



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

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PUBLIC NOTICE

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER RESOURCES/ SURFACE WATER DISCHARGE PERMIT PROGRAM
1 WINTER STREET
BOSTON, MA 02108
TEL#: (617) 292 -5500

Notice is hereby given that the following Tentative Determination to Issue Antidegradation Authorization To Discharge To an Outstanding Resource Water is being processed and the following actions being proposed thereon pursuant to the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§ 26-53) and 314 CMR 2.06, 3.00 and 4.00:

NAME OF SITE : Proposed Cumberland Farms Store #MA8355
SITE OWNER : 55 East Main Street, LLC
SITE OPERATOR
(if different than owner) : Cumberland Farms, Inc.
NPDES PERMIT NUMBER
ASSIGNED BY EPA : MAG910000
MASSDEP TRANSMITTAL
NUMBER : X280632
NAME OF RECEIVING WATER(S)
AND TOWN : Rutters Brook, Westborough, MA
PERMIT AUTHORITY FOR DISCHARGE : NPDES Remediation General Permit (RGP), effective
April 8, 2017

PROPOSED ACTION: Tentative determination to issue an Antidegradation Authorization to discharge to an Outstanding Resource Water for a proposed discharge under the Remediation General Permit (RGP). The proposed discharge is from construction related dewatering to Rutters Brook, an Outstanding Resource Water (ORW.)

A copy of the Notice of Intent (NOI), applicant's justification for Antidegradation Authorization, and Tentative Determination to Issue Antidegradation Authorization To Discharge To an Outstanding

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

TTY# MassRelay Service 1-800-439-2370

MassDEP Website: www.mass.gov/dep

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Resource Water (draft decision by MassDEP) are available [here: https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities](https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities) under “MassDEP Permits & Approvals”.

Comments on the proposed action or requests for a public hearing thereon pursuant to 314 CMR 2.07 must be filed with MassDEP either by U.S. mail to: MassDEP, Regulatory Comment Box, 1 Winter Street, 5th floor, Boston, MA 02108, or by email to dep.talks@mass.gov (include “Cumberland Farms RGP” in the subject line). All comments should include the sender’s full name and address. Comments must be submitted by January 25, 2019. The public comment period is thirty (30) days after publication of this notice.

Lealdon Langley, Director
Wetlands and Wastewater Program
Department of Environmental Protection

Tentative Determination to Issue Antidegradation Authorization
To Discharge To an
Outstanding Resource Water
Fact Sheet

I. APPLICANT, FACILITY INFORMATION, and DISCHARGE INFORMATION

Name and Address of site:

Proposed Cumberland Farms Store #MA8355
55 East Main Street
Westborough, MA 01581

Name and Address of Site Owner:

55 East Main Street LLC
15 Railroad Drive
Northborough, MA 01532

Discharge Information:

Following EPA Authorization under NPDES 2017 Remediation General Permit, construction related dewatering is proposed to be discharged to Rutters Brook, which according to Massachusetts Surface Water Quality Standards (MASWQS) 314 CMR 4.05 and 4.06 (MASWQS), is protected as an Outstanding Resource Water (ORW).

II. LIMITATIONS AND CONDITIONS

Discharge permit limitations are as listed in the 2017 Remediation General Permit (RGP) and are in conformance with 314 CMR 4.00, Massachusetts Surface Water Quality Standards (MASWQS).

The applicant has demonstrated that an Antidegradation Authorization To Discharge To an Outstanding Resource Water (314 CMR 4.04(3)) may be issued by the Department of Environmental Protection pursuant to 314 CMR 4.04(5)(b).

III. MASSDEP ANTIDegradation AUTHORIZATION BASIS AND PERMITTING REQUIREMENT

MASWQS and the RGP state that discharges to ORWs in Massachusetts are ineligible for coverage unless an Antidegradation Authorization is granted by MassDEP. Therefore, as described in the Request for Authorization letter dated July 2, 2018, ATC Group Services LLC, on behalf of Cumberland Farms, Inc. submitted a description of how the project would demonstrate compliance with the MASWQS requirements for Antidegradation Authorization listed in 314 CMR 4.04(5)(a)(2) through 4.04(5)(a)(4).

Coverage under the 2017 Remediation General Permit (RGP) is required for this discharge in accordance with the Massachusetts Clean Water Act, M.G.L. c. 21, §§ 26-53; 314 CMR 3.03; and 314 CMR 4.00.

EPA's Authorization to discharge includes effluent limitations based on the location of discharge, aquatic life and human health protection criteria, and the MASWQS.

IV. COMMENT PERIOD, HEARING REQUESTS, AND PROCEDURES FOR FINAL DECISIONS

The public comment period for this authorization was published in the MEPA Environmental Monitor on December 26, 2018 and will extend until January 25, 2019. The public comment period is thirty (30) days following the date of publication.

A final decision on the issuance/denial of this permit will be made after the public notice period, and review of any comments received during this period.

V. STATE CONTACT INFORMATION

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m. Monday through Friday excluding holidays, from:

Jennifer Wood
MassDEP
Bureau of Water Resources
1 Winter Street
Boston, MA 02108
617-654-6536
Jennifer.Wood@state.ma.us

Lealdon Langley, Director
Wetlands and Wastewater Program
Department of Environmental Protection

DATE



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[Draft for Public Comment Only]

TENTATIVE DETERMINATION TO ISSUE ANTIDegradation AUTHORIZATION TO DISCHARGE
TO AN
OUTSTANDING RESOURCE WATER

NAME OF SITE : Proposed Cumberland Farms Store #MA8355
SITE OWNER : 55 East Main Street, LLC
SITE OPERATOR :
(if different than owner) : Cumberland Farms, Inc.
NPDES PERMIT NUMBER :
ASSIGNED BY EPA : MAG910000
MASSDEP TRANSMITTAL :
NUMBER : X280632
NAME OF RECEIVING WATER(S) :
AND TOWN : Rutters Brook, Westborough, MA
PERMIT AUTHORITY FOR DISCHARGE : NPDES Remediation General Permit (RGP), effective April 8, 2017

The 2017 RGP was issued by both the Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) on March 9, 2017, with an effective date of April 8, 2017. The RGP is available for sites located in Massachusetts and New Hampshire that discharge 1.0 million gallons per day or less as a result of remediation activities from eight general categories including collection structure dewatering/remediation.

As required by the RGP, Cumberland Farms, Inc. submitted a Notice of Intent (NOI) on May 14, 2018 requesting discharge to Rutters Brook, which MassDEP classifies as an Outstanding Resource Water (ORW). Section 1.3 of the 2017 RGP states that discharges to ORWs are ineligible for coverage unless an Antidegradation Authorization is granted by MassDEP, and therefore MassDEP was required to perform an additional review in accordance with the Antidegradation Provisions of the Massachusetts Surface Water Quality Standards (314 CMR 4.04) and MassDEP policy, "Implementation Procedures For The Antidegradation Provisions of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00"

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

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("the Policy") prior to Antidegradation Authorization of the discharge. Also, according to 314 CMR 4.04(5)(c), "Where an authorization is at issue, the Department shall circulate a public notice in accordance with 314 CMR 2.06. Said notice shall state an authorization is under consideration by the Department, and indicate the Department's tentative determination. The applicant shall have the burden of justifying the authorization. Any authorization granted pursuant to 314 CMR 4.04 shall not extend beyond the expiration date of the permit."

Based on the NOI and additional information dated July 2, 2018, provided by ATC Group Services LLC (ATC) on behalf of Cumberland Farms, Inc. and pursuant to the authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 4.00, MassDEP has tentatively determined to issue the following Antidegradation Authorization To Discharge To an ORW.

MassDEP's Antidegradation Authorization does not provide final authorization for the discharge. With the completion of Antidegradation Authorization, the EPA can proceed with Authorization to discharge under the 2017 RGP.

Project Description

As described in the NOI, the project consists of development of the property at 55 East Main Street, Westborough, MA ("the Site") by Cumberland Farms, Inc. The dewatering aspect of the project is temporary and is expected to be complete within 1-2 months. The NOI requests approval to discharge and dewater under the current Remediation General Permit (RGP) and would allow for the installation of gasoline USTs, piping, and associated utilities at the Site.

The NOI states the following, "The excavation will be dewatered by installing recovery wells using slotted pipe and well gravel around the screen to reduce solids. Pumps will be used so that collected groundwater from the excavation area will be pumped into 20,000 gallon frac tank(s) to settle out solids. An aerator will be used prior to the frac tank, as needed, to aid in the settling of solids and heavy metals, as well as a flocculant sock. The floc socks will be used as needed, depending on the solid content of the influent raw water and initial sampling results. The floc socks will be installed in line with the influent hose and used intermittently during dewatering activities. The water in the frac tank will then be pumped through bag filters to remove solids and then discharged directly into the drainage ditch/brook along the southern part of the Site. The drainage ditch is the discharge location of the municipal storm drainage system in the area of the Site with an outfall entering the drainage ditch near the side of the road. Average flow rate of discharge of treated groundwater from the Site to the storm drainage line is expected to be approximately 100 gallons per minute (gpm). The maximum flow rate and design capacity of the groundwater treatment system is 200 gpm based on raw water data collection and upon data collected from comparable sites operated/designed by ATC."

Project Site

The Westborough municipal storm drainage system described in the NOI discharges to Rutters Brook, which according to Massachusetts Surface Water Quality Standards 314 CMR 4.05 and 4.06 (MASWQS), is classified as a Class B Outstanding Resource Water.

Jurisdiction

The RGP authorization will include pollutant effluent limits based on submitted groundwater data and water quality criteria for freshwater in the MASWQS, which reference EPA's *National Water Quality Criteria: 2002*, and available dilution at the point of discharge. A groundwater sample collected from the raw water/influent location on March 9, 2018 indicated an iron concentration of 8.26 mg/L and a pH of 6.13 SU. A surface water sample also collected on March 9, 2018 indicated pH of 6.23 SU. The MASWQS requires pH in the range of 6.5 to 8.3 standard units and not more than 0.5 units outside of the natural background range. The EPA Water Quality Criteria for iron includes freshwater chronic 30-day average criteria (CCC) of 1 mg/L. MassDEP approved a Dilution Factor of 1.05 for the point of discharge based on low flow conditions. USEPA will determine appropriate effluent limits based on this information and include these limits in their authorization to discharge under the RGP.

MASWQS and the RGP state that discharges to ORWs in Massachusetts are ineligible for coverage unless an Antidegradation Authorization is granted by MassDEP. As described in the Request for Authorization letter dated July 2, 2018, ATC Group Services LLC, on behalf of Cumberland Farms, Inc. submitted a description of how the project would demonstrate compliance with the MASWQS requirements for Antidegradation Authorization listed in 314 CMR 4.04(5)(a)(2) through 4.04(5)(a)(4). These responses are paraphrased below.

- Item 1, based on 314 CMR 4.04(5)(a)(2):
Are there less environmentally damaging alternative sites for the discharge, sources of disposal, or methods to eliminate the discharge that are reasonably available or feasible?
 - Response: Dewatering is necessary for the proposed redevelopment due to shallow groundwater (reported 3-4 feet below grade) the proposed excavations extending to 18 feet below grade. As a result of the shallow groundwater, discharge to a well under the MassDEP Underground Injection Control (UIC) regulations would not be feasible. Because of the expected peak flow rates needed, discharge to the Westborough sewer system may not be an option. Also, because of the expected high flow rates and larger infiltration area needed to avoid overland discharge to onsite wetlands, discharge to the land surface is not an option. Finally, other storm drains surrounding the Site discharge to the same receiving water. Therefore, there is no other alternative surface water discharge option available at this time.
- Item 2, based on 314 CMR 4.04(5)(a)(3):
To the maximum extent feasible, are the discharge and activity designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices?

- Response: The treatment system includes settling tanks and a filtration system to remove naturally occurring sediment and iron in the source groundwater. The pretreatment of groundwater prior to discharge will be done to minimize adverse impacts to water quality. Additionally, the dewatering aspect of the project is temporary and is expected to be complete within 1-2 months.
- Item 3, based on 314 CMR 4.04(5)(a)(4):
Will the discharge impair existing uses of the receiving water or result in a level of water quality less than the specified for the Class?
 - Response: The treated groundwater, when discharged, will not impair the existing uses of the receiving water or result in a level of water quality that is less than the specified Class B, which are protective of aquatic activity and recreational use.

Conclusion

The NOI and Request for Authorization have sufficiently defined the nature and general elements of the project for the purposes of MassDEP review and demonstrated that impact on the ORW will be minimized to the extent practicable. Based on review of the documents provided and comments received, MassDEP determined that the discharge meets the requirements for authorization listed in 314 CMR 4.04(5)(b) and 314 CMR 4.04(5)(a)2-4 and is proposing to authorize the discharge, subject to the terms and conditions of EPA's authorization to discharge under the RGP.

Lealdon Langley, Director
Wetlands and Wastewater Program
Department of Environmental Protection

[Date]

May 14, 2018
Project Number 03-224195

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 Remediation General Permit
Proposed Cumberland Farms Property #MA8355
55 E. Main Street
Westboro, MA 01581

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, piping, and associated utilities at the Site. A Site Locus is provided as Figure 1 and a Site Plan is provided as Figure 2. A copy of the NOI form is provided as Attachment I.

Background

The subject property is a 2.5 acre lot located at 55 East Main Street in Westboro, MA and was recently used as storage building for donated clothing bins. The property was historically used as a machine shop dating back to 1940. The Site is not located within a current or potential groundwater protection area. Catch basins are located along the front of the Site and are connected to the municipal storm drainage system which drains to the ditch/brook along the southern part of the Site.

Pretreatment

The excavation will be dewatered by installing recovery wells using slotted pipe and well gravel around the screen to reduce solids. Pumps will be used so that collected groundwater from the excavation area will be pumped into 20,000 gallon frac tank(s) to settle out solids. An aerator will be used prior to 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 and initial sampling results. 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 flocculant additive will not add any pollutant in concentrations which will exceed permit effluent limitations, will not exceed any applicable water quality standard, and will not add any pollutants that would justify the application of permit conditions that are different from or absent in the permit.

The water in the frac tank will then be pumped through bag filters to remove solids and then discharged directly into the drainage ditch/brook along the southern part of the Site. The drainage ditch is the discharge location of the municipal storm drainage system in the area of the Site with an outfall entering the drainage ditch near the side of the road. A Wetlands Protection Act Notice of Intent was submitted to the Town of Westboro on January 26, 2018 for the proposed redevelopment work and approval was granted on March 15, 2018. A copy of the Order of Conditions is included in Attachment III. Please refer to Figure 1 for a depiction of the site and surrounding area, Figure 2 for the Site Plan depicting the dewatering, 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 100 gallons per minute (gpm). The maximum flow rate and design capacity of the groundwater treatment system is 200 gpm based the raw water data collection and upon data collected from comparable sites operated/designed by ATC.

Influent Sample Analysis

Groundwater samples were collected from the raw water/influent location (MW-102) on March 9, 2018 and were submitted to Spectrum/Eurofins Analytical, Inc. of Agawam, Massachusetts for laboratory analysis for the following required 2017 RGP 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 drainage ditch/brook surface water adjacent to the Site 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 discharge outfall, receiving waters, and the proposed design discharge flow, the seven day-ten year low flow (7Q10) of the receiving waters was determined to be 0.015 MGD



and the calculated dilution factor was determined to be 1.05. 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:

- TSS
- Iron
- pH

Total suspended solids and metals (iron) are expected to be reduced by pretreatment with settling and filtration. Also, due to the pH of the raw water (6.13) being comparable to the receiving waters (6.23), ATC requests that the pH discharge limitation be modified to 5.50.

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 effect 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 Town of Westboro were obtained from the Massachusetts Cultural Resources Information System (MACRIS) online database at <http://mhc-macris.net/towns.aspx> (accessed May 13, 2018). 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 August 1, 2018 and last for approximately 6 months. The duration of the dewatering aspect of the project is only expected to be for 1-2 months. 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



A handwritten signature in blue ink, appearing to read 'Matthew J. Lyne'.

Matthew J. Lyne
Senior Project Manager

cc: Matthew Young, Cumberland Farms, Inc., 165 Flanders Road, Westborough, MA
Cathy Vakalopoulos, MassDEP, Surface Water Discharge Permit Program, One Winter
Street, 5th Floor, Boston, MA 02108
Town of Westboro Department of Public Works-34 W. Main Street, Westboro, MA 01581

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, WQBEL Calculation, and Westboro Order of Conditions.

Attachment IV: MassGIS Resource Priority and NHESP Map

Attachment V: MACRIS Database Search Results, PNF

Attachment VI: Laboratory Analytical Report

FIGURES

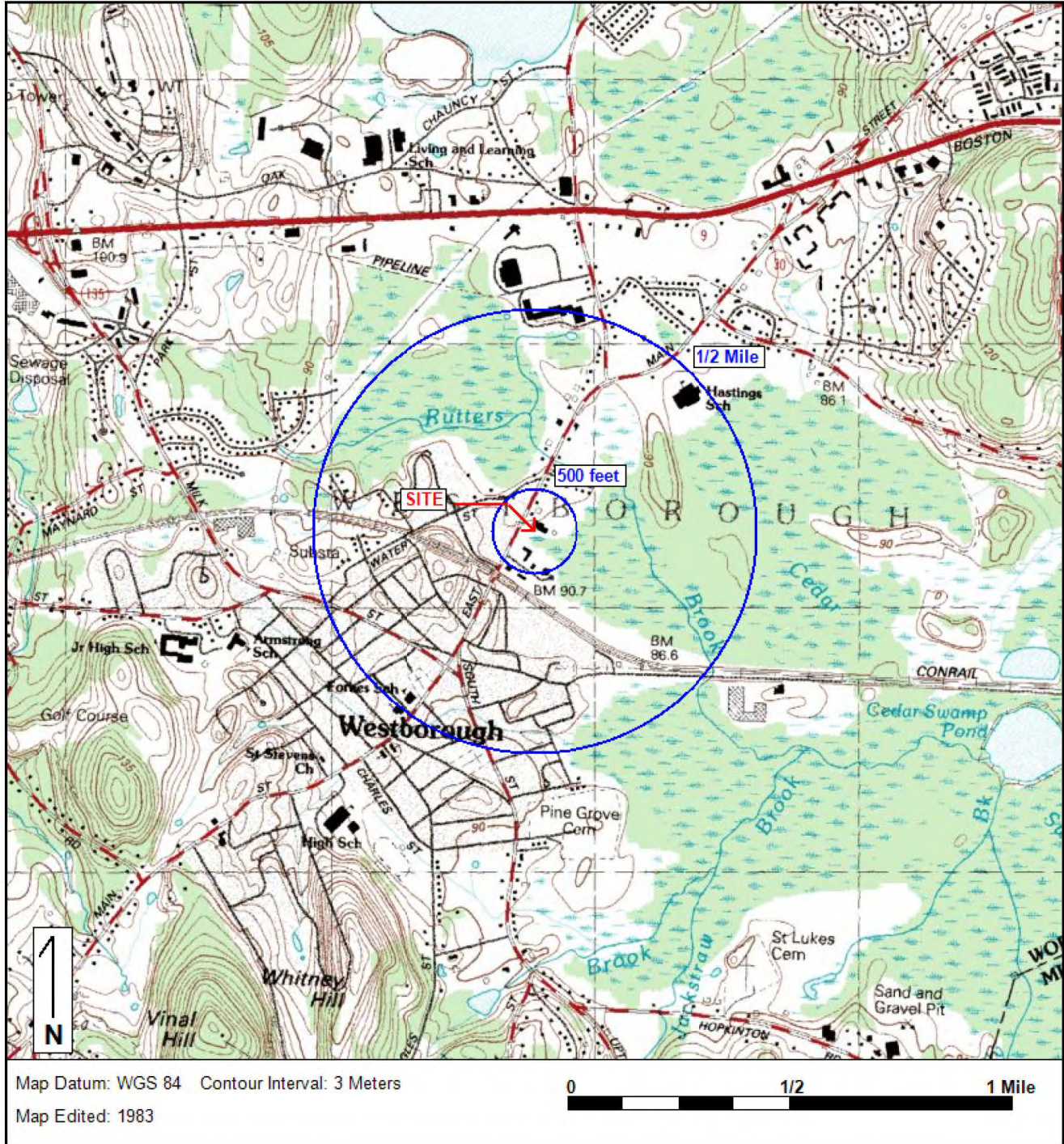


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MA-8355-Westboro 55 East Main Street
55 East Main Street
Westboro, MA

ATC Group Services LLC
997 Millbury Street, Unit 6
Worcester, MA 01607
Phone 508-756-0151 Fax 508-757-7063
www.atcgroupservices.com

Figure 1: SITE LOCUS



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

Lat/Lon: 42 16' 27.17" NORTH, 71 36' 33.68" WEST - UTM Coordinates: 19 284822.4 EAST / 4683519.9 NORTH

Generated By: Rick Starodoj

- [illegible]

NOTES:

LOCUS MAP

©2015 WEST WORLD TRAVEL MAPS

1. PROPERTY KNOWN AS LOT 12 IS SHOWN ON THE TOWN OF WESTBROOK, WORCESTER COUNTY, COMMONWEALTH OF MASSACHUSETTS MAP NO. 28.

