



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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

Charles D. Baker
Governor

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Secretary

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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 an 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: Cumberland Farms Distribution Facility (#MA0555)
SITE OWNER AND OPERATOR: Cumberland Farms, Inc.
MASSDEP TRANSMITTAL
NUMBER: x284095
NAME OF RECEIVING
WATER(S) AND TOWN: Cedar Swamp adjacent to Sudbury River, Westboro, 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 (ORW) for a proposed discharge under the NPDES Remediation General Permit (RGP). Discharge is from construction-related dewatering to Cedar Swamp and the adjacent Sudbury River in Westboro, both Outstanding Resource Waters (ORWs).

A copy of the Notice of Intent (NOI), the applicant's justification for the proposed discharge to an ORW and Tentative Determination to Issue an Antidegradation Authorization to Discharge to an Outstanding Resource Water (draft decision by MassDEP) are available here: <https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities> under "MassDEP Permits & Approvals".

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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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 “RGP Cumberland Farms Distribution Facility (#MA0555), Westboro” in the subject line). All comments should include the sender’s full name and address. Comments must be submitted by March 11, 2020. The public comment period is thirty (30) days after publication of this notice.

Lealdon Langley, Director
Division of Watershed Management
Department of Environmental Protection

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

FACT SHEET

I. APPLICANT, FACILITY INFORMATION, AND DISCHARGE INFORMATION

Name and Address of site:

Cumberland Farms Distribution Facility (#MA0555)
165 Flanders Road
Westboro, MA 01581

Name and Address of Site Owner:

Cumberland Farms, Inc.
165 Flanders Road
Westboro, MA 01581

Discharge Information:

The owner has applied for coverage under the 2017 NPDES Remediation General Permit to discharge construction-related dewatering to Cedar Swamp that is adjacent to the Sudbury River in Westboro. The Commonwealth of Massachusetts designated Cedar Swamp in Westboro as an Area of Critical Environmental Concern (ACEC) and an Outstanding Resource Water (ORW). According to the Massachusetts Surface Water Quality Standards (MASWQS) 314 CMR 4.06, the Sudbury River is classified as a Class B water and protected as an ORW.

II. LIMITATIONS AND CONDITIONS

Discharge permit limitations are as listed in the 2017 Remediation General Permit (RGP) and are in compliance with 314 CMR 4.00, MASWQS. Site-specific limits are calculated and included in EPA's Authorization to discharge under the NPDES RGP.

The applicant has demonstrated that an Authorization for a new discharge to an Outstanding Resource Water (314 CMR 4.04(3)) may be issued by the Massachusetts Department of Environmental Protection (MassDEP) based on 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. ATC Group Services LLC, on behalf of Cumberland Farms Inc, submitted a description and additional

information 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 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 will include specific effluent limitations based on the location of discharge, sampling data, 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 February 10, 2020, and will extend until March 11, 2020. The public comment period is thirty (30) days following the date of publication.

A final decision on the issuance/denial of this authorization 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 tentative determination may be obtained between the hours of 9:00 a.m. and 5:00 p.m. Monday through Friday excluding holidays, from:

Xiaodan Ruan
MassDEP
Bureau of Water Resources
1 Winter Street
Boston, MA 02108
617-654-6517
Xiaodan.Ruan@mass.gov



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[Draft for Public Comment Only]

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

NAME OF SITE: Cumberland Farms Distribution Facility (#MA0555)
SITE OWNER AND OPERATOR: Cumberland Farms, Inc.
MASSDEP TRANSMITTAL
NUMBER: x284095
NAME OF RECEIVING WATER(S)
AND TOWN: Cedar Swamp adjacent to Sudbury River, Westboro, MA
PERMIT AUTHORITY
FOR DISCHARGE: NPDES Remediation General Permit (RGP),
effective April 8, 2017

The 2017 RGP was issued by both the U.S. 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 contaminated construction dewatering.

As required by the RGP, ATC Group Services LLC (ATC), on behalf of Cumberland Farms Inc (Cumberland Farms, or CFI), submitted a Notice of Intent (NOI) dated August 7, 2019, requesting to discharge to Cedar Swamp, and the Sudbury River (segment MA82A-01) and its tributaries in Westboro. The Commonwealth of Massachusetts designated Westboro Cedar Swamp as an Area of Critical Environmental Concern (ACEC) in 1975. According to Massachusetts Surface Water Quality Standards (MASWQS) 314 CMR 4.06, this segment of the Sudbury River (MA82A-01) is classified as a Class B warm water fishery and protected as an Outstanding Resource Water (ORW). The Cedar Swamp ACEC is also protected as an ORW.

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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Section 1.3 of the 2017 RGP states that discharges to ORWs are ineligible for coverage unless an authorization is granted by MassDEP. Therefore, MassDEP is required to perform an additional review in accordance with the Antidegradation Provisions of the MASWQS 314 CMR 4.00 and MassDEP policy, “Implementation Procedures for the Antidegradation Provisions of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00” (“the Policy”) prior to issuing an Antidegradation Authorization for 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, additional information provided in two letters dated September 11 and December 9, 2019, and additional information provided in an email dated January 9, 2020 (from Matthew Lyne, ATC on behalf of Cumberland Farm), and pursuant to the authority granted by Chapter 21, §§ 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 4.00, MassDEP is authorizing this discharge to an ORW.

It should be noted that MassDEP’s decision to allow this discharge to an ORW does not provide authorization to discharge. If MassDEP decides to issue an Antidegradation Authorization, EPA can proceed with authorizing the discharge under the 2017 RGP.

Site and Project Description

As described in the application and the NOI, “the subject property is a 94-acre lot located at 165 Flanders Road in Westboro, MA and is used as a warehouse and distribution facility for food products. However, the construction work area where dewatering is expected to take place is less than 1 acre. The Site is not located within a current or potential groundwater protection area. Catch basins are located at the Site and are connected to the private storm drainage system. The catch basin in the area of the proposed work drains to a wetlands area along the western part of the Site.” The construction activities that will result in dewatering discharges include the installation of a diesel underground storage tank (UST), piping, and associated utilities.

The discharge is expected to occur intermittently during a 3-4 month period starting from September 1, 2020 (updated information via email). The RGP category of the activity is contaminated site dewatering. Groundwater samples were collected from the raw water/influent location (MW-5) on June 17, 2019, and results indicate that the following contaminants were present in the groundwater: volatile organic compounds (VOCs), metals including arsenic, copper, lead, nickel, zinc and iron, and inorganics including ammonia, chloride, and total suspended solids. The applicant described that for the excavation dewatering, recovery wells will

be installed using slotted pipe and well gravel to reduce solids. Collected groundwater will be pumped from the excavation area into the 20,000-gallon frac tank(s) for solids settlement. If needed, an aerator will be used prior to the frac tank(s) to aid in the settling of solids and heavy metals. A flocculant sock will be installed and may be used intermittently during the dewatering depending on the solids content of the influent raw water. The water in the frac tank(s) will be pumped through bag filters to remove solids and then a liquid phase carbon unit will remove any VOCs. The treated groundwater will be pumped into the catch basin in the parking lot, instead of the drainage manhole that drains to the wetland directly, with the intent of enhancing solids removal and dissipating flow velocity.

The average effluent flow rate will be 100 gallons per minute (gpm) with a maximum flow rate of 200 gpm. The duration of the peak flow of 200 gpm will possibly occur during a 3 to 5 day period when the new petroleum UST is replaced. In order to dissipate flow velocity at the outfall area, Cumberland Farms will replace and install more stone (rip rap) at the primary outfall location to improve the current condition. Also, during peak flow, a secondary discharge point with extensive rip rap can be used. The treated groundwater will be pumped to an engineered stormwater detention and drains to the same wetland area.

Jurisdiction

The EPA RGP authorization will include pollutant effluent limits based on submitted groundwater data and water quality criteria for freshwater in the MA SWQS (which reference USEPA's *National Water Quality Criteria: 2002*), and available dilution at the point of discharge. It should be noted that originally MassDEP approved a dilution factor of 1.04, however, this has been revised to 1 for the point of discharge to a wetland, i.e., no dilution.

MASWQS and the RGP state that discharges to ORWs in Massachusetts are ineligible for coverage unless an authorization is granted by MassDEP. As described in the applicant's responses to MassDEP's Request for Information letters dated September 11, and December 9, 2019, and email dated January 9, 2020, ATC on behalf of Cumberland Farms submitted descriptions of how the project would demonstrate compliance with the MASWQS requirements for authorization listed in 314 CMR 4.04(5)(a)(2) through 4.04(5)(a)(4). These responses are presented 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: "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 re-use and conservation of discharge water is not feasible as there is nowhere on site to store and reuse the discharge water for any practical purpose. As the depth to groundwater is shallow (3 to 4 feet below grade), any type of land application or shallow injection system would likely flood the work area and ultimately drain to the wetlands near the work area. 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 wetlands along the western portion of the site and work area, a UIC well or leach field would not be feasible as there is insufficient vadose zone soil onsite for on-site infiltration without potentially affecting the onsite wetlands. Also, 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.”

“The work area is limited to the existing area as allowed by town planning and zoning requirements, so relocating the proposed activity is not feasible. Also, relocating the construction work activity to another area of the site would still require the dewatering and discharge as discussed above and the ultimate receiving water for any other discharge location would still be the same resource, the Sudbury River.”

“We were told by the engineer for CFI there is a manhole near the maintenance building near the front of the property near Flanders Road that has a drain pipe that gravity feeds to the municipal sewer main in Flanders Road. The town verbally agreed to allow up to 100 gpm of groundwater discharge to the sewer. However, according to their approval (attached), this higher flow would be restricted to the overnight hours when overall municipal flow is not a peak flow. During the day, we would need to discharge some of the flow to the wetlands via RGP.”

“The treatment system will be set up with a 20,000 gallon settling tank. So there will be a tank on site. For the trucking of water off-site, a flow rate of 100 gpm would produce approximately 144,000 gallons of water in a 24-hour period and 1 million gallons of water in a 1-week period. The disposal facilities do not have the capacity to handle this type of flow and it is cost prohibitive for CFI to do so.”

“By combining the sewer option and the limited surficial infiltration option, it is possible to reduce the amount of water discharged to the wetlands, but it would not eliminate the discharge to the wetlands entirely. For the sewer discharge option discussed in Item 1 and the land infiltration option discussed in Item 2, approximately 110 gpm of the discharge flow could be reduced from the overall discharge. And as a practical matter, the land infiltration option would be implemented first for low discharge flow periods, then the sewer discharge option for the next step up to 110 gpm, and then during work when higher discharge flows are experienced or when the town restricts the sewer discharge flow to off-peak hours, the discharge to the wetlands would be the last resort.”

- 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: “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 1-2 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, 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: “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. Furthermore, the sample collected from the receiving water had a pH of 5.76, which is lower than the more neutral pH of 6.15 detected in the onsite groundwater. 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, will maintain the resource, and may actually enhance the receiving water quality based on the pH buffering.”

- Item 4, based on 314 CMR 4.04(3)(b)1:

Demonstrate how the discharge is for the express purpose and intent of maintaining and enhancing the resource for its designated use.

- Response: “Prior to discharge, debris and trash near the outfall area will be removed to better protect the resource. Also prior to discharge, maintenance will be done to allow for the removal of the accumulated sediment in the outfall pipe and the installation of new rip rap at the outfall area. These actions will improve solids and sediment removal and reduce outwash into the wetlands, which will enhance the resource for its designated use. Ultimately, the discharge will facilitate the removal of an old petroleum UST that is near the resource area and installation of a new, state-of-the-art UST system with more leak detection equipment and secondary containment. The new UST system will reduce the likelihood of spills, better protect the environment, and enhance the resource for years to come.”

Conclusion

The NOI and the responses provided by the applicant have sufficiently defined the nature and general elements of the project for the purposes of MassDEP review and demonstrated that impacts on the ORW will be minimized to the extent practicable. Based on review of the documents provided, MassDEP has 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. Jurisdictional determinations under the Massachusetts Wetlands Protection Act (M.G.L. c.131 §40) must use the relevant procedures and criteria.