2. PARCEL A: 10,000 SF
PARCEL B: 10,000 SF
PARCEL C: 47,000 SF
PARCEL D: 47,000 SF

3. PARCELS A, B, C TOTAL AREA = 18,000 SQUARE FEET OR 3.60 ACRES

4. LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE. LOCATIONS AND DEPTHS ARE BASED ON UTILITY

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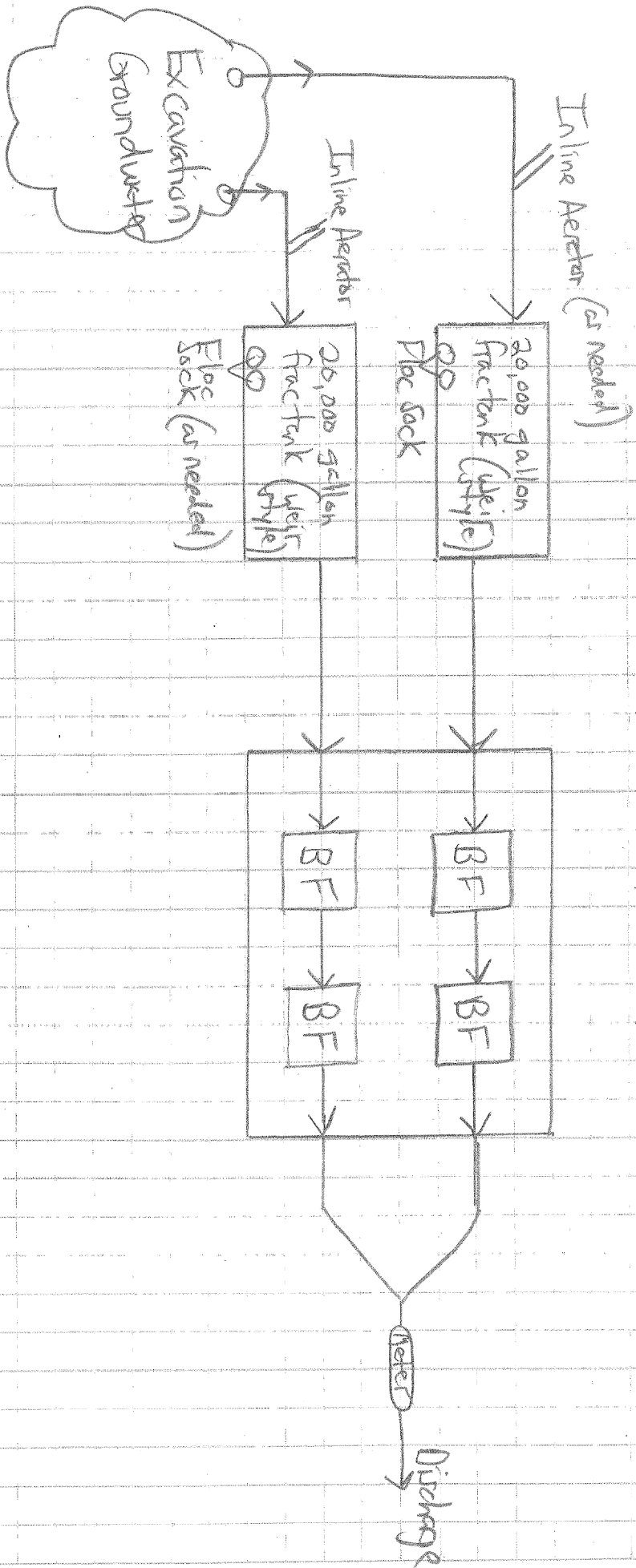


Figure 3 - Treatment System Schematics

TABLES

Table 2
Summary of Groundwater Analytical Data
CFI #MA8355
55 E. Main Street
Westborough, MA

	MW-102	Stream/ SWS-1	MassDEP RCGW-2	EPA RGP Discharge Limit TBEL	EPA RGP Discharge Limit-WQBEL
Sampling Date	3/9/18	3/9/18			
Well Elevation (ft)	282.86	NA			
Depth to Groundwater (ft)	2.36	NA			
Groundwater Elevation (ft)	280.50	NA			
VOCs by 8260/624/524 (µg/L)					
Benzene	< 0.50	NS	1,000	5	NS
Toluene	< 0.50	NS	40,000	NS	NS
MTBE	< 0.50	NS	5,000	70	NS
Naphthalene	< 0.50	NS	700	20	NS
Acetone	< 10.0	NS	50,000	7,970	NS
2-Butanone (MEK)	< 2.0	NS	50,000	NS	NS
Tert-amyl methyl ether (TAME)	< 0.50	NS	NS	90	NS
Tert Butyl Alcohol (TBA)	< 10.0	NS	NS	120	NS
SVOCs by 625 SIM (µg/L)					
Fluoranthene	0.069	NS	NS	100	NS
Pyrene	0.069	NS	NS	100	NS
Di-n-octylphthalate	16.3	NS	100,000	190	NS
TPH by EPA 8100M (mg/L)	< 1.0	NS	5	5	NS
PCBs by EPA 608 (ug/L)	< 0.192	NS	5	0.000064	NS
PP13 Metals by 6010 (mg/L)					
Copper (Total)	< 0.005	< 0.005	100	0.242	NS
Iron (Total)	8.26	NS	NS	5	1.054
Iron (Dissolved)	NS	NS	NS	NS	NS
Zinc (Total)	0.0199	0.0266	0.90	0.420	NS
Zinc (Dissolved)	NS	NS	0.90	NS	NS
Lead (Total)	< 0.0075	< 0.0075	0.01	0.160	NS
Lead (dissolved)	NS	NS	0.01	NS	NS
Flashpoint	NS	NS	No Flash	NS	NS
pH	6.13	6.23	0-4, 10-14	6.3-8.5	NS
Ammonia (mg/L as Nitrogen)	5.08	NS	NS	NS	NS
Hardness (mg/L CaCO3)	73.3	NS	NS	NS	NS
Chloride (mg/L)	76.7	NS	NS	NS	NS
Total Dissolved Solids (mg/L)	NS	NS	NS	NS	NS
Total Suspended Solids (mg/L)	28.0	NS	NS	30	NS
Total Residual Chlorine (mg/L)	NS	NS	NS	0.2	12

NOTE NA = Not Applicable. NS = No Sampled

RCGW-2: Reportable Concentration for groundwater classified as RCGW-1, promulgated June 20, 2014.

EPA RGP Discharge Limit: Discharge Limits promulgated in 2017 RGP effective April 10, 2017.

YELLOW: Concentration exceeds RCGW-2.

BOLD: Exceeds EPA RGP Discharge Limits

ATTACHMENT I

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

A. General site information:

1. Name of site: Proposed Cumberland Farms Store #MA8355		City: Westboro State: MA Zip: 01581	
2. Site owner 55 East Main Street LLC		Contact Person: El Khoury Fawaz Telephone: 508-864-4000 Email: 85carterdrive@gmail.com Mailing address: 15 Railroad Drive Street: City: Northborough State: MA Zip: 01532	
3. Site operator, if different than owner Cumberland Farms, Inc.		Contact Person: Matthew Young Telephone: 508-270-4477 Email: myoung@cumberlandfarms.com Mailing address: 165 Flanders Road Street: City: Westborough State: MA Zip: 01581	
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply: <input type="checkbox"/> RGP <input type="checkbox"/> DGP <input type="checkbox"/> CGP <input type="checkbox"/> MSGP <input type="checkbox"/> Individual NPDES permit <input type="checkbox"/> Other; if so, specify:		5. Other regulatory program(s) that apply to the site (check all that apply): <input type="checkbox"/> MA Chapter 21e; list RTN(s): <input type="checkbox"/> CERCLA <input type="checkbox"/> UIC Program <input type="checkbox"/> POTW Pretreatment <input type="checkbox"/> CWA Section 404 <input type="checkbox"/> NH Groundwater Management Permit or <input type="checkbox"/> Groundwater Release Detection Permit:	

B. Receiving water information:

1. Name of receiving water(s):		Waterbody identification of receiving water(s):		Classification of receiving water(s):	
Rutters Brook		MA82A-29		B	
Receiving water is (check any that apply): <input checked="" type="checkbox"/> Outstanding Resource Water <input type="checkbox"/> Ocean Sanctuary <input type="checkbox"/> territorial sea <input type="checkbox"/> Wild and Scenic River					
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are sensitive receptors present near the site? (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.				0.024 cfs/0.015 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.				1.05	
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, indicate date confirmation received: 5-9-18 (see attached email from MassDEP for confirmation)					
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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

C. Source water information:

1. Source water(s) is (check any that apply):			
<input checked="" type="checkbox"/> Contaminated groundwater		<input type="checkbox"/> 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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		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): <input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> The receiving water	<input type="checkbox"/> Potable water, if so, indicate municipality or origin:
		<input type="checkbox"/> A surface water other than the receiving water; if so, indicate waterbody:	<input type="checkbox"/> Other; if so, specify:

2. Source water contaminants: Naturally occurring metals (iron) and sediment

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): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> 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 at(n) (check any that apply): ☐ Existing discharge ☒ New discharge ☐ New source

Outfall(s): Direct discharge to stream along southern portion of Site that drains to Rutters Brook	Outfall location(s): (Latitude, Longitude) Lat: 42.2742 Long: 71.6093
---	---

Discharges enter the receiving water(s) via (check any that apply): ☒ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify:

☐ A private storm sewer system ☒ A municipal storm sewer system

If the discharge enters the receiving water via a private or municipal storm sewer system:

Has notification been provided to the owner of this system? (check one): ☒ Yes ☐ No

Has the operator has received permission from the owner to use such system for discharges? (check one): ☒ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission:

Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☒ Yes ☐ No

See attached Order of Conditions dated 3-15-18, Attachment III.

Provide the expected start and end dates of discharge(s) (month/year):

August 1, 2018 to November 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

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)	
<input type="checkbox"/> I – Petroleum-Related Site Remediation <input type="checkbox"/> II – Non-Petroleum-Related Site Remediation <input checked="" type="checkbox"/> III – Contaminated Site Dewatering <input type="checkbox"/> IV – Dewatering of Pipelines and Tanks <input type="checkbox"/> V – Aquifer Pump Testing <input type="checkbox"/> VI – Well Development/Rehabilitation <input type="checkbox"/> VII – Collection Structure Dewatering/Remediation <input type="checkbox"/> VIII – Dredge-Related Dewatering	<div data-bbox="1239 1205 1271 1759" style="text-align: center;">a. If Activity Category I or II: (check all that apply)</div> <div data-bbox="946 982 1187 1627"> <input type="checkbox"/> A. Inorganics <input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds <input type="checkbox"/> C. Halogenated Volatile Organic Compounds <input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds <input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds <input type="checkbox"/> F. Fuels Parameters </div>	
	<div data-bbox="849 1100 881 1869" style="text-align: center;">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</div>	
	<input checked="" type="checkbox"/> G. Sites with Known Contamination	<input type="checkbox"/> H. Sites with Unknown Contamination
	<div data-bbox="659 982 719 1398" style="text-align: center;">c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</div> <div data-bbox="240 982 605 1398"> <input checked="" type="checkbox"/> A. Inorganics <input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds <input type="checkbox"/> C. Halogenated Volatile Organic Compounds <input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds <input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds <input type="checkbox"/> F. Fuels Parameters </div>	
<div data-bbox="431 1430 521 1969" style="text-align: center;">d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</div>		

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	5.08	5.08	Report mg/L	---
Chloride		✓	1	SM4500	3.0	76.7	76.7	Report µg/l	---
Total Residual Chlorine	✓							0.2 mg/L	12
Total Suspended Solids		✓	1	2540	0.70	28.0	28.0	30 mg/L	---
Antimony	✓		1	200.7	6	< 6	< 6	206 µg/L	
Arsenic	✓		1	200.7	4	< 4	< 4	104 µg/L	
Cadmium	✓		1	200.7	2.5	< 2.5	< 2.5	10.2 µg/L	
Chromium III	✓		1	200.7	5	< 5	< 5	323 µg/L	
Chromium VI	✓		1	7196A	50	< 50	< 50	323 µg/L	
Copper	✓		1	200.7	5	< 5	< 5	242 µg/L	
Iron		✓	1	200.7	15	8,260	8,260	5,000 µg/L	
Lead	✓		1	200.7	7.5	< 7.5	< 7.5	160 µg/L	
Mercury	✓		1	7470	0.2	< 0.2	< 0.2	0.739 µg/L	
Nickel	✓		1	200.7	5	< 5	< 5	1,450 µg/L	
Selenium	✓		1	200.7	15	< 15	< 15	235.8 µg/L	
Silver	✓		1	200.7	5	< 5	< 5	35.1 µg/L	
Zinc		✓	1	200.7	5	19.9	19.9	420 µg/L	
Cyanide	✓		1	335.4	0.010	< 0.010	< 0.010	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✓		1	524.2	0.50	< 0.50	< 0.50	100 µg/L	---
Benzene	✓		1	524.2	0.50	< 0.50	< 0.50	5.0 µg/L	---
1,4 Dioxane	✓		1	8260	20	< 20	< 20	200 µg/L	---
Acetone	✓		1	524.2	0.010	< 0.010	< 0.010	7.97 mg/L	---
Phenol	✓		1	625	5	< 6.17	< 6.17	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	524.2	0.50	< 0.50	< 0.50	4.4 µg/L	
1,2 Dichlorobenzene	✓		1	524.2	0.50	< 0.50	< 0.50	600 µg/L	---
1,3 Dichlorobenzene	✓		1	524.2	0.50	< 0.50	< 0.50	320 µg/L	---
1,4 Dichlorobenzene	✓		1	524.2	0.50	< 0.50	< 0.50	5.0 µg/L	---
Total dichlorobenzene	✓		1	524.2	0.50	< 0.50	< 0.50	763 µg/L in NH	---
1,1 Dichloroethane	✓		1	524.2	0.50	< 0.50	< 0.50	70 µg/L	---
1,2 Dichloroethane	✓		1	524.2	0.50	< 0.50	< 0.50	5.0 µg/L	---
1,1 Dichloroethylene	✓		1	524.2	0.50	< 0.50	< 0.50	3.2 µg/L	---
Ethylene Dibromide	✓		1	524.2	0.50	< 0.50	< 0.50	0.05 µg/L	---
Methylene Chloride	✓		1	524.2	0.50	< 0.50	< 0.50	4.6 µg/L	---
1,1,1 Trichloroethane	✓		1	524.2	0.50	< 0.50	< 0.50	200 µg/L	---
1,1,2 Trichloroethane	✓		1	524.2	0.50	< 0.50	< 0.50	5.0 µg/L	---
Trichloroethylene	✓		1	524.2	0.50	< 0.50	< 0.50	5.0 µg/L	---
Tetrachloroethylene	✓		1	524.2	0.50	< 0.50	< 0.50	5.0 µg/L	
cis-1,2 Dichloroethylene	✓		1	524.2	0.50	< 0.50	< 0.50	70 µg/L	---
Vinyl Chloride	✓		1	524.2	0.50	< 0.50	< 0.50	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✓	1	625	6.17	16.3	16.3	190 µg/L	
Diethylhexyl phthalate	✓		1	625	6.17	< 6.17	< 6.17	101 µg/L	
Total Group I PAHs	✓		1	625	0.05	< 0.05	< 0.05	1.0 µg/L	---
Benzo(a)anthracene	✓		1	625	0.05	< 0.05	< 0.05	As Total PAHs	
Benzo(a)pyrene	✓		1	625	0.05	< 0.05	< 0.05		
Benzo(b)fluoranthene	✓		1	625	0.05	< 0.05	< 0.05		
Benzo(k)fluoranthene	✓		1	625	0.05	< 0.05	< 0.05		
Chrysene	✓		1	625	0.05	< 0.05	< 0.05		
Dibenzo(a,h)anthracene	✓		1	625	0.05	< 0.05	< 0.05		
Indeno(1,2,3-cd)pyrene	✓		1	625	0.05	< 0.05	< 0.05		

[illegible]

E. Treatment system information

<p>1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)</p> <p> <input type="checkbox"/> Adsorption/Absorption <input type="checkbox"/> Advanced Oxidation Processes <input type="checkbox"/> Air Stripping <input type="checkbox"/> Granulated Activated Carbon (“GAC”)/Liquid Phase Carbon Adsorption <input type="checkbox"/> Ion Exchange <input checked="" type="checkbox"/> Precipitation/Coagulation/Flocculation <input checked="" type="checkbox"/> Separation/Filtration <input checked="" type="checkbox"/> Other; if so, specify: Aeration of frac tank to aid in precipitation of metals. </p>	
<p>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.</p> <p>Identify each major treatment component (check any that apply):</p> <p> <input checked="" type="checkbox"/> Fractionation tanks <input type="checkbox"/> Equalization tank <input type="checkbox"/> Oil/water separator <input type="checkbox"/> Mechanical filter <input type="checkbox"/> Media filter <input type="checkbox"/> Chemical feed tank <input type="checkbox"/> Air stripping unit <input checked="" type="checkbox"/> Bag filter <input type="checkbox"/> Other; if so, specify: </p> <p>Indicate if either of the following will occur (check any that apply):</p> <p> <input type="checkbox"/> Chlorination <input type="checkbox"/> De-chlorination </p>	
<p>3. Provide the design flow capacity in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: 200 gpm Is use of a flow meter feasible? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, if so, provide justification:</p>	<p>200 gpm</p>
<p>Provide the proposed maximum effluent flow in gpm.</p>	<p>200 gpm</p>
<p>Provide the average effluent flow in gpm.</p>	<p>100 gpm</p>
<p>If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:</p>	
<p>4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	

F. Chemical and additive information

<p>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)</p> <p><input type="checkbox"/> Algaecides/biocides <input type="checkbox"/> Antifoams <input type="checkbox"/> Coagulants <input type="checkbox"/> Corrosion/scale inhibitors <input type="checkbox"/> Disinfectants <input checked="" type="checkbox"/> Flocculants <input type="checkbox"/> Neutralizing agents <input type="checkbox"/> Oxidants <input type="checkbox"/> Oxygen <input type="checkbox"/> scavengers <input type="checkbox"/> pH conditioners <input type="checkbox"/> Bioremedial agents, including microbes <input type="checkbox"/> Chlorine or chemicals containing chlorine <input type="checkbox"/> Other; if so, specify:</p>
<p>2. Provide the following information for each chemical/additive, using attachments, if necessary:</p> <p>See cover letter supplied with the notice of intent for this information.</p> <p>a. Product name, chemical formula, and manufacturer of the chemical/additive;</p> <p>b. Purpose or use of the chemical/additive or remedial agent;</p> <p>c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;</p> <p>d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;</p> <p>e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and</p> <p>f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).</p>
<p>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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> No See attached narrative.</p>

G. Endangered Species Act eligibility determination

<p>1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:</p> <p><input checked="" type="checkbox"/> 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".</p> <p><input type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> No; if no, is consultation underway? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> 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) <input type="checkbox"/> the operator <input type="checkbox"/> EPA <input type="checkbox"/> Other; if so, specify:</p>
--

- ☐ **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 the 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.¹ 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: 05/14/2018

Print Name and Title:

Matthew Young, Sr. Project Manager

¹-WPA NOI submitted to town on 1-26-18, Approval issued 3-15-18, see attachment



Enter your transmittal number

→ X280632
Transmittal Number

Your unique Transmittal Number can be accessed online:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>

Massachusetts Department of Environmental Protection Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to:
MassDEP, P.O.
Box 4062, Boston,
MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application.
Copy 2 must accompany your fee payment.
Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

* **Note:**
For BWSC Permits,
enter the LSP.

A. Permit Information

WM15

Bureau of Water Resources

1. Permit Code: 4 to 7 character code from permit instructions

2. Name of Permit Category

General Permit NPDES Notice of Intent

3. Type of Project or Activity

B. Applicant Information – Firm or Individual

Cumberland Farms, Inc.

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. Last Name of Individual
165 Flanders Road

3. First Name of Individual

4. MI

5. Street Address

Westboro

MA

01581508-

6. City/Town

7. State

270-1400

9. Telephone #

10. Ext. #

Matthew Young

myoung@cumberlandfarms.com

11. Contact Person

12. e-mail address

C. Facility, Site or Individual Requiring Approval

Proposed Cumberland Farms Store #8355

1. Name of Facility, Site Or Individual

55 E. Main Street

2. Street Address

Westboro

MA

01581

None

6. Telephone #

7. Ext. #

3. City/Town

None

4. State

5. Zip Code

None

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

ATC Group Service LLC

1. Name of Firm Or Individual

997 Millbury Street, Unit 6

2. Address

Worcester

MA

01607

508-756-0151

3. City/Town

4. State

5. Zip Code

None

6. Telephone #

7. Ext. #

Matt Lyne

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEa file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. ☐ Fee Exempt (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

102069

\$500.00

5-10-18

Check Number

Dollar Amount

Date


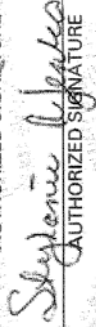
ATC
GROUP SERVICES LLC
221 Rue De Jean
Suite 300
Lafayette, LA 70508

Five Hundred And 00 / 100 Dollars

TO THE
ORDER
OF

Commonwealth of Massachusetts
MassDEP
PO Box 4062
Boston, MA 02211-4062 US

CHECK AMOUNT
\$500.00


AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE

⑈ 102069 ⑈ ⑆065403626⑆ 0207879482⑈

102069

Invoice Number Date Voucher
EPADISCHARGE 05/10/18 357426
Application Fee for EPA Discharge Permit Application

Net Amount
500.00

Commonwealth of Massachusetts MASS406

TOTAL 500.00

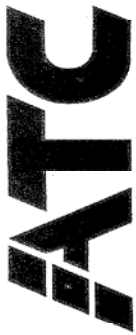
ATC
GROUP SERVICES LLC

Regions Bank - Louisiana
84-362/854

102069

102069

DATE
5/10/2018



ENVIRONMENTAL • GEOTECHNICAL
ENGINEERING SCIENCES • MATERIALS TESTING

997 Millbury Street • Unit 6
Worcester, MA 01607



5-14-18

Mass DEP
PO Box 4062
Boston, MA 02211

ATTACHMENT II



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.

Haloklear DBP-2100 Socks

Safety Data Sheet

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

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

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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.

HaloKlear DBP-2100 Socks

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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
----------------------------	------------------

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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

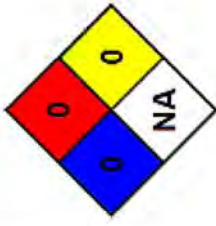
: 0 - Materials that will not burn.

NFPA reactivity

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

NFPA specific hazard

: NA - Not Applicable



Haloklear DBP-2100 Socks

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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.

DBP-2100™



HaloKlear™ DBP-2100 is formulated from natural biopolymers and is 100% biodegradable 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.

Works well for contaminant removal applications including:

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



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.

Distributed By:

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

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.



U.S. Patent No. 6,749,748

U.S. Patent No. 6,821,427

***additional patent pending**

HaloKlear™
 A HaloSource Brand

HaloSource, Inc.

1631 220th St. SE, Suite 100, Bothell, WA 98021

Phone: 425-881-6464 Fax: 425-556-4120

HaloKlear, GelFloc, LiquiFloc, and DBP-2100

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www.halosource.com • www.haloklear.com

ATTACHMENT III

Matthew Lyne

From: Vakalopoulos, Catherine (DEP) <Catherine.Vakalopoulos@MassMail.State.MA.US>
Sent: Wednesday, May 09, 2018 4:26 PM
To: Matthew Lyne
Cc: Ruan, Xiaodan (DEP); Little.Shauna@epa.gov
Subject: RE: RGP NOI DF Approval and Water Body ID Needed for 55 E. Main Street, Westboro

Hi Matt,

I spoke to Shauna today and she said this would definitely be a discharge for coverage under the RGP and not the CGP or the DGP. Have you looked at going to sewer or possibly to the Assabet under the RGP? I would like to emphasize that because discharges to ORWs are not allowed in the RGP, our review of them does not guarantee approval and it will likely take more than a couple of months (past July when construction is planned) due to our workload.

As for your DF calculation, I learned how to input a shape file from StreamStats into GIS and calculate the area of a drainage area (see below). The Shape_Area is in square meters and it converts to 0.98320915 square miles, essentially 1 square mile.

So your DF calculation with a drainage area of 1 sq mile, 7Q10 of 0.0236 cfs (0.01525 MGD), and design flow of 200 gpm (0.288 MGD) is:
 $DF = (0.01525 + 0.288) / 0.288 = 1.05$

Also, if you choose to apply for coverage under the RGP, we noticed a discrepancy with what was on the MassDEP website and the RGP. So for sites that are not currently regulated under the MCP, you will need to follow what is listed in the RGP and fill out a MassDEP WM15 form, a transmittal form, and pay a \$500 fee (unless the operator is fee exempt, e.g. a municipality). The information on the MassDEP website has been corrected and you can find the instructions and forms at: <https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent>.

Let me know what you decide.

Thanks,
Cathy

Dilution Factor		1.1		TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
A. Inorganics									
Ammonia		Report		mg/L		---			
Chloride		Report		µg/L		---			
Total Residual Chlorine		0.2		mg/L		12	µg/L	50	µg/L
Total Suspended Solids		30		mg/L		---			
Antimony		206		µg/L		674	µg/L		
Arsenic		104		µg/L		11	µg/L		
Cadmium		10.2		µg/L		0.2322	µg/L		
Chromium III		323		µg/L		72.3	µg/L		
Chromium VI		323		µg/L		12.0	µg/L		
Copper		242		µg/L		7.8	µg/L		
Iron		5000		µg/L		1054	µg/L		
Lead		160		µg/L		2.35	µg/L		
Mercury		0.739		µg/L		0.95	µg/L		
Nickel		1450		µg/L		43.5	µg/L		
Selenium		235.8		µg/L		5.3	µg/L		
Silver		35.1		µg/L		2.5	µg/L		
Zinc		420		µg/L		98.4	µg/L		
Cyanide		178		mg/L		5.5	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		316	µg/L		
C. Halogenated VOCs									
Carbon Tetrachloride		4.4		µg/L		1.7	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		3.5	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	2.3	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---			
Benzo(a)anthracene	1.0	µg/L	0.0040	µg/L	---	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0040	µg/L	---	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0040	µg/L	---	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0040	µg/L	---	µg/L
Chrysene	1.0	µg/L	0.0040	µg/L	---	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0040	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0040	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	21	µg/L		
tert-Butyl Alcohol	120	µg/L	---			
tert-Amyl Methyl Ether	90	µg/L	---			



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
332-881
MassDEP File #
eDEP Transaction #
Westborough
City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

1. From: Westborough
Conservation Commission
2. This issuance is for a. ☒ Order of Conditions b. ☐ Amended Order of Conditions
(check one):

3. To: Applicant: Tracey Roll
a. First Name b. Last Name

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



- T.M.Crowley & Associates
c. Organization
14 Breakneck Hill Road, Suite 101
d. Mailing Address
Lincoln
e. City/Town
f. State
02865
g. Zip Code

4. Property Owner (if different from applicant):

- Fawaz
a. First Name b. Last Name
55 Main Street, LLC
c. Organization
10 Eli Whitney Street
d. Mailing Address
Westborough
e. City/Town
f. State
MA
01581
g. Zip Code

5. Project Location:

- 55 East Main Street
a. Street Address b. City/Town
28
c. Assessors Map/Plat Number
42d16m27/s
d. Latitude
71d36m33s
e. Longitude
Parcel/Lot Number
182



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 332-881
 MassDEP File #
 eDEP Transaction #
 Westborough
 City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Worcester
 a. County
 22727
 c. Book
 January 26, 2018
 a. Date Notice of Intent Filed
 March 15, 2018
 b. Date Public Hearing Closed
 March 15, 2018
 c. Date of Issuance
 b. Certificate Number (if registered land)
 73
 d. Page
7. Dates:
 January 26, 2018
 a. Date Notice of Intent Filed
 March 15, 2018
 b. Date Public Hearing Closed
 March 15, 2018
 c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
 Site Development Plans for proposed Cumberland Farms
 a. Plan Title
 Bohler Engineering
 b. Prepared By
 February 27, 2018
 c. Signed and Stamped by
 William Goebel
 1"=40'
 d. Final Revision Date
 e. Scale
 Drainage Report
 February 27, 2018
 f. Additional Plan or Document Title
 g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☒ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
 d. ☐ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
 g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 332-881
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 Westborough
 City/Town

B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. ☒ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) 1' a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
332-881

MassDEP File #

eDEP Transaction #

Westborough

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
--	------------------------	-------------------------	-------------------------	--------------------------

10. ☐ Designated Port Areas

11. ☐ Land Under the Ocean

a. square feet

b. square feet

c. c/y dredged

d. c/y dredged

Indicate size under Coastal Beaches and/or Coastal Dunes below

12. ☐ Barrier Beaches

13. ☐ Coastal Beaches

a. square feet

b. square feet

cu yd

c. nourishment

d. nourishment

14. ☐ Coastal Dunes

a. square feet

b. square feet

cu yd

c. nourishment

d. nourishment

15. ☐ Coastal Banks

a. linear feet

b. linear feet

16. ☐ Rocky Intertidal Shores

a. square feet

b. square feet

17. ☐ Salt Marshes

a. square feet

b. square feet

c. square feet

d. square feet

18. ☐ Land Under Salt Ponds

a. square feet

b. square feet

c. c/y dredged

d. c/y dredged

19. ☐ Land Containing Shellfish

a. square feet

b. square feet

c. square feet

d. square feet

20. ☐ Fish Runs

Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above

a. c/y dredged

b. c/y dredged

21. ☐ Land Subject to Coastal Storm Flowage

a. square feet

b. square feet

22. ☐ Riverfront Area

a. total sq. feet

b. total sq. feet

Sq ft within 100 ft

c. square feet

d. square feet

e. square feet

f. square feet

Sq ft between 100-200 ft

g. square feet

h. square feet

i. square feet

j. square feet



Massachusetts Department of Environmental Protection
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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BWV) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BWV

b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.

5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(1)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

332-881

MassDEP File #

eDEP Transaction #

Westborough

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number 332-881 "

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
 (1) ☒ is subject to the Massachusetts Stormwater Standards
 (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



Massachusetts Department of Environmental Protection
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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
- v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.
- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:
 - i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and
 - ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:

1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See Attached Special Conditions 21-43

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

Special Conditions (DEP File # 332-881)

T.M. Crowley & Associates

Cumberland Farms

21. This Order of Conditions authorizes only the activity described on the Approved Plans and accompanying documents entitled “Site Development Plans for proposed Cumberland Farms Location of Site: 55 East Main Street, Town of Westborough 01581, Worcester County Map #28, Lot#182”, prepared by Bohler Engineering, dated 9/8/2017 and revised through February 27, 2018. Notice of Intent application dated January 26, 2018. A multi-page stormwater report entitled “Drainage Report for Proposed Cumberland Farms 55 East Main Street Assessor’s Map#28, Lot#182 Westborough, Massachusetts Worcester County”, dated September 8, 2017 and revised through February 27, 2018., prepared for: Cumberland Farms, Inc. 165 Flanders Road Westborough, MA 01581, prepared by Bohler Engineering, 352 turnpike Road, Southborough, Massachusetts, William D. Goebel P.E. Town of Westborough Engineer comments dated February 23, 2018 and Bohler Engineering comments dated February 27, 2018. A previously issued Order of Resource Area Delineation DEP File# 332-860.

*It is envisioned that there will be an additional revision date to the Approved Plan. The Applicant shall submit the final revised Approved Plan to the Conservation Commission Office prior to commencement of any activity. In addition, the anticipated deminimus changes to the Approved Plan will not require a formal modification to the Order of Conditions.

22. The term “Applicant” as used in this Order of Conditions shall refer to the owner, any successor in interest or successor in control of the property referenced in the Notice of Intent, supporting documents and this Order of Conditions. The Conservation Commission shall be notified in writing within 30 days of all transfers of title of any portion of property subject to this Order of Conditions.
23. The Applicant shall engage the services of a Commonwealth of Massachusetts Registered Professional Civil Engineer; hereinafter (Professional Engineer) to provide construction oversight as contemplated in this Order. The Professional Engineer will observe the contractor and will visit the site regularly whenever construction/land clearing alteration activity occurs within jurisdictional areas or areas that could potentially alter jurisdictional areas. The Professional Engineer will immediately notify the Conservation Officer or the Conservation Commission, hereinafter (Agent) of any matter that requires attention by the Agent. The Professional Engineer will maintain records of the activity and provide bi-weekly written reports to the Agent until such time as the Agent determines that the written reports are no longer warranted. The Agent reserves the right to conduct on-site progress meetings with the Professional Engineer, contractor, and other associated interested parties.

24. The Conservation Commission office and the Engineering Department office shall receive a final revised EPA Construction General Permit, Stormwater Pollution Prevention Plan, hereinafter (SWPPP) upon the selection of a site contractor. The SWPPP shall be fully executed and in place before construction/land clearing alteration activity commences. The Order of Conditions shall be incorporated within the final SWPPP. The SWPPP can be modified as site conditions warrant.
25. Prior to any construction/land clearing alteration activity, the constructed entrance to East Main Street shall be installed in accordance with Sheet CFG06.0 of the Approved Plans entitled "Erosion and Sedimentation Control Plan". The site contractor will be responsible for sweeping East Main Street at the direction of the Agent or other Town personnel.
26. The Erosion Control Barrier/Limit of Work as shown on CFG 06.0 of the Approved Plans entitled "Erosion and Sedimentation Control Plan" shall be staked and flagged prior to the commencement of construction activity. Stamped written certification shall be sent to the Agent stating that the Erosion Control Barrier/Limit of Work has been properly located in the locations as shown on the Approved Plans.
27. The erosion control barrier shall be observed by the Professional Engineer to confirm proper installation as shown on the Approved Plans. Stamped written certification shall be sent to the Agent stating that the erosion controls were installed in the locations as shown on the Approved Plans. Within two (2) business days after receipt of the erosion control barrier certification, the Agent shall inspect the erosion control barrier with the Professional Engineer and the site contractor(s) prior to any site construction/land clearing alteration activity. The Agent reserves the right to request the erosion controls to be relocated, additional erosion controls installed, or removed if reasonably warranted. The Agent reserves the right to require additional temporary sedimentation basins, swales, berms, stone check dams, or other erosion control BMP's as deemed warranted. * *The erosion control shall consist of straw wattles and silt fence. The straw wattles shall be placed in front of the silt fence.*
28. Prior to any construction the Professional Engineer shall submit the following to the Agent:
- a. A copy of the recorded Order of Conditions and finalized SWPPP.
 - b. A project/construction sequencing plan with an attached timeline.
 - c. A statement signed by the Applicant and the person responsible for the construction of the project (supervising site contractor) that such individuals understand the terms and conditions as specified in the Order of Conditions & SWPPP and that such persons agree to comply with the provisions of the Wetlands Protection Act/local Wetland Bylaw Regulations and this Order of Conditions.
29. All equipment storage, fueling, trash disposal, concrete truck washing, and other related construction staging areas such as, topsoil/other earthen material(s) stockpile areas shall

be located outside 100-feet of a wetland resource area or at the greatest practicable distance. This does not include construction management trailers.

30. Dewatering locations shall be approved by the Agent and shall be monitored by the site contractor daily to ensure that sediment-laden water is appropriately settled prior to discharge. No discharge of water is allowed directly into an area subject to the jurisdiction of the Wetlands Protection Act or the Local Wetlands Bylaw.
31. The Professional Engineer shall provide stamped written certification that the proposed “FES-5” with a proposed invert of 278.55 will not be submerged with the water levels within the adjacent stream/drainage channel.
32. The Professional Engineer shall provide stamped written certification that the proposed “DMH-1 with Actuated Emergency Shutoff Valve” operates as designed and the operation shall be observed by the Agent and other Town Personnel as needed.
33. Before any construction commences on the proposed Infiltration Basin, the Professional Land Surveyor or Professional Engineer shall provide stamped certification to the Agent that the staked layout of the proposed Infiltration Basin conforms to the location as shown on the Approved Plans. In addition, a test pit to determine groundwater shall be performed and witnessed by the Agent and Town Engineer to ensure that the proposed design will function accordingly. It is suggested that the test pit be performed as early as possible in the construction sequence.
34. Upon completion of the sub-grading associated with the Infiltration Basin, the Professional Engineer shall provide stamped written certification to the Agent and Engineering Department verifying that the groundwater elevation conforms to the Soil Test Pit Data. In addition to the stamped written certification, an on-site meeting to observe the sub-grading shall also commence involving at a minimum, the Agent, Engineering Department, Professional Engineer, and the contractor. Should no issues arise from the on-site meeting; the contractor can resume constructing the remaining elements associated with the Infiltration Basin.
35. An interim stamped as-built shall be submitted by the Professional Engineer and Professional Land Surveyor to the Agent and Engineering Department upon substantial completion of the Infiltration Basin and prior to installation of subsurface drainage associated with the site development drainage system. Substantial completion requires the following elements to be constructed: flared end inlets, flared end outlets, all associated rip-rap, emergency spillways, outlet control structures, maintenance access driveways, sediment forebays, swales and applicable low flow channels. In addition to the stamped interim as-built plan(s), an on-site meeting to visually observe the substantially completed Infiltration Basin shall be conducted and involve at a minimum the Agent, Engineering Department, the Professional Engineer and the contractor. Upon review of the interim as-built(s), the Engineering Department shall provide written acceptance of the Professional Engineer's certifications, that the Infiltration Basin conforms to the Approved Plans within four (4) business days of receiving the interim as-built plan(s) and certification. This will be provided to the Professional Engineer. Also, final loaming and seeding of the basin is

not required at this time, although it is highly recommended that the side slopes be loamed and seeded. Once reviewed and approved by the Engineering Department the tributary site development drainage system to the Infiltration Basin may be installed.

36. A final as-built shall be submitted by the Professional Engineer and submitted to the Agent and the Engineering Department after the completion of the remaining elements of the Project, as shown on the Approved Plans. Upon review of the final as-built, the Engineering Department will provide written acceptance of the Professional Engineer's or the Professional Land Surveyor's certifications that the constructed elements conform to the Approved Plans. This will be provided to the Professional Engineer. It is required at this time that all exposed soils are loamed/seeded and stabilized. Only upon receiving the written acceptance by the Engineering Department, will the Conservation Commission issue a Complete Certificate of Compliance.
37. The Agent reserves the right to require that any related drainage structures be cleaned during construction. Prior to the issuance of a Partial or Complete Certificate of Compliance, all drainage structures shall be cleaned with receipts submitted to the Agent.
38. There shall be no pumping of water from wetland resource areas.
39. The Agent will require a separate meeting with the site contractor to review the removal of numerous discarded remnants of trash between Wetland Flags WF-1 thru WF-19. Certain excavated areas may need to be reseeded with a specialized wetland seed mix. This general area of the site also contains numerous tree blowdowns that will also be removed to enhance the function and aesthetics of this area.
40. Under the direct supervision of the Agent, the site contractor shall clean the existing stream/drainage channel via a small excavator.
41. If any material change is made on the Approved Plans, the Applicant, site contractor or the Professional Engineer shall consult the Agent prior to implementing the change in the field, whether the change is significant enough to require the filing of a new or modified Notice of Intent. Any material errors on the Plans shall be considered changes and the above procedure shall be followed. In the event that a change is significant to require a new or modified Notice of Intent, the Conservation Commission reserves the right to hire an outside consultant at the expense of the Applicant to review such changes.
42. There shall be no snow storage within the 100' buffer zone. Stockpiling of snow outside the 100' buffer zone is allowed and if amounts exceed reasonableness the snow shall be removed from the site.
43. Prior to the final issuance of a Complete Certificate of Compliance, the Agent and the Professional Engineer shall draft a vegetation management plan for areas on the site that are influenced by the presence of invasive species.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 332-881
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 eDEP Transaction #
 Westborough
 City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The Westborough Conservation Commission hereby finds (check one that applies):
 - a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:
Non-Zoning Wetlands Bylaw dated October 20, 2008 & Regulations Article 45
dated February 9, 2010 and revised through May 8, 2012. 2. Citation
 - b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:
 There are no Special Conditions pursuant to this Bylaw.
1. Municipal Ordinance or Bylaw 2. Citation
3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
 The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



Massachusetts Department of Environmental Protection
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E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Signature]
[Signature]
[Signature]

[Signature]

☒ by hand delivery on

3/15/2018

Date

☐ by certified mail, return receipt requested, on

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



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G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location MassDEP File Number

Has been recorded at the Registry of Deeds of:

County Book Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee
Transmittal Form

DEP File Number:

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

1. Location of Project

a. Street Address			
b. City/Town, Zip			
c. Check number			
d. Fee amount			

2. Person or party making request (if appropriate, name the citizen group's representative):

Name			
Mailing Address			
City/Town	State	Zip Code	
Phone Number	Fax Number (if applicable)		

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name			
Mailing Address			
City/Town	State	Zip Code	
Phone Number	Fax Number (if applicable)		
4. DEP File Number:			

B. Instructions

1. When the Departmental action request is for (check one):

- ☐ Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- ☐ Superseding Determination of Applicability – Fee: \$120
- ☐ Superseding Order of Resource Area Delineation – Fee: \$120

Important:
 When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee
Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

ATTACHMENT IV

MassDEP - Bureau of Waste Site Cleanup

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

Site Information:

55 EAST MAIN STREET WESTBOROUGH, MA

NAD83 UTM Meters:

5202187mN, -7971531mE (Zone: 18)

April 3, 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:

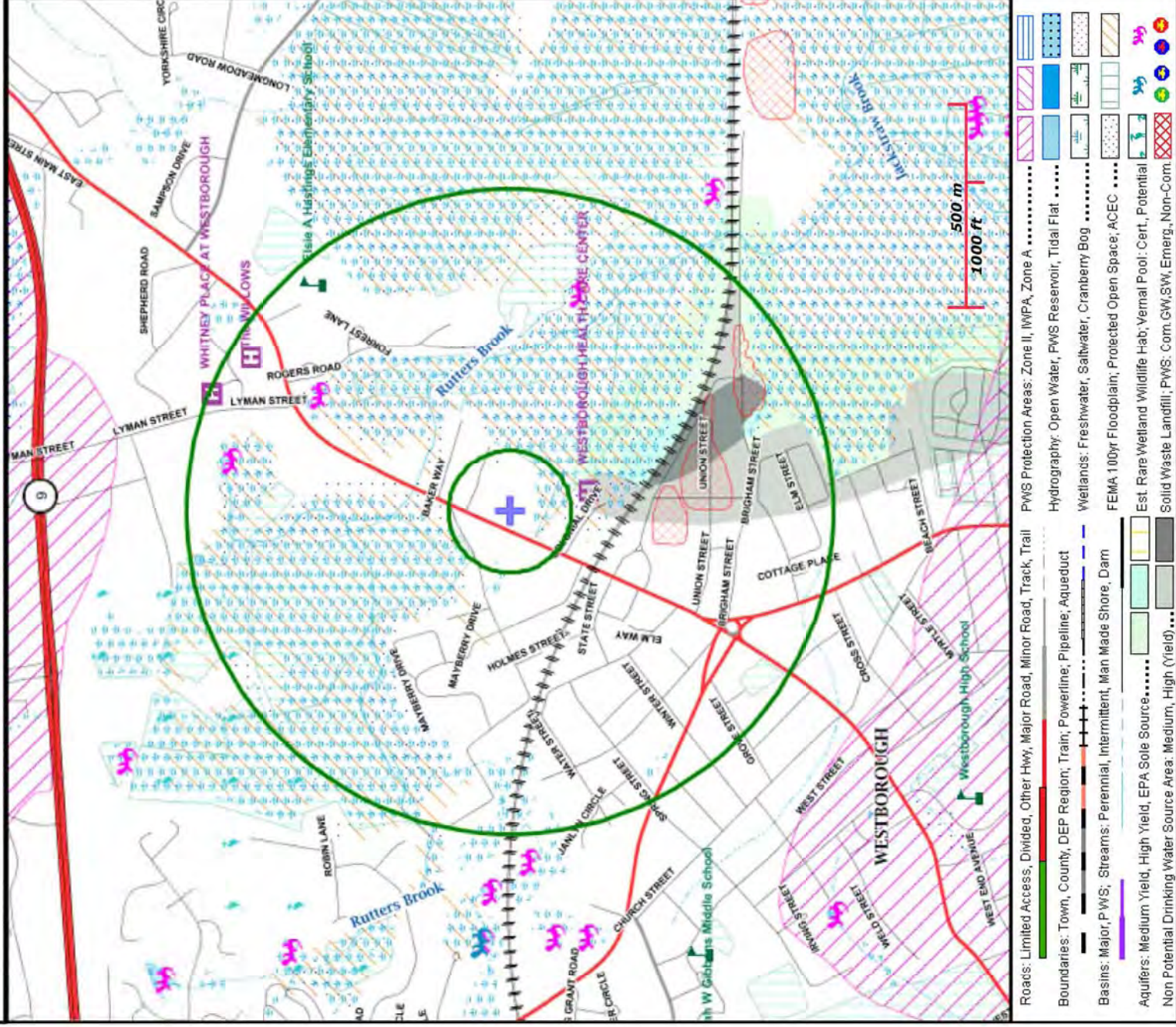
<http://www.mass.gov/mqis/>



MassDEP

Commonwealth of Massachusetts

Department of Environmental Protection

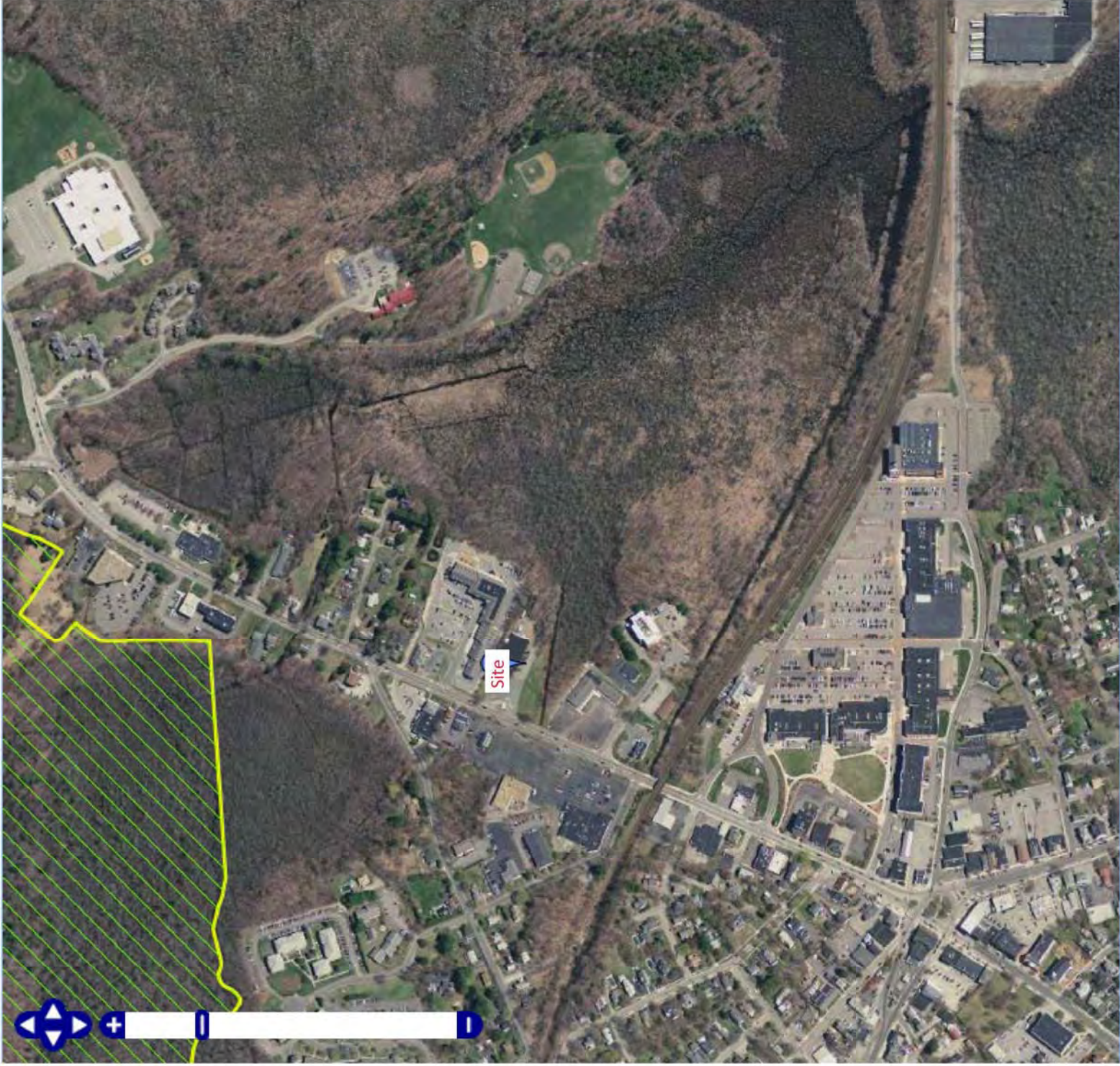




NESHAP Map

55 East Main Street, Westbor

Zoom to a town



0 m

ATTACHMENT V

Results

[Get Results in Report Format](#)

☒ PDF ☐ Spreadsheet

Below are the results of your search, using the following search criteria:

Town(s): Westborough

Street No: 55

Street Name: East Main St

Resource Type(s): Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, [click here](#)

No Results Found.