Lealdon Langley, Director
Division of Watershed Management

[Date]

August 7, 2019
Project Number 03-216350

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
Cumberland Farms Distribution Facility (Property #MA0555)
165 Flanders Road
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 a diesel UST, 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 94 acre lot located at 165 Flanders Road in Westboro, MA and is used a warehouse and distribution facility for food products. However, the construction work area where dewatering is expected to take place is less than 1 acre (see Figure 3 for Work Zone). The Site is not located within a current or potential groundwater protection area. Catch basins are located at the Site and are connected to the private storm drainage system. The catch basin in the area of the proposed work drains to a wetlands area along the western 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 through a liquid phase carbon unit to remove any trace VOCs. The discharge will be metered and then discharged directly into the drainage manhole along the western part of the Site, which drains to the wetlands nearby via 10-inch PVC pipe and outfall. A Wetlands Protection Act Notice of Intent was submitted to the Town of Westboro on December 21, 2018 for the proposed construction work and approval was granted on March 12, 2019. 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 4 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-5) on June 17, 2019 and were submitted to 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 8270/625 SIM,
- PCBs by EPA method 608.3,
- Total metals by EPA Method 200.8 (lowest reporting levels possible),
- Ammonia,
- Flashpoint,
- pH,
- Chloride,
- Hardness, and,
- Total Suspended Solids (TSS).

Also, a sample of the 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 0.010 MGD and the calculated dilution factor was determined to be 1.04. 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 (6.15) being comparable to the receiving waters (5.76), the mixing at the receiving waters should increase the pH to closer to neutral. However, ATC requests that the lower limit of the pH discharge limitation be modified to 5.76 to match that of the natural pH of the receiving water.

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 July 31, 2019). 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 or about March 15, 2019 and last for approximately 6 to 9 months. The duration of the dewatering aspect of the project is only expected to be for 1 to 2 months on an intermittent basis. 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) 926-1315.



Sincerely,
ATC GROUP SERVICES LLC

A handwritten signature in blue ink, reading '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: Site Plan-Diesel UST Area with Work Zone

Figure 4: 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

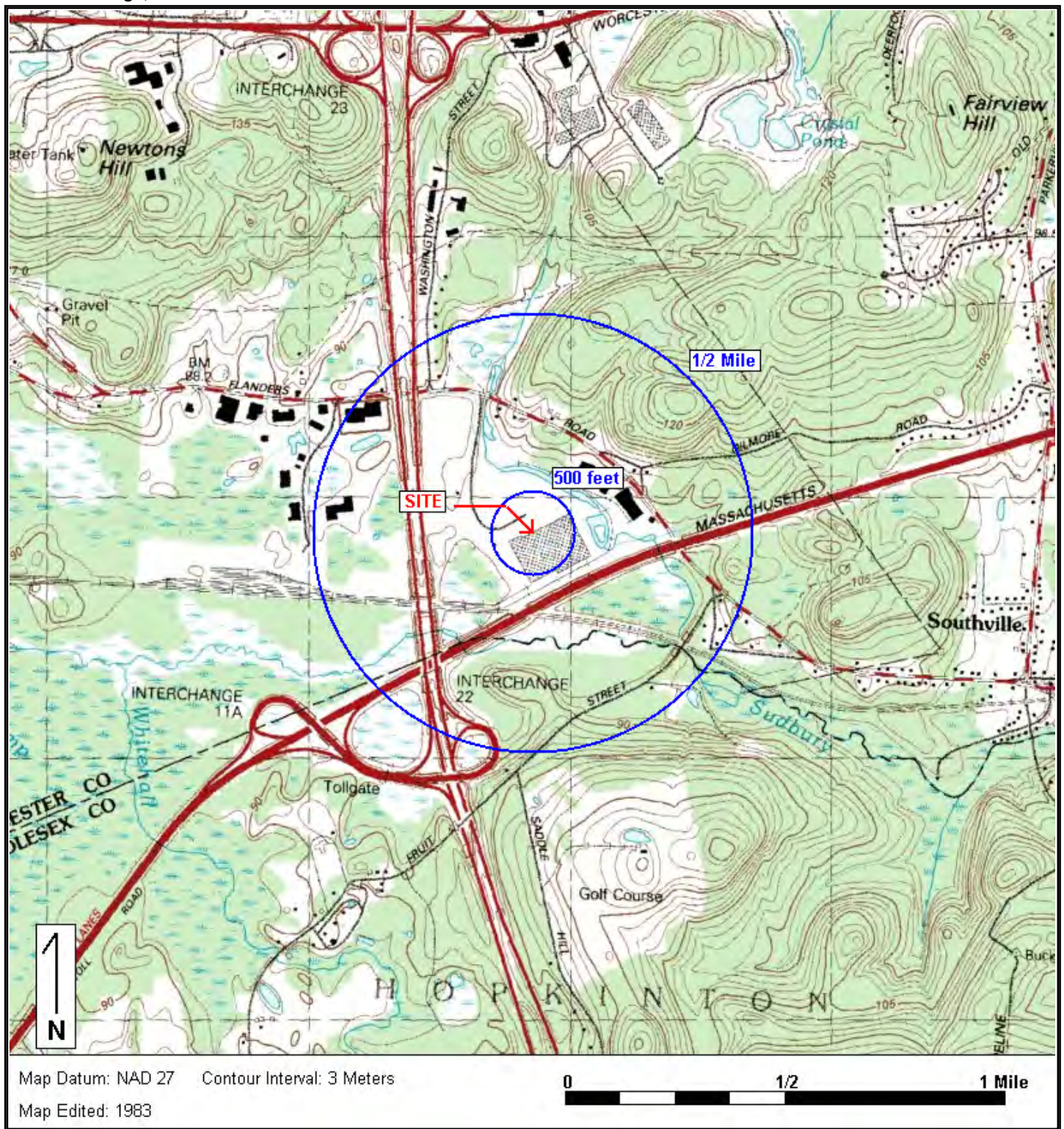
Attachment V: MACRIS Database Search Results, PNF

Attachment VI: Laboratory Analytical Report

FIGURES

Cumberland Farms, Inc. Facility
165 Flanders Road
Westborough, MA 01581-1032

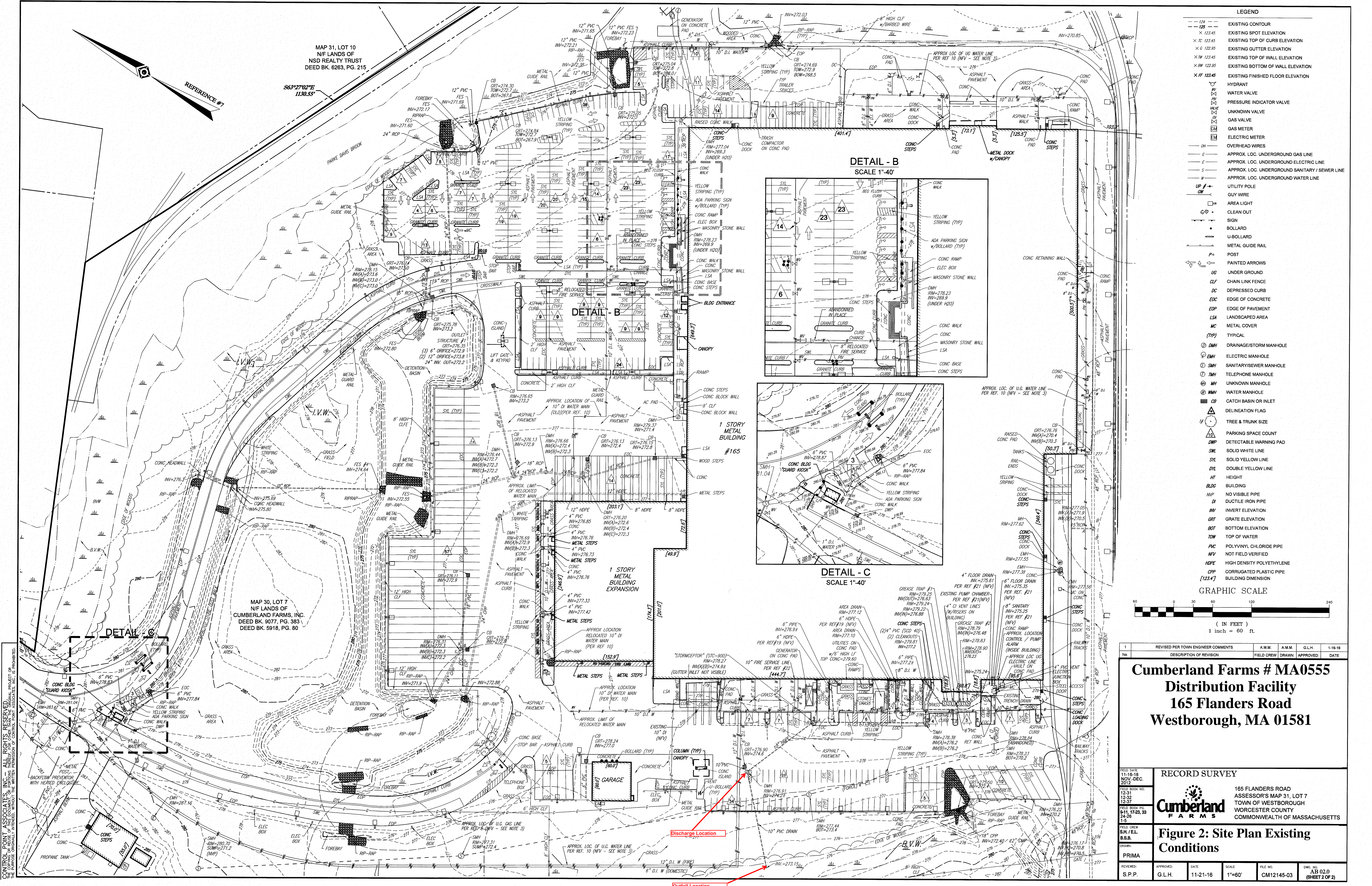
Figure 1: SITE LOCUS



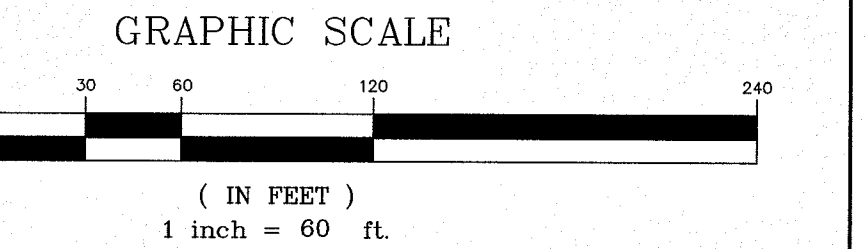
Base Map: U.S. Geological Survey; Quadrangle Location: Marlborough, MA

Lat/Lon: 42° 16' 17" NORTH, 71° 33' 35" WEST - UTM Coordinates: 19 288908.12 EAST / 4683083.0 NORTH