[New Search](#) | [New Search -- Same Town\(s\)](#) | [Previous](#)

[MHC Home](#) | [MACRIS Home](#)



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

May 14, 2018
File No. 03-224195

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

RE: Project Notification Form
Proposed Cumberland Farms Property #MA8355
55 E. Main Street
Westboro, Massachusetts 01581

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 August 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 and Site Plan as Figure 2.

The subject property is a 2.5 acre lot located at 55 East Main Street in Westboro, MA and was recently used as storage building for donated clothing bins. The property was historically used as a machine shop dating back to 1940. The Site is not located within a current or potential groundwater protection area. Catch basins are located along the front of the Site and are connected to the municipal storm drainage system which drains to the ditch/brook along the southern part of the Site.

If there are any questions regarding this submittal, please do not hesitate to contact the undersigned at 508-756-0151.

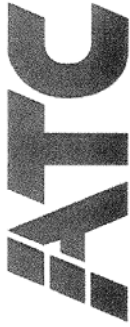
Sincerely,
ATC Group Services LLC

Matthew D. Lyne

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



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

May 14, 2018
File No. 03-224195

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

RE: **Project Notification Form**
Proposed Cumberland Farms Property #MA8355
55 E. Main Street
Westboro, Massachusetts 01581

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 August 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 and Site Plan as Figure 2.

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If there are any questions regarding this submittal, please do not hesitate to contact the undersigned at 508-756-0151.

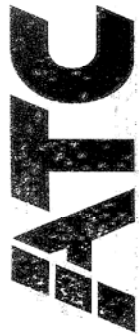
Sincerely,
ATC Group Services LLC

A handwritten signature in dark ink, appearing to read 'Matthew Lyne'.

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



ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

997 Millbury Street • Unit 6
Worcester, MA 01607



5/14/18

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

ATTACHMENT VI

☒ Final Report
☐ Revised Report

Report Date:
21-Mar-18 11:16

Laboratory Report SC44638

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

Project: CFI #MA8355 - Westborough, MA
Project #: 03 224195 08

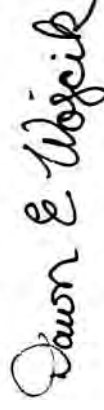
I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

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 44 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: SC44638
Project: CFI #MA8355 - Westborough, MA
Project Number: 03 224195 08

Laboratory ID Client Sample ID

SC44638-01 MW-102
SC44638-02 SWS-1

Matrix

Ground Water
Surface Water

Date Sampled

09-Mar-18 10:55
09-Mar-18 11:30

Date Received

09-Mar-18 14:33
09-Mar-18 14:33

CASE NARRATIVE:

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

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

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

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

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

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 and 12.5 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.

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

EPA 524.2

Calibration:

1802088

Analyte quantified by quadratic equation type calibration.

Bromoform
Carbon tetrachloride

This affected the following samples:

1803372-BLK1
1803372-BS1
MW-102
S817144-ICV1
S817556-CCV1

Laboratory Control Samples:

1803372 BS

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

MW-102

EPA 608

Laboratory Control Samples:

EPA 608

Laboratory Control Samples:

1803365 BSD

Aroclor-1260 RPD 22% (20%) is outside individual acceptance criteria.

EPA 624

Calibration:

1802088

Analyte quantified by quadratic equation type calibration.

Bromoform
Carbon tetrachloride

This affected the following samples:

1803372-BLK1
1803372-BS1
1803372-BSD1
MW-102
S817144-ICV1
S817556-CCV1

EPA 625

Calibration:

1802070

Analyte quantified by quadratic equation type calibration.

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

This affected the following samples:

1803534-BLK3
1803534-BS3
1803534-BSD3
MW-102
S816932-ICV1
S817781-CCV1

Laboratory Control Samples:

1803534 BS/BSD

Benzidine percent recoveries (36/40) are outside individual acceptance criteria (40-140), but within overall method allowances.
All reported results of the following samples are considered to have a potentially low bias:

MW-102

1803534-BS3

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

Benzidine

Samples:

S817781-CCV1

EPA 625

Samples:

S817781-CCV1

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

3,3'-Dichlorobenzidine (-24.4%)

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

4-Nitrophenol (20.7%)

This affected the following samples:

1803534-BLK3

1803534-BS3

1803534-BSD3

MW-102

SC44638-01

MW-102

The surrogate recovery for this sample is outside of method acceptance limits. There is insufficient sample volume to re-extract and confirm potential matrix interference.

2-Fluorobiphenyl

Nitrobenzene-d5

Phenol-d5

Mod. EPA 625

Samples:

S817820-CCV1

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

Fluorene (24.0%)

Indeno (1,2,3-cd) pyrene (-22.1%)

This affected the following samples:

1803534-BLK2

1803534-BS2

1803534-BSD2

SM3500-Cr-B (11)/7196A

Samples:

SC44638-01

MW-102

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

Hexavalent Chromium

SW846 8260C

Calibration:

1802088

Analyte quantified by quadratic equation type calibration.

Bromoform

Carbon tetrachloride

SW846 8260C

Calibration:

1802088

This affected the following samples:

1803372-BLK1
1803372-BS1
1803372-BSD1
MW-102
S817144-ICV1
S817556-CCV1

Samples:

S817556-CCV1

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

Dichlorodifluoromethane (Freon12) (-22.1%)
trans-1,4-Dichloro-2-butene (22.3%)

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

Chloromethane (-24.0%)

This affected the following samples:

1803372-BLK1
1803372-BS1
1803372-BSD1
MW-102

SW9010C/SW9012B

CA01120-MS

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

Total Cyanide

Sample Acceptance Check Form

Client: ATC Group Services, LLC - Worcester, MA
Project: CFI #MA8355 - Westborough, MA / 03 224195 08
Work Order: SC44638
Sample(s) received on: 3/9/2018

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

<u>Yes</u>	<u>No</u>	<u>N/A</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Were custody seals present?

Were custody seals intact?

Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?

Were samples cooled on ice upon transfer to laboratory representative?

Were sample containers received intact?

Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?

Were samples accompanied by a Chain of Custody document?

Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?

Did sample container labels agree with Chain of Custody document?

Were samples received within method-specific holding times?

Summary of Hits

Lab ID:	SC44638-01	Client ID:	MW-102		
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ammonia as Nitrogen	5.08		0.05	mg/l	E350.1
Calcium	24.9		0.100	mg/l	EPA 200.7
Iron	8.26		0.0150	mg/l	EPA 200.7
Magnesium	2.69		0.0100	mg/l	EPA 200.7
Zinc	0.0199		0.0050	mg/l	EPA 200.7
Di-n-octyl phthalate	16.3		6.17	µg/l	EPA 625
Fluoranthene	0.069		0.050	µg/l	Mod. EPA 625
Pyrene	0.069		0.050	µg/l	Mod. EPA 625
Hardness	73.3		0.291	mg/l CaCO3	SM 2340B (11)
Total Suspended Solids	28.0		1.7	mg/l	SM2540D (11)
Chloride	76.7		3.0	mg/l	SM4500CLE-97,-11

Lab ID:	SC44638-02	Client ID:	SWS-1		
Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ammonia as Nitrogen	0.90		0.05	mg/l	E350.1
Calcium	38.0		0.100	mg/l	EPA 200.7
Magnesium	6.60		0.0100	mg/l	EPA 200.7
Zinc	0.0266		0.0050	mg/l	EPA 200.7
Hardness	122		0.291	mg/l CaCO3	SM 2340B (11)

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

Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
Purgeable Organic Compounds													
73-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.50		µg/l	0.50	0.35	1	EPA 524.2	12-Mar-18	12-Mar-18	GMA	1803372	
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	"	"	"	"	"	"
55-23-5	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	"	"	"	"	"	"
98-12-8	1,2-Dibromo-3-chloropropane	< 0.50		µg/l	0.50	0.48	1	"	"	"	"	"	"
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	"
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	"
74-95-3	Dibromomethane	< 0.50		µg/l	0.50	0.31	1	"	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	< 0.50		µg/l	0.50	0.20	1	"	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	"
75-34-3	1,1-Dichloroethane	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	"
107-06-2	1,2-Dichloroethane	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	"
75-35-4	1,1-Dichloroethene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	"
78-87-5	1,2-Dichloropropane	< 0.50		µg/l	0.50	0.27	1	"	"	"	"	"	"
142-28-9	1,3-Dichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	"
594-20-7	2,2-Dichloropropane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	"
553-58-6	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	"	"	"	"	"	"

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

Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
Purgeable Organic Compounds													
98-82-8	Isopropylbenzene	< 0.50		µg/l	0.50	0.23	1	EPA 524.2	12-Mar-18	12-Mar-18	GMA	1803372	
98-87-6	4-Isopropyltoluene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
1534-04-4	Methyl tert-butyl ether	< 0.50		µg/l	0.50	0.15	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.35	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
100-42-5	Styrene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 0.50		µg/l	0.50	0.39	1	"	"	"	"	"	
108-88-3	Toluene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
95-18-4	1,2,3-Trichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 0.50		µg/l	0.50	0.43	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 0.50		µg/l	0.50	0.45	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	0.39	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
75-65-0	Tert Butanol / butyl alcohol	< 10.0		µg/l	10.0	3.55	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	4-Bromofluorobenzene	93			80-120 %			"	"	"	"	"	
2037-26-5	Toluene-d8	98			80-120 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	110			80-120 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	98			80-120 %			"	"	"	"	"	
Volatile Organic Compounds by GCMS													
67-64-1	Acetone	< 10.0		µg/l	10.0	0.8	1	EPA 624	"	"	GMA	"	
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	0.8	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	"	"	"	"	"	
55-23-5	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

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by GC/MS</u>													
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.6	1	EPA 624	12-Mar-18	12-Mar-18	GMA	1803372	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	< 1.0		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	"	"	"	"	"	
1534-04-4	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	< 1.0		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
<u>Surrogate recoveries:</u>													
460-00-4	4-Bromofluorobenzene	93			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	98			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	110			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	98			70-130 %			"	"	"	"	"	
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
75-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00	0.53	1	SW846 8260C	"	"	GMA	"	
67-64-1	Acetone	< 10.0		µg/l	10.0	0.80	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	
71-43-2	Benzene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
108-86-1	Bromobenzene	< 1.00		µg/l	1.00	0.33	1	SW846 8260C	12-Mar-18	12-Mar-18	GMA	1803372	
74-97-5	Bromochloromethane	< 1.00		µg/l	1.00	0.34	1	"	"	"	"	"	"
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	"
75-25-2	Bromoform	< 1.00		µg/l	1.00	0.42	1	"	"	"	"	"	"
74-83-9	Bromomethane	< 2.00		µg/l	2.00	0.90	1	"	"	"	"	"	"
78-93-3	2-Butanone (MEK)	< 2.00		µg/l	2.00	1.07	1	"	"	"	"	"	"
104-51-8	n-Butylbenzene	< 1.00		µg/l	1.00	0.41	1	"	"	"	"	"	"
135-98-8	sec-Butylbenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	"
98-06-6	tert-Butylbenzene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	"
75-15-0	Carbon disulfide	< 2.00		µg/l	2.00	0.41	1	"	"	"	"	"	"
55-23-5	Carbon tetrachloride	< 1.00		µg/l	1.00	0.44	1	"	"	"	"	"	"
108-90-7	Chlorobenzene	< 1.00		µg/l	1.00	0.25	1	"	"	"	"	"	"
75-00-3	Chloroethane	< 2.00		µg/l	2.00	0.59	1	"	"	"	"	"	"
67-66-3	Chloroform	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	"
74-87-3	Chloromethane	< 2.00		µg/l	2.00	0.37	1	"	"	"	"	"	"
95-49-8	2-Chlorotoluene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	"
106-43-4	4-Chlorotoluene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	"
95-12-8	1,2-Dibromo-3-chloroprop ane	< 2.00		µg/l	2.00	0.86	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	0.20	1	"	"	"	"	"	"
74-95-3	Dibromomethane	< 1.00		µg/l	1.00	0.31	1	"	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	< 1.00		µg/l	1.00	0.31	1	"	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	< 1.00		µg/l	1.00	0.27	1	"	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00	0.58	1	"	"	"	"	"	"
75-34-3	1,1-Dichloroethane	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	"
107-06-2	1,2-Dichloroethane	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	"
75-35-4	1,1-Dichloroethene	< 1.00		µg/l	1.00	0.69	1	"	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	"
78-87-5	1,2-Dichloropropane	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	"
142-28-9	1,3-Dichloropropane	< 1.00		µg/l	1.00	0.21	1	"	"	"	"	"	"
594-20-7	2,2-Dichloropropane	< 1.00		µg/l	1.00	0.42	1	"	"	"	"	"	"
553-58-6	1,1-Dichloropropene	< 1.00		µg/l	1.00	0.58	1	"	"	"	"	"	"
10051-01-5	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	0.35	1	"	"	"	"	"	"
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.33	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	"	"	"	"	"	"
98-82-8	Isopropylbenzene	< 1.00		µg/l	1.00	0.36	1	"	"	"	"	"	"
99-87-6	4-Isopropyltoluene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	"
1534-04-4	Methyl tert-butyl ether	< 1.00		µg/l	1.00	0.24	1	"	"	"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.52	1	"	"	"	"	"	"

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
75-09-2	Methylene chloride	< 2.00		µg/l	2.00	0.66	1	SW846 8260C	12-Mar-18	12-Mar-18	GMA	1803372	
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.35	1	"	"	"	"	"	"
103-65-1	n-Propylbenzene	< 1.00		µg/l	1.00	0.34	1	"	"	"	"	"	"
100-42-5	Styrene	< 1.00		µg/l	1.00	0.40	1	"	"	"	"	"	"
630-20-6	1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	"
127-18-4	Tetrachloroethene	< 1.00		µg/l	1.00	0.57	1	"	"	"	"	"	"
108-88-3	Toluene	< 1.00		µg/l	1.00	0.30	1	"	"	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	"
108-70-3	1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00	0.30	1	"	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	< 1.00		µg/l	1.00	0.51	1	"	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	"
79-01-6	Trichloroethene	< 1.00		µg/l	1.00	0.50	1	"	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	"
95-18-4	1,2,3-Trichloropropane	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00	0.36	1	"	"	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00	0.43	1	"	"	"	"	"	"
75-01-4	Vinyl chloride	< 1.00		µg/l	1.00	0.47	1	"	"	"	"	"	"
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	0.38	1	"	"	"	"	"	"
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	"
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	1.06	1	"	"	"	"	"	"
60-29-7	Ethyl ether	< 1.00		µg/l	1.00	0.37	1	"	"	"	"	"	"
994-05-8	Tert-amyl methyl ether	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	"
637-92-3	Ethyl tert-butyl ether	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	"
108-20-3	Di-isopropyl ether	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	"
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	5.90	1	"	"	"	"	"	"
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	11.4	1	"	"	"	"	"	"
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.00		µg/l	5.00	0.82	1	"	"	"	"	"	"
64-17-5	Ethanol	< 200		µg/l	200	30.9	1	"	"	"	"	"	"
Surrogate recoveries:													
460-00-4	4-Bromofluorobenzene	93			70-130 %			"	"	"	"	"	"
2037-26-5	Toluene-d8	98			70-130 %			"	"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	110			70-130 %			"	"	"	"	"	"
1868-53-7	Dibromofluoromethane	98			70-130 %			"	"	"	"	"	"
Ethanol by SW846 8260													
64-17-5	Ethanol	< 200		µg/l	200	30.9	1	"	"	"	"	"	"
Surrogate recoveries:													
460-00-4	4-Bromofluorobenzene	93			70-130 %			"	"	"	"	"	"
2037-26-5	Toluene-d8	98			70-130 %			"	"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	110			70-130 %			"	"	"	"	"	"
1868-53-7	Dibromofluoromethane	98			70-130 %			"	"	"	"	"	"
Semivolatile Organic Compounds by GCMS													
PAHs by SIM													

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Semivolatile Organic Compounds by GC/MS													
PAHs by SIM													
83-32-9	Acenaphthene	< 0.050		µg/l	0.050	0.030	1	Mod. EPA 625	15-Mar-18	19-Mar-18	MSL	1803534	
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	"	"	"	"	"	
55-55-3	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	0.069		µg/l	0.050	0.020	1	"	"	"	"	"	
88-73-7	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	0.069		µg/l	0.050	0.022	1	"	"	"	"	"	
Surrogate recoveries:													
205440-82-0	Benzo (e) pyrene-d12	32			30-130 %			"	"	"	"	"	
Semivolatile Organic Compounds													
83-32-9	Acenaphthene	< 6.17		µg/l	6.17	0.853	1	EPA 625	"	19-Mar-18	MSL	"	X
208-96-8	Acenaphthylene	< 6.17		µg/l	6.17	0.843	1	"	"	"	"	"	X
120-12-7	Anthracene	< 6.17		µg/l	6.17	0.751	1	"	"	"	"	"	X
92-87-5	Benzidine	< 12.3		µg/l	12.3	1.42	1	"	"	"	"	"	X
55-55-3	Benzo (a) anthracene	< 6.17		µg/l	6.17	0.662	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 6.17		µg/l	6.17	0.694	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 6.17		µg/l	6.17	0.540	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 6.17		µg/l	6.17	0.654	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 6.17		µg/l	6.17	0.503	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 6.17		µg/l	6.17	0.822	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 6.17		µg/l	6.17	0.906	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 6.17		µg/l	6.17	0.960	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 6.17		µg/l	6.17	0.788	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 6.17		µg/l	6.17	0.743	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 6.17		µg/l	6.17	0.541	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 6.17		µg/l	6.17	0.619	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 6.17		µg/l	6.17	0.728	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 6.17		µg/l	6.17	0.923	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 6.17		µg/l	6.17	0.744	1	"	"	"	"	"	X
218-01-9	Chrysene	< 6.17		µg/l	6.17	0.657	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 6.17		µg/l	6.17	0.556	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 6.17		µg/l	6.17	0.694	1	"	"	"	"	"	X

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Semivolatile Organic Compounds by GCMS													
<u>Semivolatile Organic Compounds</u>													
541-73-1	1,3-Dichlorobenzene	< 6.17		µg/l	6.17	0.759	1	EPA 625	15-Mar-18	19-Mar-18	MSL	1803534	X
106-46-7	1,4-Dichlorobenzene	< 6.17		µg/l	6.17	0.758	1	"	"	"	"	"	X
91-94-1	3,3'-Dichlorobenzidine	< 6.17		µg/l	6.17	2.45	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 6.17		µg/l	6.17	0.654	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 6.17		µg/l	6.17	0.769	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 6.17		µg/l	6.17	0.936	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 6.17		µg/l	6.17	0.806	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 6.17		µg/l	6.17	0.564	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 6.17		µg/l	6.17	0.394	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 6.17		µg/l	6.17	0.693	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 6.17		µg/l	6.17	0.831	1	"	"	"	"	"	X
806-20-2	2,6-Dinitrotoluene	< 6.17		µg/l	6.17	0.732	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	16.3		µg/l	6.17	0.501	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 6.17		µg/l	6.17	0.788	1	"	"	"	"	"	X
88-73-7	Fluorene	< 6.17		µg/l	6.17	0.756	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 6.17		µg/l	6.17	0.705	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 6.17		µg/l	6.17	0.479	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 6.17		µg/l	6.17	1.28	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 6.17		µg/l	6.17	0.789	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 6.17		µg/l	6.17	0.716	1	"	"	"	"	"	X
78-59-1	Isophorone	< 6.17		µg/l	6.17	0.723	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 6.17		µg/l	6.17	0.846	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 6.17		µg/l	6.17	0.852	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 6.17		µg/l	6.17	0.574	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 6.17		µg/l	6.17	1.03	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 6.17		µg/l	6.17	0.831	1	"	"	"	"	"	X
821-64-7	N-Nitrosodi-n-propylamine	< 6.17		µg/l	6.17	0.714	1	"	"	"	"	"	X
85-30-6	N-Nitrosodiphenylamine	< 6.17		µg/l	6.17	0.804	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 6.17		µg/l	6.17	0.460	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 6.17		µg/l	6.17	0.723	1	"	"	"	"	"	X
108-95-2	Phenol	< 6.17		µg/l	6.17	0.796	1	"	"	"	"	"	X
129-00-0	Pyrene	< 6.17		µg/l	6.17	0.753	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 6.17		µg/l	6.17	0.848	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 6.17		µg/l	6.17	0.640	1	"	"	"	"	"	X
<u>Surrogate recoveries:</u>													
321-60-8	2-Fluorobiphenyl	27	SRE		30-130 %			"	"	"	"	"	
367-12-4	2-Fluorophenol	20			15-110 %			"	"	"	"	"	
4165-60-0	Nitrobenzene-d5	25	SRE		30-130 %			"	"	"	"	"	
4165-62-2	Phenol-d5	13	SRE		15-110 %			"	"	"	"	"	
1718-51-0	Terphenyl-d14	33			30-130 %			"	"	"	"	"	
118-79-6	2,4,6-Tribromophenol	33			15-110 %			"	"	"	"	"	
<u>Semivolatile Organic Compounds by GC</u>													
<u>Polychlorinated Biphenyls</u>													
12674-11-2	Aroclor-1016	< 0.192		µg/l	0.192	0.100	1	EPA 608	12-Mar-18	14-Mar-18	AM	1803365	X

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Semivolatile Organic Compounds by GC													
<u>Polychlorinated Biphenyls</u>													
11104-28-2	Aroclor-1221	< 0.192		µg/l	0.192	0.111	1	EPA 608	12-Mar-18	14-Mar-18	AM	1803365	X
11141-16-5	Aroclor-1232	< 0.192		µg/l	0.192	0.107	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 0.192		µg/l	0.192	0.103	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 0.192		µg/l	0.192	0.131	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 0.192		µg/l	0.192	0.112	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 0.192		µg/l	0.192	0.0818	1	"	"	"	"	"	X
37324-23-5	Aroclor-1262	< 0.192		µg/l	0.192	0.0862	1	"	"	"	"	"	X
11100-14-4	Aroclor-1268	< 0.192		µg/l	0.192	0.0880	1	"	"	"	"	"	X
<u>Surrogate recoveries:</u>													
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	35			30-150 %			"	"	"	"	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	30			30-150 %			"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	35			30-150 %			"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	35			30-150 %			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
<u>Prepared by method General Preparation SVOC</u>													
	Non-polar material (SGT-HEM)	< 1.0		mg/l	1.0	0.9	1	EPA 1664B	13-Mar-18	14-Mar-18	SC	1803437	
Total Metals by EPA 200/6000 Series Methods													
<u>Prepared by method General Prep-Metal</u>													
	Preservation	Field		N/A			1	EPA 200/6000 methods	12-Mar-18		KT	1803408	
Total Metals by EPA 200 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0035	1	EPA 200.7	14-Mar-18	15-Mar-18	TBC	1803452	X
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0028	1	"	"	"	"	"	X
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0002	1	"	"	"	"	"	X
7440-70-2	Calcium	24.9		mg/l	0.100	0.0340	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0019	1	"	"	"	"	"	X
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0029	1	"	"	"	"	"	X
7439-89-6	Iron	8.26		mg/l	0.0150	0.0100	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00013	1	EPA 245.1/7470A	"	15-Mar-18	ABW	1803453	X
7439-95-4	Magnesium	2.69		mg/l	0.0100	0.0074	1	EPA 200.7	"	15-Mar-18	TBC	1803452	X
7440-02-0	Nickel	< 0.0050		mg/l	0.0050	0.0010	1	"	"	"	"	"	X
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0034	1	"	"	"	"	"	X
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0026	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0072	1	"	"	"	"	"	X
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0024	1	"	"	"	"	"	X
7440-66-6	Zinc	0.0199		mg/l	0.0050	0.0027	1	"	"	"	"	"	X
General Chemistry Parameters													
	Hardness	73.3	HD	mg/l CaCO3	0.291	0.115	1	SM 2340B (11)	14-Mar-18	15-Mar-18	TBC	[CALC]	
13540-29-9	Hexavalent Chromium	< 0.050	R01, D	mg/l	0.050	0.021	10	SM3500-Cr-B (11)/7196A	09-Mar-18 15:38	09-Mar-18 15:54	TN	1803323	

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Sample Identification**MW-102**

SC44638-01

Client Project #

03 224195 08

Matrix

Ground Water

Collection Date/Time

09-Mar-18 10:55

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
General Chemistry Parameters													
	pH	6.13	pH	pH Units			1	ASTM D 1293-99B	09-Mar-18 17:00	09-Mar-18 18:00	BD	1803338	X
Reactivity Cyanide/Sulfide													
	Reactivity	See Narrative		mg/l			1	SW846 Ch. 7.3	15-Mar-18	15-Mar-18	TN	1803589	
57-12-5	Reactive Cyanide	< 25.0		mg/l	25.0	25.0	1	"	"	"	"	"	"
13496-25-8	Reactive Sulfide	< 50.0		mg/l	50.0	50.0	1	"	"	"	"	"	"
	Total Suspended Solids	28.0		mg/l	1.7	0.7	1	SM2540D (11)	14-Mar-18	15-Mar-18	CMB	1803506	X
Subcontracted Analyses													
<u>Prepared by method 422636</u>													
<i>Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007</i>													
7584-41-7	Ammonia as Nitrogen	5.08		mg/l	0.05	0.05	1	E350.1	08-Mar-18 10:55	14-Mar-18 11:39	M-CT007	422636A	
<u>Prepared by method 422607-SM4500CLE</u>													
<i>Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007</i>													
15887-00-6	Chloride	76.7		mg/l	3.0	3.0	1	SM4500CLE-97, -11	"	15-Mar-18 12:56	M-CT007	422607A	
<u>Prepared by method 422760-SW9010C/</u>													
<i>Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007</i>													
57-12-5	Total Cyanide	< 0.010		mg/l	0.010	0.010	1	SW9010C/SW9 012B	14-Mar-18	15-Mar-18 08:30	M-CT007	422760A	

Sample Identification**SWS-1**

SC44638-02

Client Project #

03 224195 08

Matrix

Surface Water

Collection Date/Time

09-Mar-18 11:30

Received

09-Mar-18

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Total Metals by EPA 200/6000 Series Methods													
<u>Prepared by method General Prep-Metal</u>													
Preservation		Field Preserved; pH<2 confirmed											
	N/A						1	EPA 200/6000 methods	12-Mar-18		KT	1803408	
Total Metals by EPA 200 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0035	1	EPA 200.7	14-Mar-18	15-Mar-18	TBC	1803452	X
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0028	1	"	"	"	"	"	X
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0002	1	"	"	"	"	"	X
7440-70-2	Calcium	38.0		mg/l	0.100	0.0340	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0019	1	"	"	"	"	"	X
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0029	1	"	"	"	"	"	X
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00013	1	EPA 245.1/7470A	"	15-Mar-18	ABW	1803453	X
7439-95-4	Magnesium	6.60		mg/l	0.0100	0.0074	1	EPA 200.7	"	15-Mar-18	TBC	1803452	X
7440-02-0	Nickel	< 0.0050		mg/l	0.0050	0.0010	1	"	"	"	"	"	X
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0034	1	"	"	"	"	"	X
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0026	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0072	1	"	"	"	"	"	X
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0024	1	"	"	"	"	"	X
7440-66-6	Zinc	0.0266		mg/l	0.0050	0.0027	1	"	"	"	"	"	X
General Chemistry Parameters													
	Hardness	122	HD	mg/l CaCO3	0.291	0.115	1	SM 2340B (11)	14-Mar-18	15-Mar-18	TBC	[CALC]	
	pH	6.23	pH	pH Units			1	ASTM D 1293-99B	09-Mar-18	09-Mar-18	BD	1803338	X
Subcontracted Analyses													
<u>Prepared by method 422636</u>													
<i>Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007</i>													
7564-41-7	Ammonia as Nitrogen	0.90		mg/l	0.05	0.05	1	E350.1	08-Mar-18	14-Mar-18	M-CT007	422636A	
									11:30	11:40			

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 524.2									
Batch 1803372 - SW846 5030 Water MS									
Blank (1803372-BLK1)									
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					

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD Limit
EPA 524.2								
Batch 1803372 - SW 846 5030 Water MS								
<u>Blank (1803372-BLK1)</u>								
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				
<u>Surrogate: 4-Bromofluorobenzene</u>								
	46.5		µg/l		50.0		93	80-120
<u>Surrogate: Toluene-d8</u>								
	48.0		µg/l		50.0		96	80-120
<u>Surrogate: 1,2-Dichloroethane-d4</u>								
	53.2		µg/l		50.0		106	80-120
<u>Surrogate: Dibromofluoromethane</u>								
	47.7		µg/l		50.0		95	80-120
<u>LCS (1803372-BS1)</u>								
Prepared & Analyzed: 12-Mar-18								
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.5		µg/l		20.0		103	80-120
Acetone	18.2		µg/l		20.0		91	70-130
Acrylonitrile	16.8		µg/l		20.0		84	70-130
Benzene	18.4		µg/l		20.0		92	80-120
Bromobenzene	20.3		µg/l		20.0		102	80-120
Bromochloromethane	20.1		µg/l		20.0		100	80-120
Bromodichloromethane	20.9		µg/l		20.0		104	80-120
Bromoform	20.8		µg/l		20.0		104	80-120
Bromomethane	23.6		µg/l		20.0		118	80-120
2-Butanone (MEK)	17.6		µg/l		20.0		88	70-130
n-Butylbenzene	19.4		µg/l		20.0		97	80-120
sec-Butylbenzene	20.0		µg/l		20.0		100	80-120
tert-Butylbenzene	20.1		µg/l		20.0		100	80-120
Carbon disulfide	20.4		µg/l		20.0		102	70-130
Carbon tetrachloride	21.4		µg/l		20.0		107	80-120
Chlorobenzene	19.8		µg/l		20.0		99	80-120
Chloroethane	23.9		µg/l		20.0		120	80-120
Chloroform	19.9		µg/l		20.0		99	80-120
Chloromethane	17.4		µg/l		20.0		87	80-120
2-Chlorotoluene	20.8		µg/l		20.0		104	80-120
4-Chlorotoluene	21.0		µg/l		20.0		105	80-120
1,2-Dibromo-3-chloropropane	22.7		µg/l		20.0		114	80-120
Dibromochloromethane	21.1		µg/l		20.0		105	80-120

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD Limit
EPA 524.2								
Batch 1803372 - SW846 5030 Water MS								
LCS(1803372-BS1)								
1,2-Dibromoethane (EDB)	19.4		µg/l		20.0		97	80-120
Dibromomethane	19.9		µg/l		20.0		100	80-120
1,2-Dichlorobenzene	20.8		µg/l		20.0		104	80-120
1,3-Dichlorobenzene	21.0		µg/l		20.0		105	80-120
1,4-Dichlorobenzene	20.3		µg/l		20.0		102	80-120
Dichlorodifluoromethane (Freon12)	18.5		µg/l		20.0		92	80-120
1,1-Dichloroethane	19.2		µg/l		20.0		96	80-120
1,2-Dichloroethane	20.0		µg/l		20.0		100	80-120
1,1-Dichloroethene	19.1		µg/l		20.0		96	80-120
cis-1,2-Dichloroethene	18.3		µg/l		20.0		91	80-120
trans-1,2-Dichloroethene	18.3		µg/l		20.0		91	80-120
1,2-Dichloropropane	18.3		µg/l		20.0		91	80-120
1,3-Dichloropropane	18.5		µg/l		20.0		92	80-120
2,2-Dichloropropane	18.7		µg/l		20.0		93	80-120
1,1-Dichloropropene	17.8		µg/l		20.0		89	80-120
cis-1,3-Dichloropropene	18.1		µg/l		20.0		90	80-120
trans-1,3-Dichloropropene	19.9		µg/l		20.0		100	80-120
Ethylbenzene	19.4		µg/l		20.0		97	80-120
Hexachlorobutadiene	20.1		µg/l		20.0		100	80-120
2-Hexanone (MBK)	17.4		µg/l		20.0		87	70-130
Isopropylbenzene	19.9		µg/l		20.0		100	80-120
4-Isopropyltoluene	20.1		µg/l		20.0		100	80-120
Methyl tert-butyl ether	18.1		µg/l		20.0		91	80-120
4-Methyl-2-pentanone (MIBK)	18.0		µg/l		20.0		90	70-130
Methylene chloride	18.6		µg/l		20.0		93	80-120
Naphthalene	24.8	QC2	µg/l		20.0		124	80-120
n-Propylbenzene	20.0		µg/l		20.0		100	80-120
Styrene	20.1		µg/l		20.0		101	80-120
1,1,1,2-Tetrachloroethane	22.5		µg/l		20.0		113	80-120
1,1,2,2-Tetrachloroethane	21.4		µg/l		20.0		107	80-120
Tetrachloroethene	18.4		µg/l		20.0		92	80-120
Toluene	18.8		µg/l		20.0		94	80-120
1,2,3-Trichlorobenzene	22.6		µg/l		20.0		113	80-120
1,2,4-Trichlorobenzene	21.6		µg/l		20.0		108	80-120
1,1,1-Trichloroethane	20.9		µg/l		20.0		105	80-120
1,1,2-Trichloroethane	19.3		µg/l		20.0		96	80-120
Trichloroethene	19.2		µg/l		20.0		96	80-120
Trichlorofluoromethane (Freon 11)	23.7		µg/l		20.0		118	80-120
1,2,3-Trichloropropane	21.5		µg/l		20.0		108	80-120
1,2,4-Trimethylbenzene	20.6		µg/l		20.0		103	80-120
1,3,5-Trimethylbenzene	20.7		µg/l		20.0		104	80-120
Vinyl chloride	21.7		µg/l		20.0		109	80-120
m,p-Xylene	19.8		µg/l		20.0		99	80-120
o-Xylene	19.5		µg/l		20.0		98	80-120
Tetrahydrofuran	16.4		µg/l		20.0		82	70-130
Tert-amyl methyl ether	17.9		µg/l		20.0		89	70-130
Ethyl tert-butyl ether	17.8		µg/l		20.0		89	70-130
Di-isopropyl ether	16.9		µg/l		20.0		84	70-130
Tert-Butanol / butyl alcohol	167		µg/l		200		83	70-130
Surrogate: 4-Bromofluorobenzene	48.8		µg/l		50.0		98	80-120

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 524.2									
Batch 1803372 - SW846 5030 Water MS									
<u>LCS (1803372-BS1)</u>									
Prepared & Analyzed: 12-Mar-18									
Surrogate: Toluene-d8	48.7		µg/l		50.0		97	80-120	
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106	80-120	
Surrogate: Dibromofluoromethane	48.2		µg/l		50.0		96	80-120	
EPA 624									
Batch 1803372 - SW846 5030 Water MS									
<u>Blank (1803372-BLK1)</u>									
Prepared & Analyzed: 12-Mar-18									
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					
Surrogate: 4-Bromofluorobenzene	46.5		µg/l		50.0		93	70-130	
Surrogate: Toluene-d8	48.0		µg/l		50.0		96	70-130	

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 624									
Batch 1803372 - SW846 5030 Water MS									
Blank (1803372-BLK1)									
Prepared & Analyzed: 12-Mar-18									
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106		70-130
Surrogate: Dibromofluoromethane	47.7		µg/l		50.0		95		70-130
LCS (1803372-BS1)									
Prepared & Analyzed: 12-Mar-18									
Acetone	18.2		µg/l		20.0		91		70-130
Benzene	18.4		µg/l		20.0		92		70-130
Bromodichloromethane	20.9		µg/l		20.0		104		35-155
Bromoform	20.8		µg/l		20.0		104		45-169
Bromomethane	23.6		µg/l		20.0		118		1-242
2-Butanone (MEK)	17.6		µg/l		20.0		88		70-130
Carbon disulfide	20.4		µg/l		20.0		102		70-130
Carbon tetrachloride	21.4		µg/l		20.0		107		70-140
Chlorobenzene	19.8		µg/l		20.0		99		70-130
Chloroethane	23.9		µg/l		20.0		120		14-230
Chloroform	19.9		µg/l		20.0		99		51-138
Chloromethane	17.4		µg/l		20.0		87		1-273
Dibromochloromethane	21.1		µg/l		20.0		105		53-149
Dibromomethane	19.9		µg/l		20.0		100		70-130
1,2-Dichlorobenzene	20.8		µg/l		20.0		104		18-190
1,3-Dichlorobenzene	21.0		µg/l		20.0		105		59-156
1,4-Dichlorobenzene	20.3		µg/l		20.0		102		18-190
1,1-Dichloroethane	19.2		µg/l		20.0		96		59-155
1,2-Dichloroethane	20.0		µg/l		20.0		100		49-155
1,1-Dichloroethene	19.1		µg/l		20.0		96		70-130
cis-1,2-Dichloroethene	18.3		µg/l		20.0		91		70-130
trans-1,2-Dichloroethene	18.3		µg/l		20.0		91		54-156
1,2-Dichloropropane	18.3		µg/l		20.0		91		1-210
cis-1,3-Dichloropropene	18.1		µg/l		20.0		90		1-227
trans-1,3-Dichloropropene	19.9		µg/l		20.0		100		17-183
Ethylbenzene	19.4		µg/l		20.0		97		37-162
2-Hexanone (MBK)	17.4		µg/l		20.0		87		70-130
Methyl tert-butyl ether	18.1		µg/l		20.0		91		70-130
4-Methyl-2-pentanone (MIBK)	18.0		µg/l		20.0		90		70-130
Methylene chloride	18.6		µg/l		20.0		93		1-221
Styrene	20.1		µg/l		20.0		101		70-130
1,1,2,2-Tetrachloroethane	21.4		µg/l		20.0		107		46-157
Tetrachloroethene	18.4		µg/l		20.0		92		64-148
Toluene	18.8		µg/l		20.0		94		70-130
1,1,1-Trichloroethane	20.9		µg/l		20.0		105		52-162
1,1,2-Trichloroethane	19.3		µg/l		20.0		96		52-150
Trichloroethene	19.2		µg/l		20.0		96		71-157
Trichlorofluoromethane (Freon 11)	23.7		µg/l		20.0		118		17-181
Vinyl chloride	21.7		µg/l		20.0		109		1-251
m,p-Xylene	19.8		µg/l		20.0		99		70-130
o-Xylene	19.5		µg/l		20.0		98		70-130
Prepared & Analyzed: 12-Mar-18									
Surrogate: 4-Bromofluorobenzene	48.8		µg/l		50.0		98		70-130
Surrogate: Toluene-d8	48.7		µg/l		50.0		97		70-130
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106		70-130
Surrogate: Dibromofluoromethane	48.2		µg/l		50.0		96		70-130
LCS Dup (1803372-BSD1)									
Prepared & Analyzed: 12-Mar-18									
Acetone	18.6		µg/l		20.0		93		70-130
2									
30									