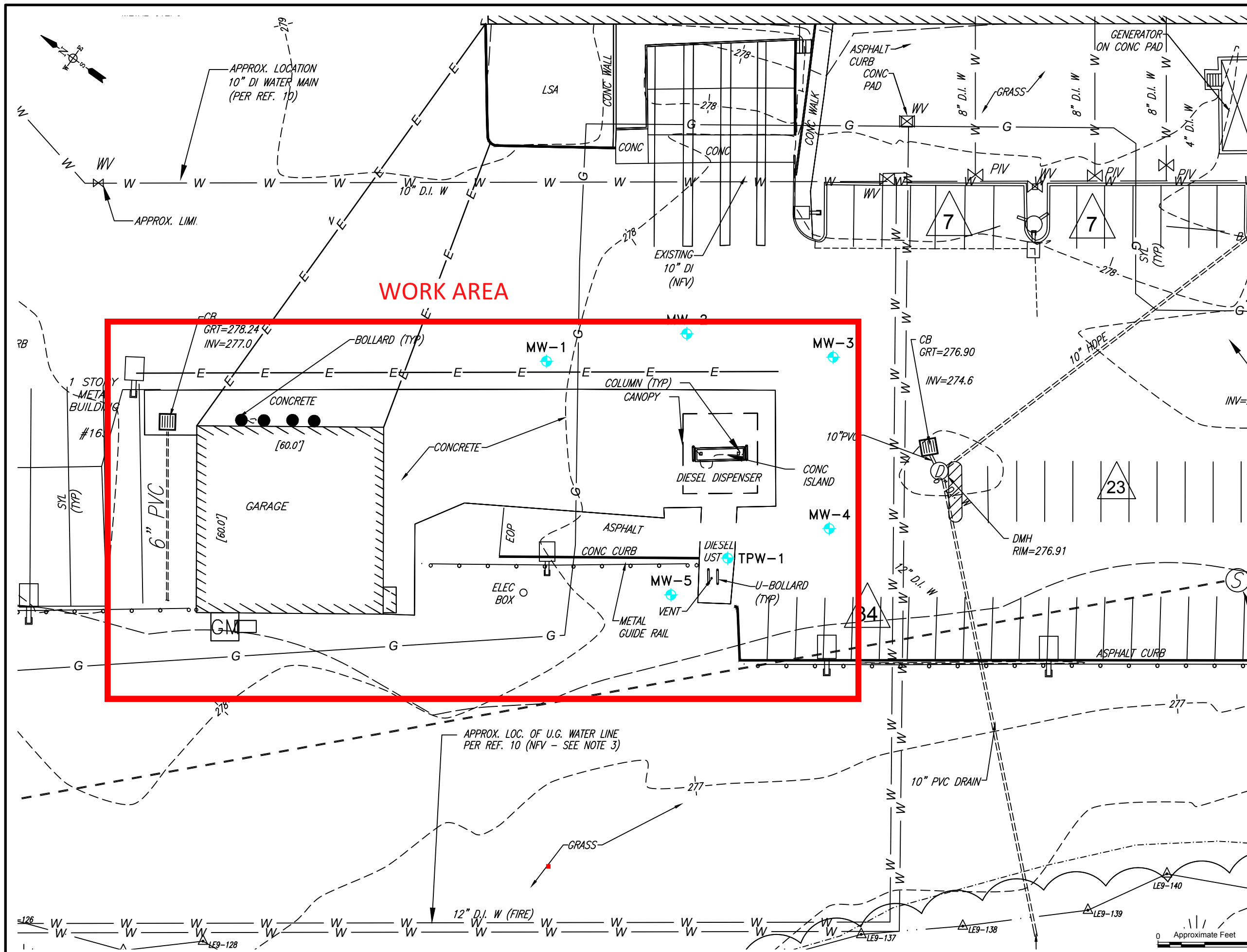
Generated By: Rick Starodaj



- LEGEND**
- 124 --- EXISTING CONTOUR
 - 125 --- EXISTING SPOT ELEVATION
 - X 123.45 EXISTING TOP OF CURB ELEVATION
 - X 122.55 EXISTING GUTTER ELEVATION
 - X 123.45 EXISTING TOP OF WALL ELEVATION
 - X 122.55 EXISTING BOTTOM OF WALL ELEVATION
 - X 123.45 EXISTING FINISHED FLOOR ELEVATION
 - HYDRANT
 - WATER VALVE
 - PRESSURE INDICATOR VALVE
 - UNKNOWN VALVE
 - GAS VALVE
 - GAS METER
 - ELECTRIC METER
 - OVERHEAD WIRES
 - APPROX. LOC. UNDERGROUND GAS LINE
 - APPROX. LOC. UNDERGROUND ELECTRIC LINE
 - APPROX. LOC. UNDERGROUND SANITARY / SEWER LINE
 - APPROX. LOC. UNDERGROUND WATER LINE
 - UTILITY POLE
 - GUY WIRE
 - AREA LIGHT
 - CLEAN OUT
 - SIGN
 - BOLLARD
 - U-BOLLARD
 - METAL GUIDE RAIL
 - POST
 - PAINTED ARROWS
 - UG UNDER GROUND
 - CLF CHAIN LINK FENCE
 - DC DEPRESSURE CURB
 - EOC EDGE OF CONCRETE
 - EOP EDGE OF PAVEMENT
 - LSA LANDSCAPED AREA
 - MC METAL COVER
 - (TYP) TYPICAL
 - DMH DRAINAGE/STORM MANHOLE
 - EMH ELECTRIC MANHOLE
 - SMH SANITARY/SEWER MANHOLE
 - TMH TELEPHONE MANHOLE
 - UMH UNKNOWN MANHOLE
 - WMH WATER MANHOLE
 - CB CATCH BASIN OR INLET
 - DELIN. FLAG
 - TR & TRUNK SIZE
 - PARKING SPACE COUNT
 - DWP DETECTABLE WARNING PAD
 - SWL SOLID WHITE LINE
 - SYL SOLID YELLOW LINE
 - DTL DOUBLE YELLOW LINE
 - HT HEIGHT
 - BLDG BUILDING
 - NVP NO VISIBLE PIPE
 - DI DUCTILE IRON PIPE
 - INV INVERT ELEVATION
 - GRT GRATE ELEVATION
 - BOT BOTTOM ELEVATION
 - TOW TOP OF WATER
 - PVC POLYVINYL CHLORIDE PIPE
 - NFV NOT FIELD VERIFIED
 - HDPE HIGH DENSITY POLYETHYLENE
 - CPP CORRUGATED PLASTIC PIPE
 - BLDG DIMENSION



1	REVISED PER TOWN ENGINEER COMMENTS		A.M.M.	A.M.M.	G.L.H.	1-16-18
No	DESCRIPTION OF REVISION		FIELD CREW	DRAWN	APPROVED	DATE
<div>Cumberland Farms # MA0555</div> <div>Distribution Facility</div> <div>165 Flanders Road</div> <div>Westborough, MA 01581</div>						
<div>FIELD DATE</div> <div>11-16-18</div> <div>NOV.-DEC.</div> <div>2012</div>		<div>RECORD SURVEY</div>				
<div>FIELD BOOK NO.</div> <div>12-31</div> <div>12-32</div> <div>12-37</div>		<div>165 FLANDERS ROAD</div> <div>ASSESSOR'S MAP 31, LOT 7</div> <div>TOWN OF WESTBOROUGH</div> <div>WORCESTER COUNTY</div> <div>COMMONWEALTH OF MASSACHUSETTS</div>				
<div>FIELD BOOK PG.</div> <div>9-11, 17-23, 33</div> <div>24-26</div> <div>1-5</div>		<div><div><div>Cumberland</div><div>FARMS</div></div></div>				
<div>FIELD CREW</div> <div>S.H./E.L.</div> <div>8.8.5.</div>		<div>Figure 2: Site Plan Existing</div> <div>Conditions</div>				
<div>GRABBY:</div> <div>PRIMA</div>						
<div>REVIEWED:</div> <div>S.P.P.</div>	<div>APPROVED:</div> <div>G.L.H.</div>	<div>DATE</div> <div>11-21-16</div>	<div>SCALE</div> <div>1"=60'</div>	<div>FILE NO.</div> <div>CM12145-03</div>	<div>DWG. NO.</div> <div>AB 02.0</div> <div>(SHEET 2 OF 2)</div>	



LEGEND

- 124 --- EXISTING CONTOUR
- 125 --- EXISTING CONTOUR
- X 123.45 EXISTING SPOT ELEVATION
- X TC 123.45 EXISTING TOP OF CURB ELEVATION
- X G 122.95 EXISTING GUTTER ELEVATION
- X TW 123.45 EXISTING TOP OF WALL ELEVATION
- X BW 122.95 EXISTING BOTTOM OF WALL ELEVATION
- X FF 123.45 EXISTING FINISHED FLOOR ELEVATION
- HYDRANT
- WV WATER VALVE
- PIV PRESSURE INDICATOR VALVE
- VALVE UNKNOWN VALVE
- GV GAS VALVE
- GM GAS METER
- EM ELECTRIC METER
- OH OVERHEAD WIRES
- G UNDERGROUND GAS
- E UNDERGROUND ELECTRIC
- S UNDERGROUND SANITARY/SEWER
- W UNDERGROUND WATER
- UP # UTILITY POLE
- GW GUY WIRE
- AREA LIGHT
- C/O CLEAN OUT
- SIGN
- BOLLARD
- U-BOLLARD
- METAL GUIDE RAIL
- POST
- PAINTED ARROWS
- MONITORING WELL
- MW-4 MONITORING WELL LABEL

NAME/ADDRESS:
Cumberland Farms, Inc.
165 FLANDERS ROAD.
WESTBORO, MA 01581

DRAWING TITLE:
**SITE PLAN - DIESEL UST
AREA
1-15-2019**



DRAWN BY: RB
CHECKED BY: ML
PROJECT NO. 9321635002
DATE: JANUARY 2019

FIGURE NO.

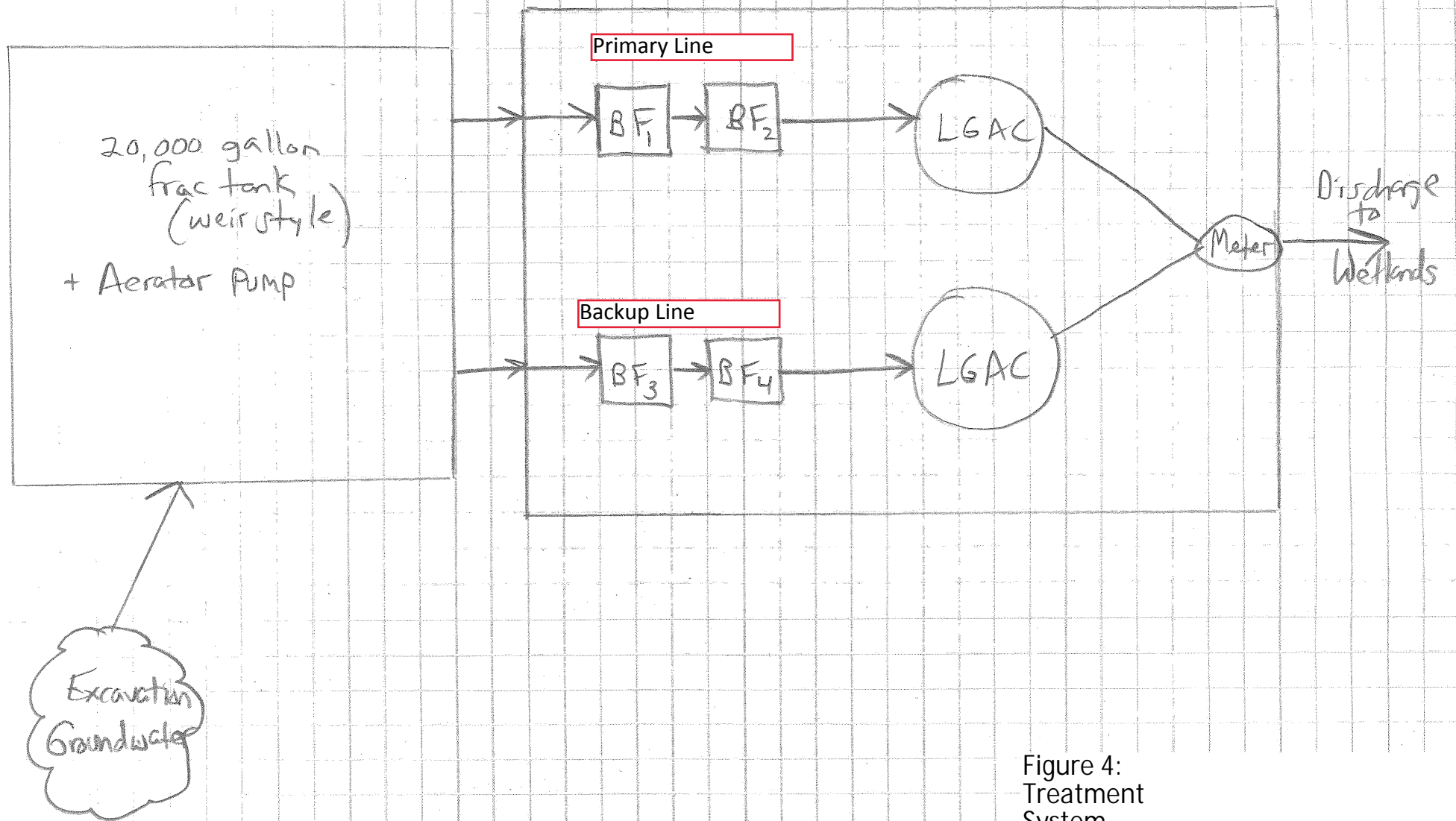


Figure 4:
Treatment
System
Schematic

TABLES

Table 1
Summary of Groundwater Analytical Data
CFI Distribution Facility (#MA055)
165 Flanders Road
Westborough, MA