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 624										
Batch 1803372 - SW846 5030 Water MS										
LCS Dup (1803372-BSD1)										
Benzene	17.9		µg/l		20.0		90	70-130	2	30
Bromodichloromethane	20.2		µg/l		20.0		101	35-155	3	30
Bromoform	20.8		µg/l		20.0		104	45-169	0.5	30
Bromomethane	22.1		µg/l		20.0		111	1-242	6	30
2-Butanone (MEK)	17.7		µg/l		20.0		89	70-130	1	30
Carbon disulfide	19.1		µg/l		20.0		96	70-130	6	30
Carbon tetrachloride	20.8		µg/l		20.0		104	70-140	3	30
Chlorobenzene	19.2		µg/l		20.0		96	70-130	3	30
Chloroethane	23.2		µg/l		20.0		116	14-230	3	30
Chloroform	19.4		µg/l		20.0		97	51-138	2	30
Chloromethane	16.7		µg/l		20.0		84	1-273	4	30
Dibromochloromethane	20.8		µg/l		20.0		104	53-149	2	30
Dibromomethane	19.4		µg/l		20.0		97	70-130	3	25
1,2-Dichlorobenzene	19.6		µg/l		20.0		98	18-190	6	30
1,3-Dichlorobenzene	20.1		µg/l		20.0		101	59-156	4	30
1,4-Dichlorobenzene	19.5		µg/l		20.0		98	18-190	4	30
1,1-Dichloroethane	18.6		µg/l		20.0		93	59-155	4	30
1,2-Dichloroethane	19.5		µg/l		20.0		98	49-155	3	30
1,1-Dichloroethene	19.0		µg/l		20.0		95	70-130	0.4	30
cis-1,2-Dichloroethene	17.8		µg/l		20.0		89	70-130	3	30
trans-1,2-Dichloroethene	17.8		µg/l		20.0		89	54-156	3	30
1,2-Dichloropropane	18.0		µg/l		20.0		90	1-210	1	30
cis-1,3-Dichloropropene	17.7		µg/l		20.0		89	1-227	2	30
trans-1,3-Dichloropropene	19.2		µg/l		20.0		96	17-183	4	30
Ethylbenzene	19.0		µg/l		20.0		95	37-162	2	30
2-Hexanone (MBK)	17.7		µg/l		20.0		89	70-130	2	30
Methyl tert-butyl ether	17.7		µg/l		20.0		88	70-130	3	30
4-Methyl-2-pentanone (MIBK)	18.1		µg/l		20.0		90	70-130	0.6	30
Methylene chloride	18.3		µg/l		20.0		92	1-221	1	30
Styrene	19.5		µg/l		20.0		98	70-130	3	30
1,1,2,2-Tetrachloroethane	21.3		µg/l		20.0		106	46-157	0.7	30
Tetrachloroethene	17.8		µg/l		20.0		89	64-148	3	30
Toluene	18.3		µg/l		20.0		92	70-130	3	30
1,1,1-Trichloroethane	20.2		µg/l		20.0		101	52-162	4	30
1,1,2-Trichloroethane	18.9		µg/l		20.0		94	52-150	2	30
Trichloroethene	18.4		µg/l		20.0		92	71-157	4	30
Trichlorofluoromethane (Freon 11)	22.6		µg/l		20.0		113	17-181	5	30
Vinyl chloride	21.0		µg/l		20.0		105	1-251	3	30
m,p-Xylene	19.2		µg/l		20.0		96	70-130	3	30
o-Xylene	19.0		µg/l		20.0		95	70-130	3	30
Surrogate: 4-Bromofluorobenzene										
	49.0		µg/l		50.0		98	70-130		
Surrogate: Toluene-d8										
	48.4		µg/l		50.0		97	70-130		
Surrogate: 1,2-Dichloroethane-d4										
	52.4		µg/l		50.0		105	70-130		
Surrogate: Dibromofluoromethane										
	48.1		µg/l		50.0		96	70-130		
SW846 8260C										
Batch 1803372 - SW846 5030 Water MS										
Blank (1803372-BLK1)										
Prepared & Analyzed: 12-Mar-18										
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00						
Acetone	< 10.0		µg/l	10.0						
Acrylonitrile	< 0.50		µg/l	0.50						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
SW846 8260C Batch 1803372 - SW846 5030 Water MS Blank (1803372-BLK1)									
Benzene	< 1.00		µg/l	1.00					
Bromobenzene	< 1.00		µg/l	1.00					
Bromochloromethane	< 1.00		µg/l	1.00					
Bromodichloromethane	< 0.50		µg/l	0.50					
Bromoform	< 1.00		µg/l	1.00					
Bromomethane	< 2.00		µg/l	2.00					
2-Butanone (MEK)	< 2.00		µg/l	2.00					
n-Butylbenzene	< 1.00		µg/l	1.00					
sec-Butylbenzene	< 1.00		µg/l	1.00					
tert-Butylbenzene	< 1.00		µg/l	1.00					
Carbon disulfide	< 2.00		µg/l	2.00					
Carbon tetrachloride	< 1.00		µg/l	1.00					
Chlorobenzene	< 1.00		µg/l	1.00					
Chloroethane	< 2.00		µg/l	2.00					
Chloroform	< 1.00		µg/l	1.00					
Chloromethane	< 2.00		µg/l	2.00					
2-Chlorotoluene	< 1.00		µg/l	1.00					
4-Chlorotoluene	< 1.00		µg/l	1.00					
1,2-Dibromo-3-chloropropane	< 2.00		µg/l	2.00					
Dibromochloromethane	< 0.50		µg/l	0.50					
1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50					
Dibromomethane	< 1.00		µg/l	1.00					
1,2-Dichlorobenzene	< 1.00		µg/l	1.00					
1,3-Dichlorobenzene	< 1.00		µg/l	1.00					
1,4-Dichlorobenzene	< 1.00		µg/l	1.00					
Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00					
1,1-Dichloroethane	< 1.00		µg/l	1.00					
1,2-Dichloroethane	< 1.00		µg/l	1.00					
1,1-Dichloroethene	< 1.00		µg/l	1.00					
cis-1,2-Dichloroethene	< 1.00		µg/l	1.00					
trans-1,2-Dichloroethene	< 1.00		µg/l	1.00					
1,2-Dichloropropane	< 1.00		µg/l	1.00					
1,3-Dichloropropane	< 1.00		µg/l	1.00					
2,2-Dichloropropane	< 1.00		µg/l	1.00					
1,1-Dichloropropene	< 1.00		µg/l	1.00					
cis-1,3-Dichloropropene	< 0.50		µg/l	0.50					
trans-1,3-Dichloropropene	< 0.50		µg/l	0.50					
Ethylbenzene	< 1.00		µg/l	1.00					
Hexachlorobutadiene	< 0.50		µg/l	0.50					
2-Hexanone (MBK)	< 2.00		µg/l	2.00					
Isopropylbenzene	< 1.00		µg/l	1.00					
4-Isopropyltoluene	< 1.00		µg/l	1.00					
Methyl tert-butyl ether	< 1.00		µg/l	1.00					
4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00					
Methylene chloride	< 2.00		µg/l	2.00					
Naphthalene	< 1.00		µg/l	1.00					
n-Propylbenzene	< 1.00		µg/l	1.00					
Styrene	< 1.00		µg/l	1.00					
1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00					
1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50					

Prepared & Analyzed: 12-Mar-18

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
<p>SW846 8260C</p> <p>Batch 1803372 - SW846 5030 Water MS</p> <p>Blank (1803372-BLK1)</p> <p>Prepared & Analyzed: 12-Mar-18</p>									
Tetrachloroethene	< 1.00		µg/l	1.00					
Toluene	< 1.00		µg/l	1.00					
1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00					
1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00					
1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00					
1,1,1-Trichloroethane	< 1.00		µg/l	1.00					
1,1,2-Trichloroethane	< 1.00		µg/l	1.00					
Trichloroethene	< 1.00		µg/l	1.00					
Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00					
1,2,3-Trichloropropane	< 1.00		µg/l	1.00					
1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00					
1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00					
Vinyl chloride	< 1.00		µg/l	1.00					
m,p-Xylene	< 2.00		µg/l	2.00					
o-Xylene	< 1.00		µg/l	1.00					
Tetrahydrofuran	< 2.00		µg/l	2.00					
Ethyl ether	< 1.00		µg/l	1.00					
Tert-amyl methyl ether	< 1.00		µg/l	1.00					
Ethyl tert-butyl ether	< 1.00		µg/l	1.00					
Di-isopropyl ether	< 1.00		µg/l	1.00					
Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0					
1,4-Dioxane	< 20.0		µg/l	20.0					
trans-1,4-Dichloro-2-butene	< 5.00		µg/l	5.00					
Ethanol	< 200		µg/l	200					
Ethanol	< 200		µg/l	200					
Surrogate: 4-Bromofluorobenzene	46.5		µg/l		50.0		93	70-130	
Surrogate: 4-Bromofluorobenzene	46.5		µg/l		50.0		93	70-130	
Surrogate: Toluene-d8	48.0		µg/l		50.0		96	70-130	
Surrogate: Toluene-d8	48.0		µg/l		50.0		96	70-130	
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106	70-130	
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106	70-130	
Surrogate: Dibromofluoromethane	47.7		µg/l		50.0		95	70-130	
Surrogate: Dibromofluoromethane	47.7		µg/l		50.0		95	70-130	
<p>LCS (1803372-BS1)</p> <p>Prepared & Analyzed: 12-Mar-18</p>									
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.5		µg/l		20.0		103	70-130	
Acetone	18.2		µg/l		20.0		91	70-130	
Acrylonitrile	16.8		µg/l		20.0		84	70-130	
Benzene	18.4		µg/l		20.0		92	70-130	
Bromobenzene	20.3		µg/l		20.0		102	70-130	
Bromochloromethane	20.1		µg/l		20.0		100	70-130	
Bromodichloromethane	20.9		µg/l		20.0		104	70-130	
Bromoforn	20.8		µg/l		20.0		104	70-130	
Bromomethane	23.6		µg/l		20.0		118	70-130	
2-Butanone (MEK)	17.6		µg/l		20.0		88	70-130	
n-Butylbenzene	19.4		µg/l		20.0		97	70-130	
sec-Butylbenzene	20.0		µg/l		20.0		100	70-130	
tert-Butylbenzene	20.1		µg/l		20.0		100	70-130	
Carbon disulfide	20.4		µg/l		20.0		102	70-130	
Carbon tetrachloride	21.4		µg/l		20.0		107	70-130	
Chlorobenzene	19.8		µg/l		20.0		99	70-130	

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
<p>SW846 8260C Batch 1803372 - SW 846 5030 Water MS LCS(1803372-BS1)</p>									
Chloroethane	23.9		µg/l		20.0		120		70-130
Chloroform	19.9		µg/l		20.0		99		70-130
Chloromethane	17.4		µg/l		20.0		87		70-130
2-Chlorotoluene	20.8		µg/l		20.0		104		70-130
4-Chlorotoluene	21.0		µg/l		20.0		105		70-130
1,2-Dibromo-3-chloropropane	22.7		µg/l		20.0		114		70-130
Dibromochloromethane	21.1		µg/l		20.0		105		70-130
1,2-Dibromoethane (EDB)	19.4		µg/l		20.0		97		70-130
Dibromomethane	19.9		µg/l		20.0		100		70-130
1,2-Dichlorobenzene	20.8		µg/l		20.0		104		70-130
1,3-Dichlorobenzene	21.0		µg/l		20.0		105		70-130
1,4-Dichlorobenzene	20.3		µg/l		20.0		102		70-130
Dichlorodifluoromethane (Freon12)	18.5		µg/l		20.0		92		70-130
1,1-Dichloroethane	19.2		µg/l		20.0		96		70-130
1,2-Dichloroethane	20.0		µg/l		20.0		100		70-130
1,1-Dichloroethene	19.1		µg/l		20.0		96		70-130
cis-1,2-Dichloroethene	18.3		µg/l		20.0		91		70-130
trans-1,2-Dichloroethene	18.3		µg/l		20.0		91		70-130
1,2-Dichloropropane	18.3		µg/l		20.0		91		70-130
1,3-Dichloropropane	18.5		µg/l		20.0		92		70-130
2,2-Dichloropropane	18.7		µg/l		20.0		93		70-130
1,1-Dichloropropene	17.8		µg/l		20.0		89		70-130
cis-1,3-Dichloropropene	18.1		µg/l		20.0		90		70-130
trans-1,3-Dichloropropene	19.9		µg/l		20.0		100		70-130
Ethylbenzene	19.4		µg/l		20.0		97		70-130
Hexachlorobutadiene	20.1		µg/l		20.0		100		70-130
2-Hexanone (MBK)	17.4		µg/l		20.0		87		70-130
Isopropylbenzene	19.9		µg/l		20.0		100		70-130
4-Isopropyltoluene	20.1		µg/l		20.0		100		70-130
Methyl tert-butyl ether	18.1		µg/l		20.0		91		70-130
4-Methyl-2-pentanone (MIBK)	18.0		µg/l		20.0		90		70-130
Methylene chloride	18.6		µg/l		20.0		93		70-130
Naphthalene	24.8		µg/l		20.0		124		70-130
n-Propylbenzene	20.0		µg/l		20.0		100		70-130
Styrene	20.1		µg/l		20.0		101		70-130
1,1,1,2-Tetrachloroethane	22.5		µg/l		20.0		113		70-130
1,1,2,2-Tetrachloroethane	21.4		µg/l		20.0		107		70-130
Tetrachloroethene	18.4		µg/l		20.0		92		70-130
Toluene	18.8		µg/l		20.0		94		70-130
1,2,3-Trichlorobenzene	22.6		µg/l		20.0		113		70-130
1,2,4-Trichlorobenzene	21.6		µg/l		20.0		108		70-130
1,3,5-Trichlorobenzene	22.1		µg/l		20.0		110		70-130
1,1,1-Trichloroethane	20.9		µg/l		20.0		105		70-130
1,1,2-Trichloroethane	19.3		µg/l		20.0		96		70-130
Trichloroethene	19.2		µg/l		20.0		96		70-130
Trichlorofluoromethane (Freon 11)	23.7		µg/l		20.0		118		70-130
1,2,3-Trichloropropane	21.5		µg/l		20.0		108		70-130
1,2,4-Trimethylbenzene	20.6		µg/l		20.0		103		70-130
1,3,5-Trimethylbenzene	20.7		µg/l		20.0		104		70-130
Vinyl chloride	21.7		µg/l		20.0		109		70-130

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
SW846 8260C									
Batch 1803372 - SW846 5030 Water MS									
<u>LCS (1803372-BS1)</u>									
					Prepared & Analyzed: 12-Mar-18				
m,p-Xylene	19.8		µg/l		20.0		99	70-130	
o-Xylene	19.5		µg/l		20.0		98	70-130	
Tetrahydrofuran	16.4		µg/l		20.0		82	70-130	
Ethyl ether	19.5		µg/l		20.0		97	70-130	
Tert-amyl methyl ether	17.9		µg/l		20.0		89	70-130	
Ethyl tert-butyl ether	17.8		µg/l		20.0		89	70-130	
Di-isopropyl ether	16.9		µg/l		20.0		84	70-130	
Tert-Butanol / butyl alcohol	167		µg/l		200		83	70-130	
1,4-Dioxane	169		µg/l		200		84	70-130	
trans-1,4-Dichloro-2-butene	24.6		µg/l		20.0		123	70-130	
Ethanol	362		µg/l		400		90	70-130	
Ethanol	362		µg/l		400		90	70-130	
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Surrogate: 4-Bromofluorobenzene	48.8		µg/l		50.0		98	70-130	
Surrogate: 4-Bromofluorobenzene	48.8		µg/l		50.0		98	70-130	
Surrogate: Toluene-d8	48.7		µg/l		50.0		97	70-130	
Surrogate: Toluene-d8	48.7		µg/l		50.0		97	70-130	
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106	70-130	
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106	70-130	
Surrogate: Dibromofluoromethane	48.2		µg/l		50.0		96	70-130	
Surrogate: Dibromofluoromethane	48.2		µg/l		50.0		96	70-130	
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					Prepared & Analyzed: 12-Mar-18				
LCS Dup (1803372-BSD1)									
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.9		µg/l		20.0		100	70-130	3
Acetone	18.6		µg/l		20.0		93	70-130	2
Acrylonitrile	17.4		µg/l		20.0		87	70-130	4
Benzene	17.9		µg/l		20.0		90	70-130	2
Bromobenzene	19.8		µg/l		20.0		99	70-130	2
Bromochloromethane	19.2		µg/l		20.0		96	70-130	4
Bromodichloromethane	20.2		µg/l		20.0		101	70-130	3
Bromoform	20.8		µg/l		20.0		104	70-130	0.5
Bromomethane	22.1		µg/l		20.0		111	70-130	6
2-Butanone (MEK)	17.7		µg/l		20.0		89	70-130	1
n-Butylbenzene	19.0		µg/l		20.0		95	70-130	2
sec-Butylbenzene	19.9		µg/l		20.0		100	70-130	0.7
tert-Butylbenzene	19.7		µg/l		20.0		98	70-130	2
Carbon disulfide	19.1		µg/l		20.0		96	70-130	6
Carbon tetrachloride	20.8		µg/l		20.0		104	70-130	3
Chlorobenzene	19.2		µg/l		20.0		96	70-130	3
Chloroethane	23.2		µg/l		20.0		116	70-130	3
Chloroform	19.4		µg/l		20.0		97	70-130	2
Chloromethane	16.7		µg/l		20.0		84	70-130	4
2-Chlorotoluene	20.1		µg/l		20.0		100	70-130	4
4-Chlorotoluene	20.1		µg/l		20.0		101	70-130	4
1,2-Dibromo-3-chloropropane	22.3		µg/l		20.0		112	70-130	2
Dibromochloromethane	20.8		µg/l		20.0		104	70-130	2
1,2-Dibromoethane (EDB)	19.1		µg/l		20.0		95	70-130	2
Dibromomethane	19.4		µg/l		20.0		97	70-130	3
1,2-Dichlorobenzene	19.6		µg/l		20.0		98	70-130	6
1,3-Dichlorobenzene	20.1		µg/l		20.0		101	70-130	4
1,4-Dichlorobenzene	19.5		µg/l		20.0		98	70-130	4
Dichlorodifluoromethane (Freon12)	17.8		µg/l		20.0		89	70-130	4

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
SW846 8260C									
Batch 1803372 - SW846 5030 Water MS									
LCS Dup (1803372-BSD1)									
1,1-Dichloroethane	18.6		µg/l		20.0		93 70-130	4	20
1,2-Dichloroethane	19.5		µg/l		20.0		98 70-130	3	20
1,1-Dichloroethene	19.0		µg/l		20.0		95 70-130	0.4	20
cis-1,2-Dichloroethene	17.8		µg/l		20.0		89 70-130	3	20
trans-1,2-Dichloroethene	17.8		µg/l		20.0		89 70-130	3	20
1,2-Dichloropropane	18.0		µg/l		20.0		90 70-130	1	20
1,3-Dichloropropane	18.1		µg/l		20.0		90 70-130	2	20
2,2-Dichloropropane	17.7		µg/l		20.0		88 70-130	5	20
1,1-Dichloropropene	17.4		µg/l		20.0		87 70-130	2	20
cis-1,3-Dichloropropene	17.7		µg/l		20.0		89 70-130	2	20
trans-1,3-Dichloropropene	19.2		µg/l		20.0		96 70-130	4	20
Ethylbenzene	19.0		µg/l		20.0		95 70-130	2	20
Hexachlorobutadiene	20.8		µg/l		20.0		104 70-130	3	20
2-Hexanone (MBK)	17.7		µg/l		20.0		89 70-130	2	20
Isopropylbenzene	19.5		µg/l		20.0		97 70-130	2	20
4-Isopropyltoluene	19.6		µg/l		20.0		98 70-130	3	20
Methyl tert-butyl ether	17.7		µg/l		20.0		88 70-130	3	20
4-Methyl-2-pentanone (MIBK)	18.1		µg/l		20.0		90 70-130	0.6	20
Methylene chloride	18.3		µg/l		20.0		92 70-130	1	20
Naphthalene	24.6		µg/l		20.0		123 70-130	0.8	20
n-Propylbenzene	19.4		µg/l		20.0		97 70-130	3	20
Styrene	19.5		µg/l		20.0		98 70-130	3	20
1,1,1,2-Tetrachloroethane	22.0		µg/l		20.0		110 70-130	2	20
1,1,2,2-Tetrachloroethane	21.3		µg/l		20.0		106 70-130	0.7	20
Tetrachloroethene	17.8		µg/l		20.0		89 70-130	3	20
Toluene	18.3		µg/l		20.0		92 70-130	3	20
1,2,3-Trichlorobenzene	22.1		µg/l		20.0		110 70-130	2	20
1,2,4-Trichlorobenzene	21.3		µg/l		20.0		107 70-130	1	20
1,3,5-Trichlorobenzene	21.6		µg/l		20.0		108 70-130	2	20
1,1,1-Trichloroethane	20.2		µg/l		20.0		101 70-130	4	20
1,1,2-Trichloroethane	18.9		µg/l		20.0		94 70-130	2	20
Trichloroethene	18.4		µg/l		20.0		92 70-130	4	20
Trichlorofluoromethane (Freon 11)	22.6		µg/l		20.0		113 70-130	5	20
1,2,3-Trichloropropane	21.5		µg/l		20.0		108 70-130	0.09	20
1,2,4-Trimethylbenzene	20.0		µg/l		20.0		100 70-130	3	20
1,3,5-Trimethylbenzene	20.3		µg/l		20.0		102 70-130	2	20
Vinyl chloride	21.0		µg/l		20.0		105 70-130	3	20
m,p-Xylene	19.2		µg/l		20.0		96 70-130	3	20
o-Xylene	19.0		µg/l		20.0		95 70-130	3	20
Tetrahydrofuran	16.6		µg/l		20.0		83 70-130	1	20
Ethyl ether	20.7		µg/l		20.0		104 70-130	6	20
Tert-amyl methyl ether	17.5		µg/l		20.0		88 70-130	2	20
Ethyl tert-butyl ether	17.4		µg/l		20.0		87 70-130	2	20
Di-isopropyl ether	16.5		µg/l		20.0		82 70-130	3	20
Tert-Butanol / butyl alcohol	165		µg/l		200		83 70-130	0.8	20
1,4-Dioxane	173		µg/l		200		86 70-130	2	20
trans-1,4-Dichloro-2-butene	24.9		µg/l		20.0		125 70-130	1	20
Ethanol	366		µg/l		400		91 70-130	1	20
Ethanol	366		µg/l		400		91 70-130	1	20
Surrogate: 4-Bromofluorobenzene	49.0		µg/l		50.0		98 70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1803372 - SW846 5030 Water MS										
LCS Dup (1803372-BSD1)										
Prepared & Analyzed: 12-Mar-18										
Surrogate: 4-Bromofluorobenzene	49.0		µg/l		50.0		98	70-130		
Surrogate: Toluene-d8	48.4		µg/l		50.0		97	70-130		
Surrogate: Toluene-d8	48.4		µg/l		50.0		97	70-130		
Surrogate: 1,2-Dichloroethane-d4	52.4		µg/l		50.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	52.4		µg/l		50.0		105	70-130		
Surrogate: Dibromofluoromethane	48.1		µg/l		50.0		96	70-130		
Surrogate: Dibromofluoromethane	48.1		µg/l		50.0		96	70-130		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 625 Batch 1803534 - SW846 3510C Blank (1803534-BLK3)									
Acenaphthene	< 5.00		µg/l	5.00					
Acenaphthylene	< 5.00		µg/l	5.00					
Anthracene	< 5.00		µg/l	5.00					
Benztidine	< 10.0		µg/l	10.0					
Benzo (a) anthracene	< 5.00		µg/l	5.00					
Benzo (a) pyrene	< 5.00		µg/l	5.00					
Benzo (b) fluoranthene	< 5.00		µg/l	5.00					
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00					
Benzo (k) fluoranthene	< 5.00		µg/l	5.00					
Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00					
Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00					
Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00					
Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00					
4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00					
Butyl benzyl phthalate	< 5.00		µg/l	5.00					
4-Chloro-3-methylphenol	< 5.00		µg/l	5.00					
2-Chloronaphthalene	< 5.00		µg/l	5.00					
2-Chlorophenol	< 5.00		µg/l	5.00					
4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00					
Chrysene	< 5.00		µg/l	5.00					
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00					
1,2-Dichlorobenzene	< 5.00		µg/l	5.00					
1,3-Dichlorobenzene	< 5.00		µg/l	5.00					
1,4-Dichlorobenzene	< 5.00		µg/l	5.00					
3,3'-Dichlorobenzidine	< 5.00		µg/l	5.00					
2,4-Dichlorophenol	< 5.00		µg/l	5.00					
Diethyl phthalate	< 5.00		µg/l	5.00					
Dimethyl phthalate	< 5.00		µg/l	5.00					
2,4-Dimethylphenol	< 5.00		µg/l	5.00					
Di-n-butyl phthalate	< 5.00		µg/l	5.00					
4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00					
2,4-Dinitrophenol	< 5.00		µg/l	5.00					
2,4-Dinitrotoluene	< 5.00		µg/l	5.00					
2,6-Dinitrotoluene	< 5.00		µg/l	5.00					
Di-n-octyl phthalate	< 5.00		µg/l	5.00					
Fluoranthene	< 5.00		µg/l	5.00					
Fluorene	< 5.00		µg/l	5.00					
Hexachlorobenzene	< 5.00		µg/l	5.00					
Hexachlorobutadiene	< 5.00		µg/l	5.00					
Hexachlorocyclopentadiene	< 5.00		µg/l	5.00					
Hexachloroethane	< 5.00		µg/l	5.00					
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00					
Isophorone	< 5.00		µg/l	5.00					
Naphthalene	< 5.00		µg/l	5.00					
Nitrobenzene	< 5.00		µg/l	5.00					
2-Nitrophenol	< 5.00		µg/l	5.00					
4-Nitrophenol	< 5.00		µg/l	5.00					
N-Nitrosodimethylamine	< 5.00		µg/l	5.00					
N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00					
N-Nitrosodiphenylamine	< 5.00		µg/l	5.00					

Prepared: 15-Mar-18 Analyzed: 19-Mar-18

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD Limit
EPA 625								
Batch 1803534 - SW846 3510C								
Blank (1803534-BLK3)								
Pentachlorophenol	< 5.00		µg/l	5.00				
Phenanthrene	< 5.00		µg/l	5.00				
Phenol	< 5.00		µg/l	5.00				
Pyrene	< 5.00		µg/l	5.00				
1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00				
2,4,6-Trichlorophenol	< 5.00		µg/l	5.00				
Surrogate: 2-Fluorobiphenyl								
	29.4		µg/l		50.0		59	30-130
Surrogate: 2-Fluorophenol								
	27.0		µg/l		50.0		54	15-110
Surrogate: Nitrobenzene-d5								
	27.4		µg/l		50.0		55	30-130
Surrogate: Phenol-d5								
	22.3		µg/l		50.0		45	15-110
Surrogate: Terphenyl-d14								
	35.2		µg/l		50.0		70	30-130
Surrogate: 2,4,6-Tribromophenol								
	35.4		µg/l		50.0		71	15-110
Prepared: 15-Mar-18 Analyzed: 19-Mar-18								
LCS (1803534-BS3)								
Acenaphthene	34.1		µg/l	5.00	50.0		68	47-145
Acenaphthylene	33.0		µg/l	5.00	50.0		66	33-145
Anthracene	35.5		µg/l	5.00	50.0		71	27-133
Benzidine	17.9	QC6	µg/l	10.0	50.0		36	40-140
Benzo (a) anthracene	36.6		µg/l	5.00	50.0		73	33-143
Benzo (a) pyrene	32.4		µg/l	5.00	50.0		65	17-163
Benzo (b) fluoranthene	34.4		µg/l	5.00	50.0		69	24-159
Benzo (g,h,i) perylene	32.2		µg/l	5.00	50.0		64	1-219
Benzo (k) fluoranthene	28.2		µg/l	5.00	50.0		56	11-162
Bis(2-chloroethoxy)methane	27.3		µg/l	5.00	50.0		55	33-184
Bis(2-chloroethyl)ether	28.7		µg/l	5.00	50.0		57	12-158
Bis(2-chloroisopropyl)ether	22.3		µg/l	5.00	50.0		45	36-166
Bis(2-ethylhexyl)phthalate	32.6		µg/l	5.00	50.0		65	8-158
4-Bromophenyl phenyl ether	35.6		µg/l	5.00	50.0		71	53-127
Butyl benzyl phthalate	31.4		µg/l	5.00	50.0		63	1-152
4-Chloro-3-methylphenol	34.2		µg/l	5.00	50.0		68	22-147
2-Chloronaphthalene	35.8		µg/l	5.00	50.0		72	60-118
2-Chlorophenol	32.0		µg/l	5.00	50.0		64	23-134
4-Chlorophenyl phenyl ether	34.3		µg/l	5.00	50.0		69	25-158
Chrysene	34.3		µg/l	5.00	50.0		69	17-168
Dibenzo (a,h) anthracene	33.8		µg/l	5.00	50.0		68	1-227
1,2-Dichlorobenzene	30.4		µg/l	5.00	50.0		61	32-129
1,3-Dichlorobenzene	30.2		µg/l	5.00	50.0		60	1-172
1,4-Dichlorobenzene	30.2		µg/l	5.00	50.0		60	20-124
3,3'-Dichlorobenzidine	41.1		µg/l	5.00	50.0		82	1-262
2,4-Dichlorophenol	35.6		µg/l	5.00	50.0		71	39-135
Diethyl phthalate	31.9		µg/l	5.00	50.0		64	1-114
Dimethyl phthalate	30.0		µg/l	5.00	50.0		60	1-112
2,4-Dimethylphenol	30.1		µg/l	5.00	50.0		60	32-119
Di-n-butyl phthalate	33.1		µg/l	5.00	50.0		66	1-118
4,6-Dinitro-2-methylphenol	35.5		µg/l	5.00	50.0		71	1-181
2,4-Dinitrophenol	30.2		µg/l	5.00	50.0		60	1-191
2,4-Dinitrotoluene	43.7		µg/l	5.00	50.0		87	39-139
2,6-Dinitrotoluene	43.3		µg/l	5.00	50.0		87	50-158
Di-n-octyl phthalate	29.2		µg/l	5.00	50.0		58	4-146
Fluoranthene	37.5		µg/l	5.00	50.0		75	26-137
Fluorene	34.6		µg/l	5.00	50.0		69	59-121

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 625 Batch 1803534 - SW846 3510C LCS (1803534-BS3)									
Prepared: 15-Mar-18 Analyzed: 19-Mar-18									
Hexachlorobenzene	41.4		µg/l	5.00	50.0		83 1-152		
Hexachlorobutadiene	31.6		µg/l	5.00	50.0		63 24-116		
Hexachlorocyclopentadiene	31.6		µg/l	5.00	50.0		63 40-140		
Hexachloroethane	28.4		µg/l	5.00	50.0		57 40-113		
Indeno (1,2,3-cd) pyrene	35.0		µg/l	5.00	50.0		70 1-171		
Isophorone	30.4		µg/l	5.00	50.0		61 21-196		
Naphthalene	32.3		µg/l	5.00	50.0		65 21-133		
Nitrobenzene	34.4		µg/l	5.00	50.0		69 35-180		
2-Nitrophenol	34.2		µg/l	5.00	50.0		68 29-182		
4-Nitrophenol	29.9		µg/l	5.00	50.0		60 1-132		
N-Nitrosodimethylamine	23.8		µg/l	5.00	50.0		48 40-140		
N-Nitrosodi-n-propylamine	28.1		µg/l	5.00	50.0		56 1-230		
N-Nitrosodiphenylamine	35.2		µg/l	5.00	50.0		70 40-140		
Pentachlorophenol	33.5		µg/l	5.00	50.0		67 14-176		
Phenanthrene	35.3		µg/l	5.00	50.0		71 54-120		
Phenol	17.7		µg/l	5.00	50.0		35 5-112		
Pyrene	35.8		µg/l	5.00	50.0		72 52-115		
1,2,4-Trichlorobenzene	34.8		µg/l	5.00	50.0		70 44-142		
2,4,6-Trichlorophenol	32.4		µg/l	5.00	50.0		65 37-144		
Surrogate: 2-Fluorobiphenyl									
	31.6		µg/l		50.0		63 30-130		
Surrogate: 2-Fluorophenol									
	23.9		µg/l		50.0		48 15-110		
Surrogate: Nitrobenzene-d5									
	30.5		µg/l		50.0		61 30-130		
Surrogate: Phenol-d5									
	18.0		µg/l		50.0		36 15-110		
Surrogate: Terphenyl-d14									
	38.0		µg/l		50.0		76 30-130		
Surrogate: 2,4,6-Tribromophenol									
	41.2		µg/l		50.0		82 15-110		
LCS Dup (1803534-BS03)									
Prepared: 15-Mar-18 Analyzed: 19-Mar-18									
Acenaphthene	34.5		µg/l	5.00	50.0		69 47-145	1	20
Acenaphthylene	33.2		µg/l	5.00	50.0		66 33-145	0.7	20
Anthracene	34.9		µg/l	5.00	50.0		70 27-133	2	20
Benzidine	19.8		µg/l	10.0	50.0		40 40-140	10	20
Benzo (a) anthracene	37.6		µg/l	5.00	50.0		75 33-143	3	20
Benzo (a) pyrene	32.4		µg/l	5.00	50.0		65 17-163	0.1	20
Benzo (b) fluoranthene	33.6		µg/l	5.00	50.0		67 24-159	2	20
Benzo (g,h,i) perylene	32.1		µg/l	5.00	50.0		64 1-219	0.5	20
Benzo (k) fluoranthene	27.9		µg/l	5.00	50.0		56 11-162	1	20
Bis(2-chloroethoxy)methane	27.7		µg/l	5.00	50.0		55 33-184	2	20
Bis(2-chloroethyl)ether	29.9		µg/l	5.00	50.0		60 12-158	4	20
Bis(2-chloroisopropyl)ether	22.4		µg/l	5.00	50.0		45 36-166	0.8	20
Bis(2-ethylhexyl)phthalate	32.7		µg/l	5.00	50.0		65 8-158	0.2	20
4-Bromophenyl phenyl ether	35.6		µg/l	5.00	50.0		71 53-127	0	20
Butyl benzyl phthalate	31.8		µg/l	5.00	50.0		64 1-152	1	20
4-Chloro-3-methylphenol	35.3		µg/l	5.00	50.0		71 22-147	3	20
2-Chloronaphthalene	35.7		µg/l	5.00	50.0		71 60-118	0.4	20
2-Chlorophenol	32.1		µg/l	5.00	50.0		64 23-134	0.4	20
4-Chlorophenyl phenyl ether	34.0		µg/l	5.00	50.0		68 25-158	1	20
Chrysene	34.1		µg/l	5.00	50.0		68 17-168	0.6	20
Dibenzo (a,h) anthracene	34.0		µg/l	5.00	50.0		68 1-227	0.5	20
1,2-Dichlorobenzene	30.4		µg/l	5.00	50.0		61 32-129	0.2	20
1,3-Dichlorobenzene	30.0		µg/l	5.00	50.0		60 1-172	0.8	20
1,4-Dichlorobenzene	30.3		µg/l	5.00	50.0		61 20-124	0.4	20

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Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 625 Batch 1803534 - SW846 3510C LCS Dup (1803534-BSD3)									
Prepared: 15-Mar-18 Analyzed: 19-Mar-18									
3,3'-Dichlorobenzidine	41.8		µg/l	5.00	50.0		84 1-262	2	20
2,4-Dichlorophenol	36.0		µg/l	5.00	50.0		72 39-135	1	20
Diethyl phthalate	31.4		µg/l	5.00	50.0		63 1-114	1	20
Dimethyl phthalate	29.9		µg/l	5.00	50.0		60 1-112	0.3	20
2,4-Dimethylphenol	30.2		µg/l	5.00	50.0		60 32-119	0.2	20
Di-n-butyl phthalate	32.6		µg/l	5.00	50.0		65 1-118	2	20
4,6-Dinitro-2-methylphenol	36.1		µg/l	5.00	50.0		72 1-181	2	20
2,4-Dinitrophenol	30.9		µg/l	5.00	50.0		62 1-191	3	20
2,4-Dinitrotoluene	43.6		µg/l	5.00	50.0		87 39-139	0.3	20
2,6-Dinitrotoluene	42.4		µg/l	5.00	50.0		85 50-158	2	20
Di-n-octyl phthalate	28.2		µg/l	5.00	50.0		56 4-146	4	20
Fluoranthene	37.9		µg/l	5.00	50.0		76 26-137	1	20
Fluorene	34.6		µg/l	5.00	50.0		69 59-121	0.1	20
Hexachlorobenzene	41.7		µg/l	5.00	50.0		83 1-152	0.8	20
Hexachlorobutadiene	32.0		µg/l	5.00	50.0		64 24-116	1	20
Hexachlorocyclopentadiene	32.1		µg/l	5.00	50.0		64 40-140	2	20
Hexachloroethane	28.9		µg/l	5.00	50.0		58 40-113	2	20
Indeno (1,2,3-cd) pyrene	35.6		µg/l	5.00	50.0		71 1-171	2	20
Isophorone	30.5		µg/l	5.00	50.0		61 21-196	0.5	20
Naphthalene	31.9		µg/l	5.00	50.0		64 21-133	1	20
Nitrobenzene	35.4		µg/l	5.00	50.0		71 35-180	3	20
2-Nitrophenol	35.0		µg/l	5.00	50.0		70 29-182	3	20
4-Nitrophenol	30.5		µg/l	5.00	50.0		61 1-132	2	20
N-Nitrosodimethylamine	23.7		µg/l	5.00	50.0		47 40-140	0.7	20
N-Nitrosodi-n-propylamine	28.6		µg/l	5.00	50.0		57 1-230	2	20
N-Nitrosodiphenylamine	35.6		µg/l	5.00	50.0		71 40-140	1	20
Pentachlorophenol	33.0		µg/l	5.00	50.0		66 14-176	1	20
Phenanthrene	35.9		µg/l	5.00	50.0		72 54-120	2	20
Phenol	18.2		µg/l	5.00	50.0		36 5-112	3	20
Pyrene	36.6		µg/l	5.00	50.0		73 52-115	2	20
1,2,4-Trichlorobenzene	35.0		µg/l	5.00	50.0		70 44-142	0.6	20
2,4,6-Trichlorophenol	32.9		µg/l	5.00	50.0		66 37-144	1	20
Surrogate: 2-Fluorobiphenyl	32.3		µg/l		50.0		65 30-130		
Surrogate: 2-Fluorophenol	24.0		µg/l		50.0		48 15-110		
Surrogate: Nitrobenzene-d5	31.2		µg/l		50.0		62 30-130		
Surrogate: Phenol-d5	18.2		µg/l		50.0		36 15-110		
Surrogate: Terphenyl-d14	38.0		µg/l		50.0		76 30-130		
Surrogate: 2,4,6-Tribromophenol	42.0		µg/l		50.0		84 15-110		
Mod. EPA 625 Batch 1803534 - SW846 3510C Blank (1803534-BLK2)									
Prepared: 15-Mar-18 Analyzed: 20-Mar-18									
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					

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Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD Limit
Mod. EPA 625								
Batch 1803534 - SW846 3510C								
<u>Blank (1803534-BLK2)</u>								
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				
<u>Surrogate: Benzo (e) pyrene-d12</u>								
	0.640		µg/l		1.00		64	30-130
<u>LCS (1803534-BS2)</u>								
Prepared: 15-Mar-18 Analyzed: 20-Mar-18								
Acenaphthene	0.604		µg/l	0.050	1.00		60	40-140
Acenaphthylene	0.553		µg/l	0.050	1.00		55	40-140
1-Methylnaphthalene	0.463		µg/l	0.050	1.00		46	40-140
Anthracene	0.503		µg/l	0.050	1.00		50	40-140
Benzo (a) anthracene	0.790		µg/l	0.050	1.00		79	40-140
Benzo (a) pyrene	0.627		µg/l	0.050	1.00		63	40-140
Benzo (b) fluoranthene	0.721		µg/l	0.050	1.00		72	40-140
Benzo (g,h,i) perylene	0.587		µg/l	0.050	1.00		59	40-140
Benzo (k) fluoranthene	0.668		µg/l	0.050	1.00		67	40-140
Chrysene	0.798		µg/l	0.050	1.00		80	40-140
Dibenzo (a,h) anthracene	0.657		µg/l	0.050	1.00		66	40-140
Fluoranthene	0.685		µg/l	0.050	1.00		68	40-140
Fluorene	0.660		µg/l	0.050	1.00		66	40-140
Indeno (1,2,3-cd) pyrene	0.665		µg/l	0.050	1.00		66	40-140
2-Methylnaphthalene	0.538		µg/l	0.050	1.00		54	40-140
Naphthalene	0.442		µg/l	0.050	1.00		44	40-140
Phenanthrene	0.690		µg/l	0.050	1.00		69	40-140
Pyrene	0.737		µg/l	0.050	1.00		74	40-140
<u>Surrogate: Benzo (e) pyrene-d12</u>								
	0.620		µg/l		1.00		62	30-130
<u>LCS Dup (1803534-BS02)</u>								
Prepared: 15-Mar-18 Analyzed: 20-Mar-18								
Acenaphthene	0.623		µg/l	0.050	1.00		62	40-140
Acenaphthylene	0.539		µg/l	0.050	1.00		54	40-140
1-Methylnaphthalene	0.478		µg/l	0.050	1.00		48	40-140
Anthracene	0.458		µg/l	0.050	1.00		46	40-140
Benzo (a) anthracene	0.723		µg/l	0.050	1.00		72	40-140
Benzo (a) pyrene	0.552		µg/l	0.050	1.00		55	40-140
Benzo (b) fluoranthene	0.691		µg/l	0.050	1.00		69	40-140
Benzo (g,h,i) perylene	0.547		µg/l	0.050	1.00		55	40-140
Benzo (k) fluoranthene	0.667		µg/l	0.050	1.00		67	40-140
Chrysene	0.751		µg/l	0.050	1.00		75	40-140
Dibenzo (a,h) anthracene	0.613		µg/l	0.050	1.00		61	40-140
Fluoranthene	0.700		µg/l	0.050	1.00		70	40-140
Fluorene	0.690		µg/l	0.050	1.00		69	40-140
Indeno (1,2,3-cd) pyrene	0.595		µg/l	0.050	1.00		60	40-140
2-Methylnaphthalene	0.541		µg/l	0.050	1.00		54	40-140
Naphthalene	0.470		µg/l	0.050	1.00		47	40-140
Phenanthrene	0.686		µg/l	0.050	1.00		69	40-140
Pyrene	0.694		µg/l	0.050	1.00		69	40-140

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
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Mod. EPA 625

Batch 1803534 - SW846 3510C

LCS Dup (1803534-BSD2)

Prepared: 15-Mar-18 Analyzed: 20-Mar-18

Surrogate: Benzo (e) pyrene-d12	0.550		µg/l		1.00		55	30-130	
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Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 608									
Batch 1803365 - SW846 3510C									
<u>Blank (1803365-BLK1)</u>									
Prepared & Analyzed: 12-Mar-18									
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					
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Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.0722		µg/l		0.206		35	30-150	
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.0722		µg/l		0.206		35	30-150	
Surrogate: Decachlorobiphenyl (Sr)	0.124		µg/l		0.206		60	30-150	
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.113		µg/l		0.206		55	30-150	
<u>LCS (1803365-BS1)</u>									
Prepared & Analyzed: 12-Mar-18									
Aroclor-1016	1.55		µg/l	0.204	2.55		61	50-114	
Aroclor-1016 [2C]	1.50		µg/l	0.204	2.55		59	50-114	
Aroclor-1260	1.71		µg/l	0.204	2.55		67	40-127	
Aroclor-1260 [2C]	1.69		µg/l	0.204	2.55		66	40-127	
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Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.0714		µg/l		0.204		35	30-150	
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.0714		µg/l		0.204		35	30-150	
Surrogate: Decachlorobiphenyl (Sr)	0.0816		µg/l		0.204		40	30-150	
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.0918		µg/l		0.204		45	30-150	
<u>LCS Dup (1803365-BSD1)</u>									
Prepared & Analyzed: 12-Mar-18									
Aroclor-1016	1.88		µg/l	0.204	2.55		74	50-114	20
Aroclor-1016 [2C]	1.86	QR2	µg/l	0.204	2.55		73	50-114	21
Aroclor-1260	2.14	QR2	µg/l	0.204	2.55		84	40-127	22
Aroclor-1260 [2C]	2.15	QR2	µg/l	0.204	2.55		84	40-127	24
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Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.102		µg/l		0.204		50	30-150	
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.0918		µg/l		0.204		45	30-150	
Surrogate: Decachlorobiphenyl (Sr)	0.122		µg/l		0.204		60	30-150	
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.122		µg/l		0.204		60	30-150	

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
<u>EPA 1664B</u>									
Batch 1803437 - General Preparation SVOC									
<u>Blank (1803437-BLK1)</u>									
Non-polar material (SGT-HEM)	< 1.0		mg/l	1.0					
Prepared: 13-Mar-18 Analyzed: 14-Mar-18									
<u>LCS (1803437-BS1)</u>									
Non-polar material (SGT-HEM)	26.8		mg/l	1.0	40.8		66 64-132		
Prepared: 13-Mar-18 Analyzed: 14-Mar-18									

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
EPA 200.7									
Batch 1803452 - EPA 200 Series									
<u>Blank (1803452-BLK1)</u>									
Antimony	< 0.0060		mg/l	0.0060					
Iron	< 0.0150		mg/l	0.0150					
Thallium	< 0.0050		mg/l	0.0050					
Selenium	< 0.0150		mg/l	0.0150					
Calcium	< 0.100		mg/l	0.100					
Lead	< 0.0075		mg/l	0.0075					
Nickel	< 0.0050		mg/l	0.0050					
Zinc	< 0.0050		mg/l	0.0050					
Magnesium	< 0.0100		mg/l	0.0100					
Copper	< 0.0050		mg/l	0.0050					
Cadmium	< 0.0025		mg/l	0.0025					
Beryllium	< 0.0020		mg/l	0.0020					
Arsenic	< 0.0040		mg/l	0.0040					
Silver	< 0.0050		mg/l	0.0050					
Chromium	< 0.0050		mg/l	0.0050					
<u>LCS (1803452-BS1)</u>									
Antimony	1.24		mg/l	0.0060	1.25	BRL	99	85-115	
Thallium	1.31		mg/l	0.0050	1.25	BRL	105	85-115	
Selenium	1.30		mg/l	0.0150	1.25	BRL	104	85-115	
Iron	1.34		mg/l	0.0150	1.25	BRL	107	85-115	
Zinc	1.30		mg/l	0.0050	1.25	BRL	104	85-115	
Silver	1.27		mg/l	0.0050	1.25	BRL	101	85-115	
Nickel	1.27		mg/l	0.0050	1.25	BRL	101	85-115	
Magnesium	1.32		mg/l	0.0100	1.25	BRL	106	85-115	
Copper	1.35		mg/l	0.0050	1.25	BRL	108	85-115	
Chromium	1.32		mg/l	0.0050	1.25	BRL	105	85-115	
Cadmium	1.32		mg/l	0.0025	1.25	BRL	105	85-115	
Calcium	6.66		mg/l	0.100	6.25	BRL	107	85-115	
Beryllium	1.40		mg/l	0.0020	1.25	BRL	112	85-115	
Arsenic	1.26		mg/l	0.0040	1.25	BRL	101	85-115	
Lead	1.30		mg/l	0.0075	1.25	BRL	104	85-115	
<u>Duplicate (1803452-DUP1)</u>									
Antimony	< 0.0060		mg/l	0.0060		BRL			20
Thallium	< 0.0050		mg/l	0.0050		BRL			20
Selenium	< 0.0150		mg/l	0.0150		BRL			20
Iron	8.14		mg/l	0.0150		8.26		1	20
Magnesium	2.65		mg/l	0.0100		2.69		1	20
Nickel	< 0.0050		mg/l	0.0050		BRL			20
Zinc	0.0198		mg/l	0.0050		0.0199		0.3	20
Copper	0.0030	J	mg/l	0.0050		0.0030		0	20
Chromium	0.0022	J	mg/l	0.0050		0.0024		6	20
Cadmium	< 0.0025		mg/l	0.0025		BRL			20
Calcium	24.7		mg/l	0.100		24.9		1	20
Beryllium	< 0.0020		mg/l	0.0020		BRL			20
Arsenic	< 0.0040		mg/l	0.0040		BRL			20
Silver	< 0.0050		mg/l	0.0050		BRL			20
Lead	0.0074	J	mg/l	0.0075		0.0071		3.46	20
<u>Matrix Spike (1803452-MS1)</u>									
Iron	9.34		mg/l	0.0150	1.25	8.26	86	70-130	
Thallium	1.29		mg/l	0.0050	1.25	BRL	103	70-130	