	MW-5	Stream	MassDEP RCGW-2	EPA Min. Detection Limit	EPA RGP Discharge Limit- TBEL	EPA RGP Discharge Limit-WQBEL
Sampling Date	6-17-19					
Well Elevation (ft)	277.54					
Depth to Groundwater (ft)	4.41					
Groundwater Elevation (ft)	273.13					
VOCs by 8260/624/524 (µg/L)						
Benzene	< 0.5	NS	1,000	1	5	
MTBE	< 0.5	NS	5,000	1	70	
Naphthalene	< 7	NS	700	0.05	20	
Acetone	< 5.0	NS	50,000	10	7,970	
1,4 Dioxane	< 0.4	NS		20	200	
Tert-amyl methyl ether (TAME)	< 0.5	NS	NS	0.5	90	
Tert Butyl Alcohol (TBA)	< 10	NS	NS	10	120	
Ethanol	< 1,000	NS	NS	1,000	NS	
Ethylene Dibromide (EDB)	< 0.001	NS		0.5	0.05	
Tetrachloroethene	0.9	NS		1	5	
Trichlorofluoromethane	0.7	NS		NS	NS	
sec-Butylbenzene	0.7	NS		NS	NS	
SVOCs by 625 SIM (µg/L)						
Benzo(a)anthracene	< 0.05	NS	NS	0.05	1	
Total PAHs	< 0.09	NS	NS	100	100	
Pentachlorophenol	< 1.0	NS	NS	1	1	
TPH by EPA 8100M (mg/L)						
	< 1.4	NS	5	1	5	
PCBs by EPA 608 (ug/L)						
	< 0.10	NS	5	0.2	0.000064	
PP13 Total Metals by 6020 (mg/L)						
Antimony	< 0.0012	< 0.0012		0.0005	0.206	
Arsenic	0.0041	< 0.0016		0.0005	0.104	
Beryllium	< 0.0016	< 0.0016		NS	NS	
Cadmium	< 0.0004	< 0.0004		0.00025	0.01	
Chromium	< 0.004	< 0.004		0.010	0.323	
Copper	0.0241	0.0027	100	0.0005	0.242	0.0069
Lead	0.001	0.0013	0.01	0.0005	0.160	
Silver	< 0.0004	< 0.0004		0.0005	0.0351	
Thallium	< 0.0002	< 0.0002		0.0005	NS	
Nickel	0.0079	0.0053		0.0005	1.450	
Selenium	< 0.010	< 0.010		0.0005	0.235	
Zinc	0.02	0.128	0.90	0.0005	0.420	
Mercury	< 0.0002	< 0.0002		0.0002	0.739	
Iron	9.82	NS	NS	0.030	5	1.036
Chromium III	< 0.125	NS		0.010	0.323	
Chromium VI	< 0.125	NS		0.005	0.323	
pH	6.15/6.42	5.76	0-4, 10-14	NS	6.3-8.5	
Ammonia (mg/L as Nitrogen)	0.11	0.40	NS	0.0001	NS	
Hardness (mg/L CaCO3)	70.5	22.7	NS	NS	NS	
Chloride (mg/L)	26.3	NS	NS	1	NS	
Total Dissolved Solids (mg/L)	194	NS	NS	NS	NS	
Total Suspended Solids (mg/L)	31.7	NS	NS	5	30	

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:	Site address: Street: <table border="1" data-bbox="888 475 1950 557"> <tr> <td data-bbox="888 475 1591 557">City:</td><td data-bbox="1591 475 1724 557">State:</td><td data-bbox="1724 475 1950 557">Zip:</td></tr> </table>	City:	State:	Zip:									
City:	State:	Zip:											
2. Site owner Owner is (check one): <input type="checkbox"/> Federal <input type="checkbox"/> State/Tribal <input type="checkbox"/> Private <input type="checkbox"/> Other; if so, specify:	<table border="1"> <tr> <td colspan="3" data-bbox="888 557 1950 630">Contact Person:</td></tr> <tr> <td data-bbox="888 630 1461 699">Telephone:</td><td colspan="2" data-bbox="1461 630 1950 699">Email:</td></tr> <tr> <td colspan="3" data-bbox="888 699 1950 800">Mailing address: Street:</td></tr> <tr> <td data-bbox="888 800 1591 878">City:</td><td data-bbox="1591 800 1724 878">State:</td><td data-bbox="1724 800 1950 878">Zip:</td></tr> </table>	Contact Person:			Telephone:	Email:		Mailing address: Street:			City:	State:	Zip:
Contact Person:													
Telephone:	Email:												
Mailing address: Street:													
City:	State:	Zip:											
3. Site operator, if different than owner	<table border="1"> <tr> <td colspan="3" data-bbox="888 878 1950 938">Contact Person:</td></tr> <tr> <td data-bbox="888 938 1461 998">Telephone:</td><td colspan="2" data-bbox="1461 938 1950 998">Email:</td></tr> <tr> <td colspan="3" data-bbox="888 998 1950 1099">Mailing address: Street:</td></tr> <tr> <td data-bbox="888 1099 1591 1154">City:</td><td data-bbox="1591 1099 1724 1154">State:</td><td data-bbox="1724 1099 1950 1154">Zip:</td></tr> </table>	Contact Person:			Telephone:	Email:		Mailing address: Street:			City:	State:	Zip:
Contact Person:													
Telephone:	Email:												
Mailing address: Street:													
City:	State:	Zip:											
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): <table border="0"> <tr> <td data-bbox="888 1214 1461 1284"><input type="checkbox"/> MA Chapter 21e; list RTN(s):</td><td data-bbox="1461 1214 1950 1284"><input type="checkbox"/> CERCLA</td></tr> <tr> <td data-bbox="888 1284 1461 1354"><input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit:</td><td data-bbox="1461 1284 1950 1354"><input type="checkbox"/> UIC Program</td></tr> <tr> <td></td><td data-bbox="1461 1354 1950 1398"><input type="checkbox"/> POTW Pretreatment</td></tr> <tr> <td></td><td data-bbox="1461 1398 1950 1458"><input type="checkbox"/> CWA Section 404</td></tr> </table>	<input type="checkbox"/> MA Chapter 21e; list RTN(s):	<input type="checkbox"/> CERCLA	<input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit:	<input type="checkbox"/> UIC Program		<input type="checkbox"/> POTW Pretreatment		<input type="checkbox"/> CWA Section 404				
<input type="checkbox"/> MA Chapter 21e; list RTN(s):	<input type="checkbox"/> CERCLA												
<input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit:	<input type="checkbox"/> UIC Program												
	<input type="checkbox"/> POTW Pretreatment												
	<input type="checkbox"/> CWA Section 404												

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Receiving water is (check any that apply): <input 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 type="checkbox"/> Yes <input type="checkbox"/> No Are sensitive receptors present near the site? (check one): <input type="checkbox"/> Yes <input 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.		
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.		
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, indicate date confirmation received:		
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 type="checkbox"/> Yes <input type="checkbox"/> No		

C. Source water information:

1. Source water(s) is (check any that apply):			
<input type="checkbox"/> Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No	<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 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"/> Other; if so, specify:
		<input type="checkbox"/> A surface water other than the receiving water; if so, indicate waterbody:	

2. Source water contaminants:	
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 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): <input type="checkbox"/> Yes <input type="checkbox"/> No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): <input type="checkbox"/> Existing discharge <input type="checkbox"/> New discharge <input type="checkbox"/> New source	
Outfall(s):	Outfall location(s): (Latitude, Longitude)
<p>Discharges enter the receiving water(s) via (check any that apply): <input type="checkbox"/> Direct discharge to the receiving water <input type="checkbox"/> Indirect discharge, if so, specify:</p> <p><input type="checkbox"/> A private storm sewer system <input type="checkbox"/> A municipal storm sewer system</p> <p>If the discharge enters the receiving water via a private or municipal storm sewer system:</p> <p>Has notification been provided to the owner of this system? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Has the operator has received permission from the owner to use such system for discharges? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No, if so, explain, with an estimated timeframe for obtaining permission:</p> <p>Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No The operator is the owner of the site.</p>	
Provide the expected start and end dates of discharge(s) (month/year):	
Indicate if the discharge is expected to occur over a duration of: <input type="checkbox"/> less than 12 months <input type="checkbox"/> 12 months or more <input type="checkbox"/> is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> 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 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	<p>a. If Activity Category I or II: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	
	<p>b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</p>	
	<table border="1"> <tr> <td data-bbox="970 800 1419 873"><input type="checkbox"/> G. Sites with Known Contamination</td><td data-bbox="1419 800 2003 873"><input type="checkbox"/> H. Sites with Unknown Contamination</td></tr> </table>	<input type="checkbox"/> G. Sites with Known Contamination
<input type="checkbox"/> G. Sites with Known Contamination	<input type="checkbox"/> H. Sites with Unknown Contamination	
<table border="1"> <tr> <td data-bbox="970 873 1419 1409"> <p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p> </td><td data-bbox="1419 873 2003 1409"> <p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p> </td></tr> </table>	<p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	<p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>
<p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	<p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>	

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit ($\mu\text{g/l}$)	Influent		Effluent Limitations	
						Daily maximum ($\mu\text{g/l}$)	Daily average ($\mu\text{g/l}$)	TBEL	WQBEL
A. Inorganics									
Ammonia								Report mg/L	---
Chloride								Report $\mu\text{g/l}$	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids								30 mg/L	---
Antimony								206 $\mu\text{g/L}$	
Arsenic								104 $\mu\text{g/L}$	
Cadmium								10.2 $\mu\text{g/L}$	
Chromium III								323 $\mu\text{g/L}$	
Chromium VI								323 $\mu\text{g/L}$	
Copper								242 $\mu\text{g/L}$	
Iron								5,000 $\mu\text{g/L}$	
Lead								160 $\mu\text{g/L}$	
Mercury								0.739 $\mu\text{g/L}$	
Nickel								1,450 $\mu\text{g/L}$	
Selenium								235.8 $\mu\text{g/L}$	
Silver								35.1 $\mu\text{g/L}$	
Zinc								420 $\mu\text{g/L}$	
Cyanide								178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX								100 $\mu\text{g/L}$	---
Benzene								5.0 $\mu\text{g/L}$	---
1,4 Dioxane								200 $\mu\text{g/L}$	---
Acetone								7.97 mg/L	---
Phenol								1,080 $\mu\text{g/L}$	

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								4.4 µg/L	
1,2 Dichlorobenzene								600 µg/L	---
1,3 Dichlorobenzene								320 µg/L	---
1,4 Dichlorobenzene								5.0 µg/L	---
Total dichlorobenzene								763 µg/L in NH	---
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	
cis-1,2 Dichloroethylene								70 µg/L	---
Vinyl Chloride								2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates								190 µg/L	
Diethylhexyl phthalate								101 µg/L	
Total Group I PAHs								1.0 µg/L	---
Benzo(a)anthracene								As Total PAHs	
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Indeno(1,2,3-cd)pyrene									

[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</p> <p><input type="checkbox"/> Ion Exchange <input type="checkbox"/> Precipitation/Coagulation/Flocculation <input type="checkbox"/> Separation/Filtration <input type="checkbox"/> Other; if so, specify:</p>	
<p>2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.</p> <p>Identify each major treatment component (check any that apply):</p> <p><input 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</p> <p><input type="checkbox"/> Chemical feed tank <input type="checkbox"/> Air stripping unit <input 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.</p> <p>Indicate the most limiting component:</p> <p>Is use of a flow meter feasible? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No, if so, provide justification:</p>	
<p>Provide the proposed maximum effluent flow in gpm.</p>	
<p>Provide the average effluent flow in 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 type="checkbox"/> Yes <input type="checkbox"/> No</p>	

F. Chemical and additive information

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

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

2. Provide the following information for each chemical/additive, using attachments, if necessary:

- a. Product name, chemical formula, and manufacturer of the chemical/additive;
- b. Purpose or use of the chemical/additive or remedial agent;
- c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
- d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
- e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
- f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

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

G. Endangered Species Act eligibility determination

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

- ☐ **FWS Criterion A:** No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area”.
- ☐ **FWS Criterion B:** Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No
- ☐ **FWS Criterion C:** Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

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

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

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

H. National Historic Preservation Act eligibility determination

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

- ☐ **Criterion A:** No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.
- ☐ **Criterion B:** Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.
- ☐ **Criterion C:** Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

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

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

I. Supplemental information

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

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

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

J. Certification requirement

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

BMPP certification statement:

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:

Print Name and Title:

¹-WPA NOI submitted to town on December 21, 2018.
Approval granted on March 12, 2019.