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Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
<u>EPA 200.7</u>									
Batch 1803452 - EPA 200 Series									
<u>Matrix Spike (1803452-MS1)</u>									
Source: SC44638-01 Prepared: 13-Mar-18 Analyzed: 15-Mar-18									
Selenium	1.27		mg/l	0.0150	1.25	BRL	102	70-130	
Antimony	1.23		mg/l	0.0060	1.25	BRL	98	70-130	
Magnesium	3.92		mg/l	0.0100	1.25	2.69	99	70-130	
Lead	1.26		mg/l	0.0075	1.25	0.0071	101	70-130	
Nickel	1.22		mg/l	0.0050	1.25	BRL	98	70-130	
Copper	1.32		mg/l	0.0050	1.25	0.0030	106	70-130	
Cadmium	1.28		mg/l	0.0025	1.25	BRL	102	70-130	
Calcium	30.9		mg/l	0.100	6.25	24.9	96	70-130	
Beryllium	1.38		mg/l	0.0020	1.25	BRL	110	70-130	
Zinc	1.28		mg/l	0.0050	1.25	0.0199	101	70-130	
Silver	1.25		mg/l	0.0050	1.25	BRL	100	70-130	
Arsenic	1.26		mg/l	0.0040	1.25	BRL	101	70-130	
Chromium	1.29		mg/l	0.0050	1.25	0.0024	103	70-130	
<u>Post Spike (1803452-PS1)</u>									
Source: SC44638-01 Prepared: 13-Mar-18 Analyzed: 15-Mar-18									
Selenium	1.28		mg/l	0.0150	1.25	BRL	103	85-115	
Thallium	1.29		mg/l	0.0050	1.25	BRL	103	85-115	
Antimony	1.23		mg/l	0.0060	1.25	BRL	99	85-115	
Iron	9.52		mg/l	0.0150	1.25	8.26	101	85-115	
Zinc	1.29		mg/l	0.0050	1.25	0.0199	102	85-115	
Calcium	31.2		mg/l	0.100	6.25	24.9	101	85-115	
Nickel	1.23		mg/l	0.0050	1.25	BRL	99	85-115	
Magnesium	3.97		mg/l	0.0100	1.25	2.69	103	85-115	
Copper	1.32		mg/l	0.0050	1.25	0.0030	105	85-115	
Chromium	1.29		mg/l	0.0050	1.25	0.0024	103	85-115	
Cadmium	1.28		mg/l	0.0025	1.25	BRL	102	85-115	
Silver	1.26		mg/l	0.0050	1.25	BRL	101	85-115	
Arsenic	1.27		mg/l	0.0040	1.25	BRL	101	85-115	
Beryllium	1.38		mg/l	0.0020	1.25	BRL	111	85-115	
Lead	1.27		mg/l	0.0075	1.25	0.0071	101	85-115	
<u>EPA 245.1/7470A</u>									
Batch 1803453 - EPA200/SW7000 Series									
<u>Blank (1803453-BLK1)</u>									
Prepared: 14-Mar-18 Analyzed: 15-Mar-18									
Mercury	< 0.00020		mg/l	0.00020					
<u>LCS (1803453-BS1)</u>									
Prepared: 14-Mar-18 Analyzed: 15-Mar-18									
Mercury	0.00435		mg/l	0.00020	0.00500		87	85-115	
<u>Duplicate (1803453-DUP1)</u>									
Prepared: 14-Mar-18 Analyzed: 15-Mar-18									
Mercury	< 0.00020		mg/l	0.00020		BRL			20
<u>Matrix Spike (1803453-MS1)</u>									
Prepared: 14-Mar-18 Analyzed: 15-Mar-18									
Mercury	0.00452		mg/l	0.00020	0.00500	BRL	90	80-120	
<u>Post Spike (1803453-PS1)</u>									
Prepared: 14-Mar-18 Analyzed: 15-Mar-18									
Mercury	0.00450		mg/l	0.00020	0.00500	BRL	90	85-115	

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General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
ASTM D 1293-99B									
Batch 1803338 - General Preparation									
<u>Duplicate (1803338-DUP1)</u>			<u>Source: SC44638-02</u>						
pH	6.21		pH Units			6.23		0.3	5
<u>Reference (1803338-SRM1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
pH	6.01		pH Units			6.00	100	97.5-102.5	
<u>Reference (1803338-SRM2)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
pH	5.99		pH Units			6.00	100	97.5-102.5	
SM2540D (11)									
Batch 1803506 - General Preparation									
<u>Blank (1803506-BLK1)</u>			<u>Prepared: 14-Mar-18 Analyzed: 15-Mar-18</u>						
Total Suspended Solids	< 0.5		mg/l	0.5					
<u>LCS (1803506-BS1)</u>			<u>Prepared: 14-Mar-18 Analyzed: 15-Mar-18</u>						
Total Suspended Solids	96.0		mg/l	10.0	100		96	90-110	
SM3500-Cr-B (11/7196A)									
Batch 1803323 - General Preparation									
<u>Blank (1803323-BLK1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
Hexavalent Chromium	< 0.005		mg/l	0.005					
<u>LCS (1803323-BS1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
Hexavalent Chromium	0.051		mg/l	0.005	0.0500		101	90-111	
<u>Duplicate (1803323-DUP1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
Hexavalent Chromium	< 0.050	D	mg/l	0.050		BRL			20
<u>Matrix Spike (1803323-MS1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
Hexavalent Chromium	0.547		mg/l	0.050	0.500	BRL	109	85-115	
<u>Matrix Spike Dup (1803323-MSD1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
Hexavalent Chromium	0.544		mg/l	0.050	0.500	BRL	109	85-115	20
<u>Reference (1803323-SRM1)</u>			<u>Prepared & Analyzed: 09-Mar-18</u>						
Hexavalent Chromium	0.027		mg/l	0.005	0.0250		106	85-115	
SW846 Ch. 7.3									
Batch 1803589 - General Preparation									
<u>Blank (1803589-BLK1)</u>			<u>Prepared & Analyzed: 15-Mar-18</u>						
Reactivity	See Narrative		mg/l						
Reactive Cyanide	< 25.0		mg/l	25.0					200
Reactive Sulfide	< 50.0		mg/l	50.0					20
<u>Duplicate (1803589-DUP1)</u>			<u>Prepared & Analyzed: 15-Mar-18</u>						
Reactivity	See Narrative		mg/l			ee Narrativ			
Reactive Cyanide	< 25.0		mg/l	25.0		BRL			20
Reactive Sulfide	< 50.0		mg/l	50.0		BRL			20
<u>Reference (1803589-SRM1)</u>			<u>Prepared & Analyzed: 15-Mar-18</u>						
Reactive Cyanide	< 25.0		mg/l	25.0	200		0	0-200	
<u>Reference (1803589-SRM2)</u>			<u>Prepared & Analyzed: 15-Mar-18</u>						
Reactive Sulfide	< 50.0		mg/l	50.0	13400		0	0-200	

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	%REC Limits	RPD Limit
<u>E350.1</u>									
Batch 422636A - 422636									
<u>BLK (CA01359-BLK)</u>									
Ammonia as Nitrogen	< 0.05		mg/l	0.05			-		
<u>DUP (CA01359-DUP)</u>									
Ammonia as Nitrogen	0.90		mg/l	0.05			-	2.2	20
<u>LCS (CA01359-LCS)</u>									
Ammonia as Nitrogen	3.540		mg/l	0.05	3.74		94.7	90-110	20
<u>MS (CA01359-MS)</u>									
Ammonia as Nitrogen	2.730		mg/l	0.05	2		92.5	90-110	20
<u>SM4500CLE-97-II</u>									
Batch 422607A - 422607-SM4500CLE									
<u>BLK (CA01120-BLK)</u>									
Chloride	< 3.0		mg/l	3.0			-		
<u>DUP (CA01120-DUP)</u>									
Chloride	23.7		mg/l	3.0			-	0.4	20
<u>LCS (CA01120-LCS)</u>									
Chloride	51.30		mg/l	3.0	50		103	90-110	20
<u>MS (CA01120-MS)</u>									
Chloride	126.0		mg/l	3.0	100		102	90-110	20
<u>SW9010C/SW9012B</u>									
Batch 422760A - 422760-SW9010C/									
<u>BLK (CA01120-BLK)</u>									
Total Cyanide	< 0.010		mg/l	0.010			-		
<u>DUP (CA01120-DUP)</u>									
Total Cyanide	< 0.010		mg/l	0.010			-	NC	30
<u>LCS (CA01120-LCS)</u>									
Total Cyanide	0.2930		mg/l	0.010	0.2985		98.2	90-110	30
<u>MS (CA01120-MS)</u>									
Total Cyanide	0.2220	m	mg/l	0.010	000000298		111	90-110	30

Notes and Definitions

D	Data reported from a dilution
m	This parameter is outside laboratory ms/msd specified recovery limits.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QC6	Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
R01	The Reporting Limit has been raised to account for matrix interference.
SRE	The surrogate recovery for this sample is outside of method acceptance limits. There is insufficient sample volume to re-extract and confirm potential matrix interference.
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.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.
HD	Total Hardness is a calculation based on the reported values of Ca and Mg.

Interpretation of Total Petroleum Hydrocarbon Report

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

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

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

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

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

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

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

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

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

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

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

CFI NT# MA8355 (Former Tufts Machine Corp.)

55 E. Main Street, Westboro, MA

ATC Job #03-224195.08

PO# 316090

TASK	TASK DESCRIPTION	Description	COSTS			TASK
<u>Precon Related Tasks</u>						
GWS Event for new RGP	M-16	ea	1	\$338.36	\$338.36	
	Mob M-01	ea	1	\$239.67	\$239.67	
	Redevelop A-11	ea	1	\$197.38	\$197.38	
GW Disposal Profile-Global Cycle	A-18	ea	1	\$418.26	\$418.26	
Soil Disposal Profile/BOL for Landfill	A-18	ea	1	\$418.26	\$418.26	
LSP Opinion, BUD Evaluation for soil profile	R-01	ea	1	\$425.77	\$425.77	
Soil Sampling for Sulfur/Sulfate/Sulfide	A-06	ea	1	\$437.05	\$437.05	
EPA RGP Discharge Permit Application	L-12	hr	25	\$98.00	\$2,450.00	
Best Management Practice Plan & QAP	L-12	hr	8	\$98.00	\$784.00	
EPA RGP Filing Fee		ea	1	\$950.00	\$950.00	
Coordinate Vapor Barrier install	A-07	ea	1	\$458.67	\$458.67	
Prebid Meeting & Precon Meeting	A-06	ea	2	\$437.05	\$874.10	
Consult on cut/fill estimates, Geotech, SMP	L-13	hr	4	\$126.00	\$504.00	
Soil Worksheets, discuss with stakeholders	L-12	hr	8	\$98.00	\$784.00	
					\$9,327.02	
				Total Estimate	\$9,327.02	

Direct Pay Vendors
Eurofins/Spectrum\$848.00 Env. Testing (Listed below)
PO# PL140099

Lab Breakdown

Soil Sampling for landfill profile

WM Specs Sulfur/Sulfate/Sulfide	1 ea	\$100.00	\$100.00
EPA Spec & Global Cycle VOCs-624 & 8260	1 ea	\$37.50	\$37.50
VOCs-12BA/1AWE-			
EPA Spec & Global Cycle 524	1 ea	\$37.50	\$37.50
EPA Spec & Global Cycle SVOCs-SIM 625	1 ea	\$110.00	\$110.00
EPA Spec & Global Cycle PP13 Metals-total-	2 ea	\$68.00	\$136.00
EPA Spec Iron	1 ea	\$10.00	\$10.00
EPA Spec Hex Chrome-7196	1 ea	\$18.00	\$18.00
EPA Spec Cyanide-4500/React	1 ea	\$40.00	\$40.00
EPA Spec Chloride	1 ea	\$12.00	\$12.00
EPA Spec PCBs 608	1 ea	\$37.00	\$37.00
EPA Spec Pentachlorophenol	1 ea	\$10.00	\$10.00
EPA Spec & Global Cycle TSS	1 ea	\$12.00	\$12.00
EPA Spec TPH 1664	1 ea	\$32.00	\$32.00
EPA Spec & Global Cycle pH	2 ea	\$10.00	\$20.00
EPA Spec Ammonia	2 ea	\$13.00	\$26.00
EPA Spec Ethanol 1666	1 ea	\$35.00	\$35.00
EPA Spec Hardness	2 ea	\$15.00	\$30.00
EPA Spec Metal prep charge	2 ea	\$5.00	\$10.00
EPA Spec Misc/Add-on	1 ea	\$135.00	\$135.00

Eurofins \$848.00

Stream Samples

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 Requirements¹

A. Inorganics	Parameter ² / Method / RL	Effluent Limitation ^{3,4}	
		TBEL ⁵	WBEL ⁶
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 / 0.5 ug/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 R0.05 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 individ.	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	100 µg/L 20 µg/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			
Naphthalene ²⁰	625 / 0.05 ug/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		
Methyl-tert-Butyl Ether ²⁴ 604 / 1.0 ug/L	70 ug/L	20 ug/L in MA
tert-Butyl Alcohol 524 / 10 ug/L	120 ug/L in MA 40 ug/L in NH	
tert-Amyl Methyl Ether ²⁴ 524 / 0.5 ug/L	90 ug/L in MA 140 ug/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 ug/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.



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

<i>Laboratory ID</i>	<i>Client ID</i>	<i>Analysis</i>	<i>Added</i>
SC44638-01	MW-102	Ethanol by SW/846 8260	3/11/2018

Batch Summary

ICALCI

General Chemistry Parameters

SC44638-01 (MW-102)
SC44638-02 (SWS-1)

1803323

General Chemistry Parameters

1803323-BLK1
1803323-BS1
1803323-DUP1
1803323-MS1
1803323-MSD1
1803323-SRM1
SC44638-01 (MW-102)

1803338

General Chemistry Parameters

1803338-DUP1
1803338-SRM1
1803338-SRM2
SC44638-01 (MW-102)
SC44638-02 (SWS-1)

1803365

Semivolatitle Organic Compounds by GC

1803365-BLK1
1803365-BS1
1803365-BSD1
SC44638-01 (MW-102)

1803372

Volatitle Organic Compounds

1803372-BLK1
1803372-BS1
1803372-BSD1
SC44638-01 (MW-102)

1803408

Total Metals by EPA 200/6000 Series Methods

SC44638-01 (MW-102)
SC44638-02 (SWS-1)

1803437

Extractable Petroleum Hydrocarbons

1803437-BLK1
1803437-BS1
SC44638-01 (MW-102)

1803452

Total Metals by EPA 200 Series Methods

1803452-BLK1

1803452-BS1
1803452-DUP1
1803452-MS1
1803452-PS1
SC44638-01 (MW-102)
SC44638-02 (SWS-1)

1803453

Total Metals by EPA 200 Series Methods

1803453-BLK1
1803453-BS1
1803453-DUP1
1803453-MS1
1803453-PS1
SC44638-01 (MW-102)
SC44638-02 (SWS-1)

1803506

General Chemistry Parameters

1803506-BLK1
1803506-BS1
SC44638-01 (MW-102)

1803534

Semivolatitle Organic Compounds by GCMS

1803534-BLK2
1803534-BLK3
1803534-BS2
1803534-BS3
1803534-BSD2
1803534-BSD3
SC44638-01 (MW-102)

1803589

General Chemistry Parameters

1803589-BLK1
1803589-DUP1
1803589-SRM1
1803589-SRM2
SC44638-01 (MW-102)

422607A

Subcontracted Analyses

CA01120-BLK
CA01120-DUP
CA01120-LCS
CA01120-MS
SC44638-01 (MW-102)

422636A**Subcontracted Analyses**

CA01359-BLK
CA01359-DUP
CA01359-LCS
CA01359-MS
SC44638-01 (MW-102)
SC44638-02 (SWS-1)

422760A**Subcontracted Analyses**

CA01120-BLK
CA01120-DUP
CA01120-LCS
CA01120-MS
SC44638-01 (MW-102)

S711062**Semivolatile Organic Compounds by GC/MS**

S711062-CAL1
S711062-CAL2
S711062-CAL3
S711062-CAL4
S711062-CAL5
S711062-CAL6
S711062-CAL7
S711062-CAL8
S711062-CAL9
S711062-ICV1
S711062-LCV1
S711062-LCV2
S711062-TUN1

S816480**Semivolatile Organic Compounds by GC**

S816480-CAL1
S816480-CAL2
S816480-CAL3
S816480-CAL4
S816480-CAL5
S816480-CAL6
S816480-CAL7
S816480-CAL8
S816480-CAL9
S816480-CALA
S816480-CALB
S816480-CALC
S816480-CALD
S816480-CALE
S816480-CALF
S816480-CALG
S816480-CALH
S816480-CALI
S816480-CALJ

S816480-CALK
S816480-CALL
S816480-CALM
S816480-CALN
S816480-CALO
S816480-CALP
S816480-CALQ
S816480-CALR
S816480-CALS
S816480-CALT
S816480-CALU
S816480-ICV2
S816480-ICV3
S816480-ICV4
S816480-ICV5
S816480-ICV6
S816480-LCV1
S816480-LCV2
S816480-LCV3
S816480-LCV4
S816480-LCV5
S816480-LCV6

S816932**Semivolatile Organic Compounds by GC/MS**

S816932-CAL1
S816932-CAL2
S816932-CAL3
S816932-CAL4
S816932-CAL5
S816932-CAL6
S816932-CAL7
S816932-CAL8
S816932-CAL9
S816932-ICV1
S816932-LCV1
S816932-LCV2
S816932-TUN1

S817144**Volatile Organic Compounds**

S817144-CAL1
S817144-CAL2
S817144-CAL3
S817144-CAL4
S817144-CAL5
S817144-CAL6
S817144-CAL7
S817144-CAL8
S817144-CAL9
S817144-ICV1
S817144-LCV1
S817144-TUN1

S817556*Volatile Organic Compounds*

S817556-CCV1

S817556-TUN1

S817578*Semivolatile Organic Compounds by GC*

S817578-CCV1

S817578-CCV2

S817578-IBL1

S817578-IBL2

S817644*Semivolatile Organic Compounds by GC*

S817644-CCV1

S817644-CCV2

S817644-IBL1

S817644-IBL2

S817771*Semivolatile Organic Compounds by GCMS*

S817771-CCV1

S817771-TUN1

S817781*Semivolatile Organic Compounds by GCMS*

S817781-CCV1

S817781-TUN1

S817820*Semivolatile Organic Compounds by GCMS*

S817820-CCV1

S817820-TUN1

July 2, 2018
Project Number 03-224195

Ms. Jennifer Wood
MassDEP Surface Water Permit Program
1 Winter Street
Boston, MA 02018

RE: Notice of Intent for Remediation General Permit, Request for Information Response
Proposed Cumberland Farms Property #MA8355
55 E. Main Street
Westboro, MA 01581

Dear Ms. Wood:

On behalf of Cumberland Farms, Inc. (CFI), ATC Group Services LLC (ATC) is pleased to provide a response to MassDEP's Request for Information (RFI) dated June 27, 2018 to support the approval of the discharge permit application for the above referenced location (the "Site"). Below are responses to the three items listed in the RFI.

Item 1: Are there less environmentally damaging alternative sites for the discharge, sources of disposal, or methods to eliminate the discharge that are reasonably available or feasible?

Response 1:

As indicated in the Notice of Intent, dewatering is necessary for the proposed redevelopment of the Site due to the shallow groundwater reported at depths of 3 to 4 feet below grade and proposed excavations extending to 18 feet below grade. The need for dewatering would generate extensive groundwater that would need to be discharged at or near the site on a limited short term basis (1-2 months) at an intermittent frequency during this short term duration. The short term and intermittent discharge is insignificant because it does not have the potential to impair existing water use and does not have the potential to cause any significant lowering of water quality.

The applicant is evaluating the use of the town of Westboro sewer system as a potential discharge option. The building at the Site is not connected to the sewer system, but the town has indicated that there is a sewer stub in front of the Site along E. Main Street and indicated that a temporary connection would be possible. The sewer discharge, if approved, would be the primary discharge option. However, the sewer discharge option might not be approved for the expected peak flow rates that are needed for this project. For other discharge locations, ATC reviewed storm drainage maps for the town of Westboro and the area surrounding the site all discharge to the same receiving water. So there is no other alternative surface water discharge option available at this time. ATC reviewed the MassDEP Underground Injection Control (UIC) regulations to assess the viability and feasibility of on-site discharge to the ground. Given the shallow water table (3-4 feet below grade) and the location of the stream along the southern portion of the site, a UIC well or leachfield would not be feasible as there is insufficient vadose zone soil onsite for on-site infiltration without potentially affecting the onsite wetlands. Alternatively, the discharge of treated groundwater via land application would be viable and feasible for low flow rates (10 gpm or less),



but not for the expected higher flow rates and larger infiltration area needed to avoid the overland discharge to the onsite wetlands, which is prohibited by MassDEP UIC regulations.

Item 2: To the maximum extent feasible, are the discharge and activity designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices?

Response 2:

As indicated in the Notice of Intent, the dewatering treatment system would include settling tanks and a filtration system to remove naturally occurring sediment and iron in the source groundwater. The pretreatment of groundwater prior to discharge will be done to minimize adverse impacts to water quality. Additionally, the dewatering and discharge aspect of the project is temporary and is expected to be completed within 1 to 2 months. There are no raw materials or plant production processes associated with the discharge. The discharge is simply the result of the pumping of groundwater from the subsurface and removal of naturally occurring sediment and iron.

Item 3: Will the discharge impair existing uses of the receiving water or result in a level of water quality less than the specified for the Class?

Response 3:

Other than naturally occurring sediments and iron, the source water does not contain contaminants that exceed EPA surface water discharge limits. The pretreatment of the source water prior to discharge will not impair existing uses of the receiving water or result in a level of water quality that is less than the specified Class B, which are protective of aquatic activity and recreational use. Additionally, the untreated raw water does not contain any contaminants that exceed drinking water standards. As such, the discharge of the treated water to the adjacent stream would not impact or impair the nearby Class A drinking water source area.

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

Sincerely,
ATC GROUP SERVICES LLC

A handwritten signature in blue ink, appearing to read "Matthew J. Lyne".

Matthew J. Lyne
Senior Project Manager

cc: Matthew Young, Cumberland Farms, Inc., 165 Flanders Road, Westborough, MA