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.

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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.

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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.

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**



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

Distributed By:

ATTACHMENT III

Matthew Lyne

From: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@state.ma.us>
Sent: Wednesday, June 12, 2019 5:31 PM
To: Matthew Lyne
Cc: Wood, Jennifer (DEP)
Subject: RE: Receiving Water ID and 7Q10: Westboro 165 Flanders Road
Attachments: StreamStats - 165 Flanders Rd Westborough.pdf

Hi Matt,

Though both locations did/would discharge to Cedar Swamp, they aren't next to each other so I looked at StreamStats near 165 Flanders Rd. and I've attached the StreamStats report. You can use this if the proposed discharge will be at this location (but I know sometimes discharges travel long distances in storm drains).

The 7Q10 is 0.0159 cfs = 0.0103 MGD and with a max discharge flow of 200 gpm = 0.288 MGD, here is what I get for a dilution factor:
 $(0.0103 + 0.288)/0.288 = 1.04$

To help with the NOI, the receiving water is to a tributary of the Sudbury River. This segment of the Sudbury River is identified as MA82A-25 and is classified as Class B. As you noted, this is an ORW and there are no approved TMDLs for this segment. To look at the causes of impairment, go to:

https://www.mass.gov/files/documents/2016/08/sa/14list2_0.pdf and search for "MA82A-25".

As you know, MassDEP needs to evaluate and authorize any discharges under the RGP to ORWs. This evaluation includes a public notice and comment period. I've cc'd Jennifer, whom you have worked with before.

And, just like last time, if this is not current MCP site, then in addition to submitting your NOI to EPA and MassDEP, you also have to apply with MassDEP by following the instructions at: <https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent> which includes submitting a \$500 fee unless fee exempt.

Please confirm that this proposed discharge will be at the location discussed above.

Thanks,
Cathy

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026

 Please consider the environment before printing this e-mail

From: Matthew Lyne [mailto:Matthew.Lyne@atcgs.com]
Sent: Monday, June 10, 2019 3:35 PM
To: Vakalopoulos, Catherine (DEP)
Cc: Ruan, Xiaodan (DEP)
Subject: Receiving Water ID and 7Q10: Westboro 165 Flanders Road

Hi Cathy, I'm working with Cumberland Farms with regards to an upcoming renovation project at their plant and headquarters in Westboro. As part of the renovation and upgrade, they plan to replace a diesel UST and that will require dewatering. We expect max. discharge flow to be approx. 200 gpm and the receiving water was previously

determined to be Cedar Swamp, which is an ORW. Attached are some site location maps and an aerial map showing the discharge receiving waters.

We did a NOI for another CFI site down the road last year which had the same receiving water location (Cedar Swamp) and the same proposed flow rate (200 gpm). So I wanted to confirm that we can use the same Dilution Factor of 1.05 given similarities in the project. Please confirm the receiving water location for this site and that we can use the DF of 1.05. Thanks.

Matt

Matt Lyne | SENIOR PROJECT MANAGER | **ATC Group Services LLC**
Office: 508-926-1315/Direct Line: 508-926-1317/Cell: 508-641-0476/ Fax: 508-926-1334

240 Barber Avenue, Suite 6, Worcester, MA 01606
matthew.lyne@atcgs.com | www.atcgroupservices.com

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Enter number values in green boxes below

Enter values in the units specified

↓

0.01	Q_R = Enter upstream flow in MGD
0.28	Q_P = Enter discharge flow in MGD
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

1.04

Enter values in the units specified

↓

70.5	C_d = Enter influent hardness in mg/L CaCO_3
22.7	C_s = Enter receiving water hardness in mg/L CaCO_3

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

↓

5.76	pH in Standard Units
10.3	Temperature in °C
0.4	Ammonia in mg/L
22.7	Hardness in mg/L CaCO_3
0	Salinity in ppt
0	Antimony in µg/L
0	Arsenic in µg/L
0	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
2.7	Copper in µg/L
0	Iron in µg/L
1.3	Lead in µg/L
0	Mercury in µg/L
5.3	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
128	Zinc in µg/L

Enter **influent** concentrations in the units specified

↓

0	TRC in µg/L
0.11	Ammonia in mg/L
0	Antimony in µg/L
4.1	Arsenic in µg/L
0	Cadmium in µg/L
8	Chromium III in µg/L
0	Chromium VI in µg/L
24.1	Copper in µg/L
9,820	Iron in µg/L
1	Lead in µg/L
0	Mercury in µg/L
7.9	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
20	Zinc in µg/L
0	Cyanide in µg/L
0	Phenol in µg/L
0	Carbon Tetrachloride in µg/L
0.7	Tetrachloroethylene in µg/L
0	Total Phthalates in µg/L
0	Diethylhexylphthalate in µg/L
0	Benzo(a)anthracene in µg/L
0	Benzo(a)pyrene in µg/L
0	Benzo(b)fluoranthene in µg/L
0	Benzo(k)fluoranthene in µg/L
0	Chrysene in µg/L
0	Dibenzo(a,h)anthracene in µg/L
0	Indeno(1,2,3-cd)pyrene in µg/L
0	Methyl-tert butyl ether in µg/L

Notes:

Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor

Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry

Discharge flow is equal to the design flow or 1 MGD, whichever is less

Only if approved by State as the entry for Q_R ; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State

Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges

Hardness required for freshwater

Salinity required for saltwater (estuarine and marine)

Metals required for all discharges if present and if dilution factor is > 1

Enter 0 if non-detect or testing not required

I. Dilution Factor Calculation Method

A. 7Q10

Refer to Appendix V for determining critical low flow; must be approved by State before use in calculations.

B. Dilution Factor

Calculated as follows:

$$Df = \frac{Q_R + Q_P}{Q_P}$$

Q_R = 7Q10 in MGD

Q_P = Discharge flow, in MGD

II. Effluent Limitation Calculation Method

A. Calculate Water Quality Criterion:

Step 1. Downstream hardness, calculated as follows:

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream hardness in mg/L

Q_d = Discharge flow in MGD

C_d = Discharge hardness in mg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) hardness in mg/L

Q_r = Downstream receiving water flow in MGD

Step 2. Total recoverable water quality criteria for hardness-dependent metals, calculated as follows:

$$\text{Total Recoverable Criteria} = \exp \{m_c [\ln(h)] + b_c\}$$

m_c = Pollutant-specific coefficient (m_a for silver)

b_c = Pollutant-specific coefficient (b_a for silver)

\ln = Natural logarithm

h = Hardness calculated in Step 1

Step 3. Total recoverable water quality criteria for non-hardness-dependent metals, calculated as follows:

$$\text{WQC in } \mu\text{g/L} = \frac{\text{dissolved WQC in } \mu\text{g/L}}{\text{dissolved to total recoverable factor}}$$

B. Calculate WQBEL:

Step 1. WQBEL calculated as follows for parameter sampled in and detected in the receiving water:

$$C_d = \frac{Q_r C_r - Q_s C_s}{Q_d}$$

C_r = Water quality criterion in $\mu\text{g/L}$

Q_d = Discharge flow in MGD

C_d = WQBEL in $\mu\text{g/L}$

Q_s = Upstream flow (7Q10) in MGD

C_s = Ustream (receiving water) concentration in $\mu\text{g/L}$

Q_r = Downstream receiving water flow in MGD

Step 2. WQBEL calculated as follows for parameter not sampled in or not detected in receiving water:

$$C_d = (Q_r/Q_d) \times C_r$$

C_r = Water quality criterion in $\mu\text{g/L}$

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

Step 1. For parameter sampled in and detected in receiving water, downstream concentrations calculated as fo

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream concentration in µg/L

Q_d = Discharge flow in MGD

C_d = Influent concentration in µg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) concentration in µg/L

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

1) the projected downstream concentration calculated in accordance with St and the discharge concentration of a parameter are greater than the WQC ca that parameter in accordance with II.A, above

AND

2) the WQBEL determined for that parameter in accordance with II.B, above the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, the TBEL of the RGP for that parameter applies.

Step 2. For a parameter not sampled in or not detected in receiving water, the WQBEL applies if:

1) the discharge concentration of a parameter is greater than the WQBEL de that parameter in accordance with II.A or II.B, above;

AND

2) the WQBEL determined for that parameter in accordance with II.A or II.B less than the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, t

Part 2.1.1 of the RGP for that parameter applies.

Dilution Factor	1.0					
	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	11	µg/L	50	µg/L
Total Suspended Solids	30	mg/L	---			
Antimony	206	µg/L	663	µg/L		
Arsenic	104	µg/L	10	µg/L		
Cadmium	10.2	µg/L	0.2126	µg/L		
Chromium III	323	µg/L	65.8	µg/L		
Chromium VI	323	µg/L	11.8	µg/L		
Copper	242	µg/L	6.9	µg/L		
Iron	5000	µg/L	1036	µg/L		
Lead	160	µg/L	2.00	µg/L		
Mercury	0.739	µg/L	0.94	µg/L		
Nickel	1450	µg/L	39.2	µg/L		
Selenium	235.8	µg/L	5.2	µg/L		
Silver	35.1	µg/L	2.1	µg/L		
Zinc	420	µg/L	87.3	µg/L		
Cyanide	178	mg/L	5.4	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	311	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	3.4	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	0.0039	µg/L	---	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0039	µg/L	---	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0039	µg/L	---	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0039	µg/L	---	µg/L
Chrysene	1.0	µg/L	0.0039	µg/L	---	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0039	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0039	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	---			

I. Dilution Factor Calculation Method

A. 7Q10

No flow assumed at critical low flow for saltwater unless otherwise approved by the State

B. Dilution Factor

No dilution assumed for saltwater, unless otherwise approved by the State

II. Effluent Limitation Calculation Method

A. Calculate Water Quality Criterion:

Step 1. Not applicable to saltwater

Step 2. Not applicable to saltwater

Step 3. Total recoverable water quality criteria for dissolved metals, calculated as follows:

$$\text{WQC in } \mu\text{g/L} = \frac{\text{dissolved WQC in } \mu\text{g/L}}{\text{dissolved to total recoverable factor}}$$

B. Calculate WQBEL:

Step 1. WQBEL calculated as follows for parameter sampled in and detected in the receiving water:

$$C_d = \frac{Q_r C_r - Q_s C_s}{Q_d}$$

C_r = Water quality criterion in $\mu\text{g/L}$

Q_d = Discharge flow in MGD

C_d = WQBEL in $\mu\text{g/L}$

Q_s = Upstream flow (7Q10) in MGD

C_s = Ustream (receiving water) concentration in $\mu\text{g/L}$

Q_r = Downstream receiving water flow in MGD

Step 2. WQBEL calculated as follows for parameter not sampled in or not detected in receiving water:

$$C_d = (Q_r/Q_d) \times C_r$$

C_r = Water quality criterion in $\mu\text{g/L}$

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

Step 1. For parameter sampled in and detected in receiving water, downstream concentrations calculated as follows:

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream concentration in $\mu\text{g/L}$

Q_d = Discharge flow in MGD

C_d = Influent concentration in $\mu\text{g/L}$

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) concentration in $\mu\text{g/L}$

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

1) the projected downstream concentration calculated in accordance with Step 1 and the discharge concentration of a parameter is greater than the WQC calculated for that parameter in accordance with II.A, above

AND

2) the WQBEL determined for that parameter in accordance with II.B, above is greater than the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, the TBEL in Part 2.1.1 of the RGP for that parameter applies.

Step 2. For a parameter not detected in or not sampled in receiving water, the WQBEL applies if:

1) the discharge concentration of a parameter is greater than the WQBEL determined for that parameter in accordance with II.A or II.B, above;

AND

2) the WQBEL determined for that parameter in accordance with II.A or II.B, if less than the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, the TBEL in Part 2.1.1 of the RGP for that parameter applies.

Dilution Factor

1.0

A. Inorganics

TBEL applies if bolded

WQBEL applies if bolded

Ammonia	Report	mg/L	---	
Chloride	Report	µg/L	---	
Total Residual Chlorine	0.2	mg/L	7.8	µg/L
Total Suspended Solids	30	mg/L	---	
Antimony	206	µg/L	663	µg/L
Arsenic	104	µg/L	37	µg/L
Cadmium	10.2	µg/L	9.2	µg/L
Chromium III	323	µg/L	103.6	µg/L
Chromium VI	323	µg/L	52	µg/L
Copper	242	µg/L	3.8	µg/L
Iron	5000	µg/L	---	µg/L
Lead	160	µg/L	8.8	µg/L
Mercury	0.739	µg/L	1.15	µg/L
Nickel	1450	µg/L	8.4	µg/L
Selenium	235.8	µg/L	74	µg/L
Silver	35.1	µg/L	2.3	µg/L
Zinc	420	µg/L	86	µg/L
Cyanide	178	mg/L	1.0	µg/L

B. Non-Halogenated VOCs

Total BTEX	100	µg/L	---	
Benzene	5.0	µg/L	---	
1,4 Dioxane	200	µg/L	---	
Acetone	7.97	mg/L	---	
Phenol	1,080	µg/L	311	µg/L

C. Halogenated VOCs

Carbon Tetrachloride	4.4		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	3.4	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	0.0039	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0039	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0039	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0039	µg/L
Chrysene	1.0	µg/L	0.0039	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0039	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0039	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	---	
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	---	



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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:
 332-894

MassDEP File #

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Westborough

City/Town

A. General Information

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

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



1. From: Westborough
 Conservation Commission

2. This issuance is for (check one):
 a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Francis

a. First Name

Schefflin

b. Last Name

Cumberland Farms, Inc.

c. Organization

165 Flanders Road

d. Mailing Address

Westborough

e. City/Town

MA

f. State

01581

g. Zip Code

4. Property Owner (if different from applicant):

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

5. Project Location:

165 Flanders Road

a. Street Address

Westborough

b. City/Town

31

c. Assessors Map/Plat Number

7

d. Parcel/Lot Number

Latitude and Longitude, if known:

42d16m18s

d. Latitude

71d33m41s

e. Longitude

Handwritten signature/initials



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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Worcester
 a. County
 9077 & 5918
 c. Book
 b. Certificate Number (if registered land)
 383 & 80, respectively
 d. Page
 7. Dates: December 21, 2018 March 12, 2019 March 12, 2019
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
 8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
 Site Development Plans for Cumberland Farms
 a. Plan Title
 Bohler Engineering James Bernardino
 b. Prepared By c. Signed and Stamped by
 February 12, 2019 1"=40'
 d. Final Revision Date e. Scale
 Drainage Report December 20, 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.



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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) less than 5'

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
7. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	e. c/y dredged 115,542	f. c/y dredged 115,542	119,363	119,363
Cubic Feet Flood Storage	a. square feet 142,745	b. square feet 142,745	c. square feet 271,720	d. square feet 271,720
	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 2,200	d. cubic feet 2,200	e. cubic feet	f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet 2,200	d. square feet 2,200	e. square feet 0	f. square feet 0
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



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B. Findings (cont.)

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

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> 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. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. <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



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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 (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW

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(11)(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.



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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 332-894 "
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;



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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

WPA Form 5 – Order of Conditions

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

Provided by MassDEP:

332-894

MassDEP File #

eDEP Transaction #

Westborough

City/Town

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 21-37

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 # 332-894)

Cumberland Farms

21. This Order of Conditions authorizes only the activity described on the Approved Plans and accompanying documents entitled "Site Development Plans for Cumberland Farms Location of Site: 165 Flanders Road, Town of Westborough 01581, Worcester County Map #31, Lot#7", prepared by Bohler Engineering, dated December 20, 2018 and revised through February 12, 2019. Notice of Intent application dated December 21, 2018. A multi-page stormwater report entitled "Drainage Report Proposed Cumberland Farms 165 Flanders Road Assessor's Map#31, Lot#7 Westborough, Massachusetts Worcester County", dated December 20, 2018. Town of Westborough Engineer comments dated February 12, 2019.

*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 de minimus 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. Prior to any construction/land clearing alteration activity, the proposed construction entrance as shown on Sheet CFG06.0 Approved Plans entitled "Erosion and Sedimentation Control Plan" shall be installed. The site contractor will be responsible for sweeping the main access drives within the Cumberland Farms to prevent sediment from entering adjacent wetland resource areas. *facility*

25. The Erosion Control Barrier/Limit of Work as shown on Sheets CFG06.0 & CFG06.1 of the Approved Plans entitled "Erosion and Sedimentation Control Plan A & B" 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.
26. 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.*
27. Prior to any construction the Professional Engineer shall submit the following to the Agent:
- A copy of the recorded Order of Conditions and finalized SWPPP if applicable.
 - A project/construction sequencing plan with an attached timeline.
 - 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.
28. 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.
29. 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.
30. The Professional Engineer shall provide stamped written certification that the proposed "Floodplain Analysis Calculations & Exhibit" as shown in Section 15 of the Notice of Intent has been properly achieved prior to final loam and seeding. A copy of the stamped certification shall also be sent to the Board of Health in order to comply with the

Floodplain Permit issued by the Board of Health. A copy of the Floodplain Permit shall be sent to the Conservation Agent.

31. The Professional Engineer shall provide stamped written certification that the proposed "Storm Lockout Manhole Electromagnetically Operated Swing Gate Valve" operates as designed and the operation shall be observed by the Agent and other Town Personnel as needed.
32. Before any construction commences on any of the proposed drainage modifications, a meeting shall commence onsite with the Professional Engineer, site contractor and the Agent. The purpose of the meeting is to discuss what elements of the proposed drainage modifications will be subject to interim asbuilt(s). In the past, interim asbuilts were required because all the proposed stormwater basins were newly constructed. This proposal is slightly different and warrants a meeting to further discuss applicability of interim asbuilt(s).
33. 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.
34. 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.
35. The Agent will require a separate meeting with the site contractor to review the cleaning of the existing drainage swale behind the proposed maintenance building that is associated with wetland flag series "LE9".
36. The Agent shall inspect the Stormtech Infiltration Basin proposed bottom elevation of 275.00 prior to stone being applied within the trench to ensure that groundwater is at the appropriate elevation.
37. 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.



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:
 332-894
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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 hereby finds (check one that applies):
 Conservation Commission

- 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

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

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

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 Westborough
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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.

3/12/2019

1. 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.

2. Number of Signers

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:

[Handwritten signatures: Andrew Kravitz, [unclear], Amy Kravitz]

[Handwritten signatures: Kelly Houston, Gerald T. Cusley]

☒ by hand delivery on

3/12/2019

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.



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:

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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

DEP File Number: _____

Request for Departmental Action Fee Transmittal Form

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: _____

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



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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number:

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

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

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:

165 FLANDERS ROAD WESTBOROUGH, MA

NAD83 UTM Meters:

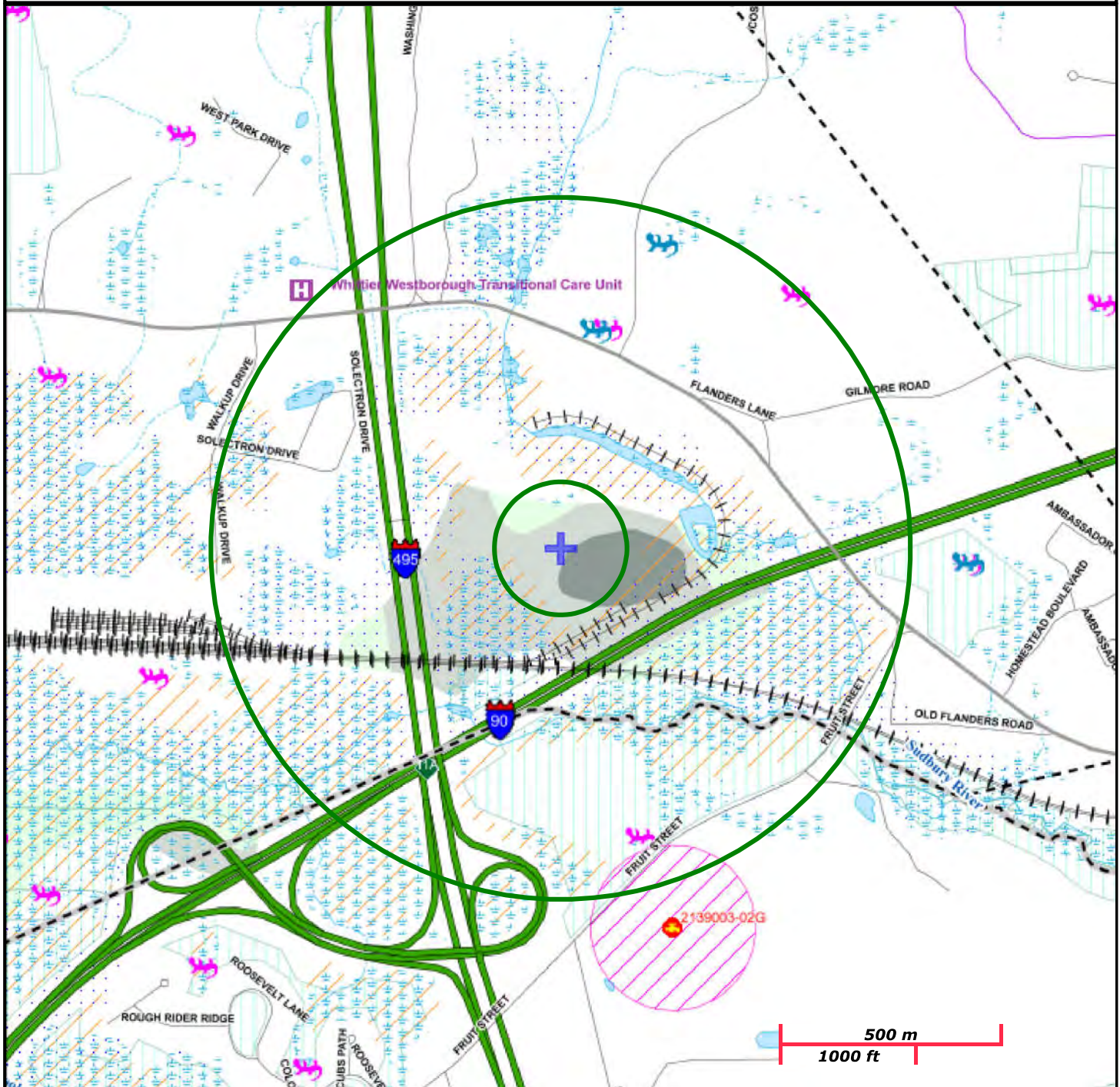
4683058mN, 288830mE (Zone: 19)
May 3, 2019

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



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

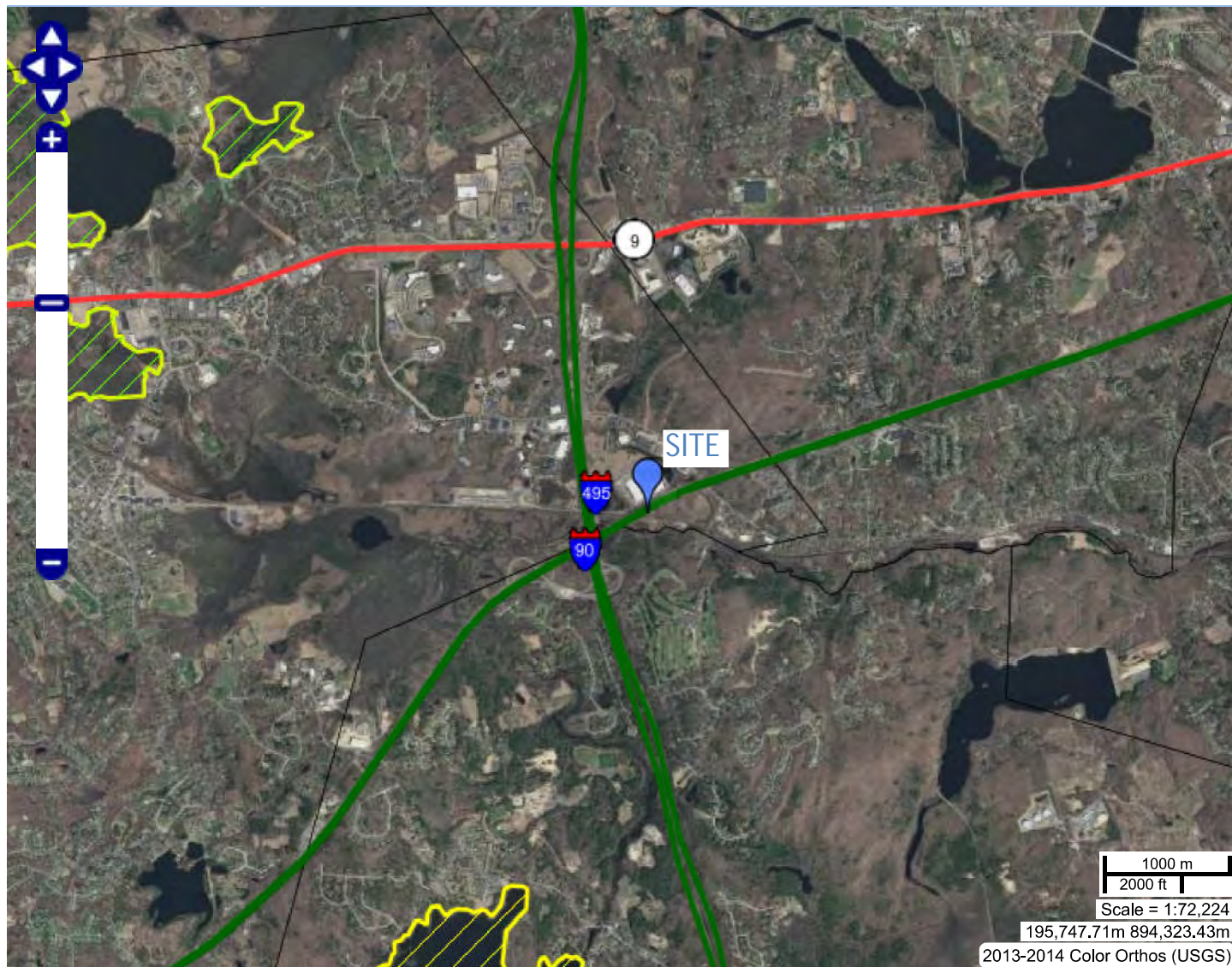
FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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

165 Flanders Road, Westboro

Zoom to a town



0 m

Basemaps

ATTACHMENT V

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Westborough; Street No: 165; Street Name: Flanders Rd; Resource Type(s): Building, Area;

Inv. No.	Property Name	Street	Town	Year
----------	---------------	--------	------	------



ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

240 Barber Avenue, Unit 6
Worcester, MA 01606
Telephone 508-926-1315
Fax 508-926-1334
www.atcgroupservices.com

August 6, 2019
File No. 03-216350

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

RE: **Project Notification Form**
Cumberland Farms Property #MA0555
165 Flanders Road
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 renovate the property in March 2020. 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 94 acre lot located at 165 Flanders Road in Westboro, MA and is as the headquarters and distribution facility for Cumberland Farms. The Site is not located within a current or potential groundwater protection area. Catch basins are located throughout the property and drain to various wetland areas onsite.

If there are any questions regarding this submittal, please do not hesitate to contact the undersigned at 508-926-1315.

Sincerely,
ATC Group Services LLC

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

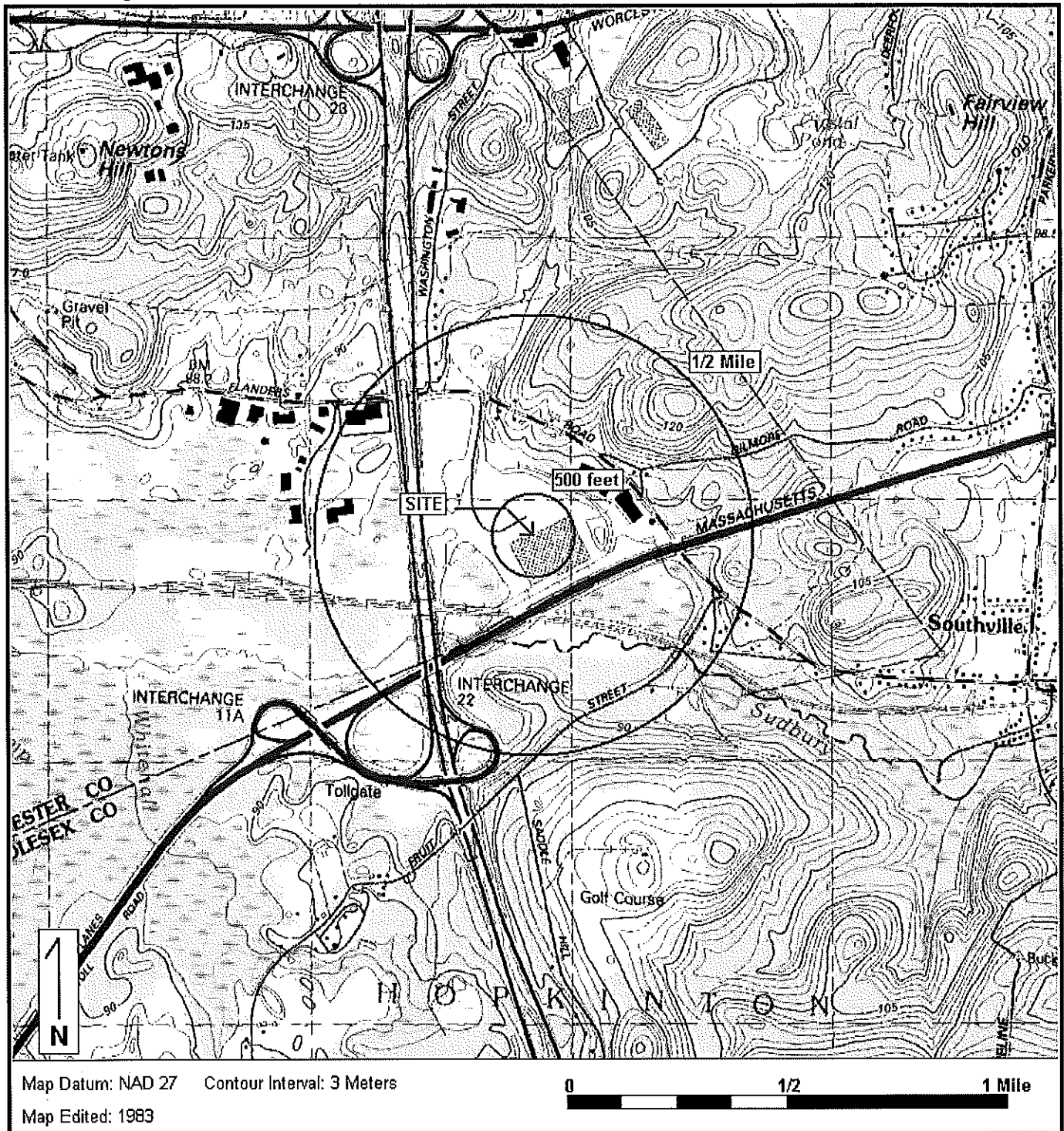
Matthew Lyne
Senior Project Manager

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

Figure 1- Site Locus
Figure 2- Site Plan

Cumberland Farms, Inc. Facility
 165 Flanders Road
 Westborough, MA 01581-1032

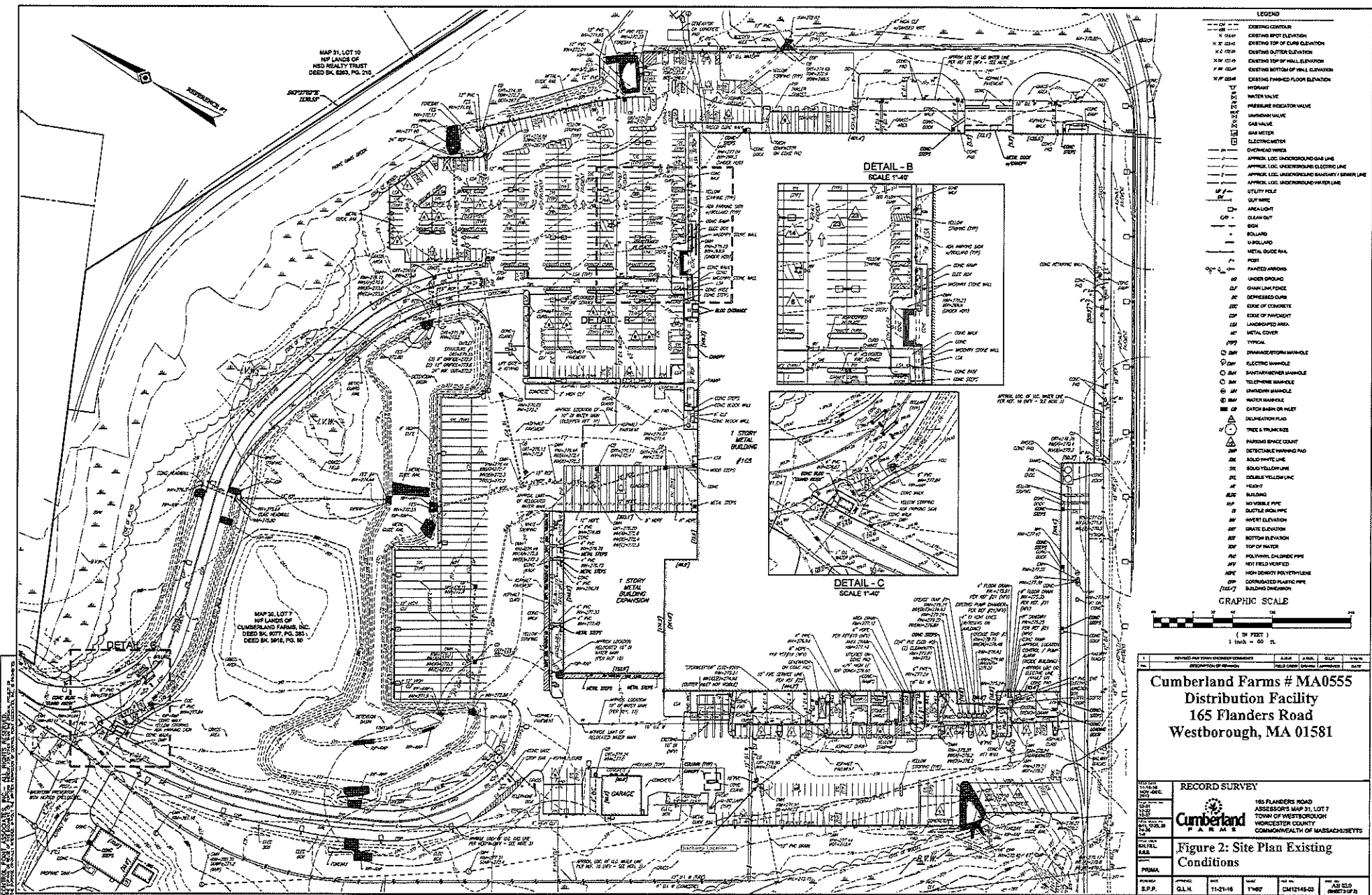
Figure 1: SITE LOCUS



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

Lat/Lon: 42° 16' 17" NORTH, 71° 33' 35" WEST - UTM Coordinates: 19 288908.12 EAST / 4683083.0 NORTH

Generated By: Rick Starodaj



ATC

240 Barber Ave., Unit 6
Worcester, MA 01606



FOREVER / USA

8-6-19

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

ATTACHMENT VI

Laboratory Report **SC55201**

ATC Group Services, LLC
240 Barber St
Worcester, MA 01607
Attn: Matt Lyne

Project: CFI - Westboro, MA
Project #: 03216350.05

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

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



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 48 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).

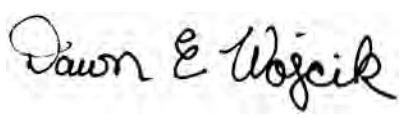
Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC55201
Project: CFI - Westboro, MA
Project Number: 03216350.05

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC55201-01	Stream	Surface Water	17-Jun-19 14:40	18-Jun-19 13:55
SC55201-02	MW-5	Ground Water	17-Jun-19 15:15	18-Jun-19 13:55
SC55201-03	Trip Blanks	Trip Blank	17-Jun-19 00:00	18-Jun-19 13:55

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.			Project #: 03216350.05		
Project Location: CFI - Westboro, MA			RTN:		
This form provides certifications for the following data set:			SC55201-01 through SC55201-03		
Matrices: Ground Water Surface Water Trip Blank					
CAM Protocol					
✓ 8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	✓ 7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	✓ 6020 Metals CAM III D	8082 PCB CAM V A	✓ 9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B
<i>Affirmative responses to questions A through F are required for Presumptive Certainty's status</i>					
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				Yes ✓ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes No
<i>Responses to questions G, H and I below are required for Presumptive Certainty's status</i>					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes ✓ No
Data User Note: Data that achieve Presumptive Certainty's status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				✓ Yes No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>					
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>					
 Dawn E. Wojcik Laboratory Director Date: 7/31/2019					

CASE NARRATIVE:

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

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

The samples were received 0.8 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

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

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

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

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

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

July 31, 2019

Report was revised to include 524 data and to lower PCB and 625 reporting limits.

SW-846 8260C 25mL purge, GC/MS Volatiles

Sample #: 1083968

The percent drift for the following is >20% in the continuing calibration verification standard associated with this sample:

The affected analyte(s) and response(s) are:

Analyte Response (%Drift)

dichlorodifluoromethane -21

bromomethane -29

chloroethane -22

trichlorotrifluoromethane -25

t-butyl alcohol -22

bromoform -26

trans-1,4-dichloro-2-butene -52

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The percent recoveries for bromomethane, trichlorofluoromethane and trans-1,4-dichloro-2-butene are outside the QC window of 70-130% in the LCS and/or LCSD associated with this sample. Bromomethane is considered a difficult analyte and the percent recovery is within the allowed 40 - 160% window.

The project required reporting limit could not be attained using the laboratory LOQ.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:

ethanol is non-detect.

Sample #: 1083967

The project QA/QC requirements were not met.

The percent drift for the following is >20% in the continuing calibration verification standard associated with this sample:

The affected analyte(s) and response(s) are:

Analyte Response (%Drift)

dichlorodifluoromethane -21

bromomethane -29

chloroethane -22

trichlorotrifluoromethane -25

t-butyl alcohol -22

bromoform -26

trans-1,4-dichloro-2-butene -52

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The percent recoveries for bromomethane, trichlorofluoromethane and trans-1,4-dichloro-2-butene are outside the QC window of 70-130% in the LCS and/or LCSD associated with this sample. Bromomethane is considered a difficult analyte and the percent recovery is within the allowed 40 - 160% window.

The project required reporting limit could not be attained using the laboratory LOQ.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: trichlorofluoromethane.

Batch #: I191772AA (Sample number(s): 1083967-1083968)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:

Bromomethane, Trichlorofluoromethane, trans-1,4-Dichloro-2-butene

SW-846 8270D, GC/MS Semivolatiles

Sample #: 1083967

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

The project QA/QC requirements were not met. The percent recoveries were outside of the acceptance limits in the LCS/LCSD associated with this sample as noted on the QC summary. The failures were within the 20% failure rate allowed by MA MCP, therefore the data is reported.
Batch #: 19171WAM026 (Sample number(s): 1083967)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Hexachlorocyclopentadiene, Caprolactam
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: 4-Chloroaniline, 4-Nitrophenol

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

EPA 608.3

Samples:

SC55201-02 *MW-5*

Indicates for dual column analyses that the result is reported from column 1

PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254
PCB-1260
PCB-1262
PCB-1268

SM3500-Cr-B (11)/7196A

Spikes:

1900829-MS1 *Source: SC55201-02*

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

Hexavalent Chromium

The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.

Hexavalent Chromium

1900829-MSD1 *Source: SC55201-02*

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

Hexavalent Chromium

The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.

Hexavalent Chromium

Duplicates:

1900829-DUP1 *Source: SC55201-02*

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

Hexavalent Chromium

Samples:

SC55201-02 *MW-5*

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

Hexavalent Chromium

SW-846 8260C 25mL purge

Laboratory Control Samples:

I191772AA BS

Bromomethane percent recovery 63 (70-130) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-5
Trip Blanks

trans-1,4-Dichloro-2-butene percent recovery 47 (70-130) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-5
Trip Blanks

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

MW-5
Trip Blanks

LCSI79Q

Outside of specification

Bromomethane
trans-1,4-Dichloro-2-butene
Trichlorofluoromethane

LCSI79Y

Outside of specification

Bromomethane
trans-1,4-Dichloro-2-butene
Trichlorofluoromethane

SW-846 8270D

Laboratory Control Samples:

171WMLCSQ

Outside of specification

Caprolactam

19171WAM026 BS

Caprolactam percent recovery 24 (40-140) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-5

19171WAM026 BSD

4-Chloroaniline RPD 22% (20%) is outside individual acceptance criteria.

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

P1WMLCSY

Outside of specification

4-Chloroaniline
4-Nitrophenol
Caprolactam
Hexachlorocyclopentadiene

Sample Acceptance Check Form

Client: ATC Group Services, LLC - Worcester, MA
Project: CFI - Westboro, MA / 03216350.05
Work Order: SC55201
Sample(s) received on: 6/18/2019

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

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples refrigerated upon transfer to laboratory representative?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did sample container labels agree with Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Summary of Hits

Lab ID: SC55201-01

Client ID: Stream

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Hardness (CaCO3)	22.7		0.1	mg/l	E200.7
Ammonia as Nitrogen	0.40		0.05	mg/l	E350.1
Copper	0.0027		0.0010	mg/l	SW6020B
Lead	0.0013		0.0002	mg/l	SW6020B

Lab ID: SC55201-01RE2

Client ID: Stream

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Nickel	0.0053		0.0025	mg/l	SW6020B
Zinc	0.128		0.005	mg/l	SW6020B

Lab ID: SC55201-02

Client ID: MW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Hardness (CaCO3)	70.5		0.1	mg/l	E200.7
Iron	9.82		0.010	mg/l	E200.7
Ammonia as Nitrogen	0.11		0.05	mg/l	E350.1
Chloride	26.3		4.0	mg/l	EPA 300.0
Tetrachloroethene	0.7		0.5	ug/l	EPA 524.2
Trichlorofluoromethane	0.8		0.5	ug/l	EPA 524.2
TDS LAB-194	194		30.0	mg/l	SM 2540 C
Total Suspended Solids	31.7		9.00	mg/l	SM 2540 D
Arsenic	0.0041		0.0016	mg/l	SW6020B
Copper	0.0241		0.0010	mg/l	SW6020B
Lead	0.0010		0.0002	mg/l	SW6020B
sec-Butylbenzene	0.7		0.5	ug/l	SW-846 8260C 25mL purge
Tetrachloroethene	0.9		0.5	ug/l	SW-846 8260C 25mL purge
Trichlorofluoromethane	0.7		0.5	ug/l	SW-846 8260C 25mL purge

Lab ID: SC55201-02RE2

Client ID: MW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Nickel	0.0079		0.0025	mg/l	SW6020B
Zinc	0.020		0.005	mg/l	SW6020B

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

Stream	Client Project #	Matrix	Collection Date/Time	Received
SC55201-01	03216350.05	Surface Water	17-Jun-19 14:40	18-Jun-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Total Metals by EPA 200/6000 Series MethodsPrepared by method General Prep-Metal

Preservation	Field Preserved; pH<2 confirmed	N/A					1	EPA 200/6000 methods	18-Jun-19		ABW	1900830	
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General Chemistry Parameters

pH	5.76	pH	pH Units				1	ASTM D 1293-99B	18-Jun-19 14:45	18-Jun-19 14:45	ABW	1900838	X
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Subcontracted Analyses*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

Hardness (CaCO3)	22.7	mg/l	0.1	0.1	1	E200.7	01-Jul-19 12:13	01-Jul-19 12:13	M-CT007	485044A		
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Prepared by method E350.1*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

7664-41-7 Ammonia as Nitrogen	0.40	mg/l	0.05	0.05	1	E350.1	26-Jun-19 07:46	26-Jun-19 07:46	M-CT007	485053A		
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Subcontracted AnalysesPrepared by method SW6020B*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

7440-36-0 Antimony	< 0.0012	mg/l	0.0012	0.0012	2	SW6020B	25-Jun-19	27-Jun-19 20:03	M-CT007	485042A		
7440-38-2 Arsenic	< 0.0016	mg/l	0.0016	0.0016	2	"	"	"	"	"		
7440-41-7 Beryllium	< 0.0016	mg/l	0.0016	0.0016	2	"	"	"	"	"		
7440-43-9 Cadmium	< 0.0004	mg/l	0.0004	0.0004	2	"	"	"	"	"		
7440-47-3 Chromium	< 0.004	mg/l	0.004	0.004	2	"	"	"	"	"		
7440-50-8 Copper	0.0027	mg/l	0.0010	0.0010	2	"	"	"	"	"		
7439-92-1 Lead	0.0013	mg/l	0.0002	0.0002	2	"	"	"	"	"		
7440-22-4 Silver	< 0.0004	mg/l	0.0004	0.0004	2	"	"	"	"	"		
7440-28-0 Thallium	< 0.0002	mg/l	0.0002	0.0002	2	"	"	"	"	"		

Re-analysis of Subcontracted AnalysesPrepared by method SW6020B

7440-02-0 Nickel	0.0053	mg/l	0.0025	0.0025	5	SW6020B	25-Jun-19	28-Jun-19 18:18	M-CT007	485042A		
7782-49-2 Selenium	< 0.010	mg/l	0.010	0.010	5	"	"	"	"	"		
7440-66-6 Zinc	0.128	mg/l	0.005	0.005	5	"	"	"	"	"		

Prepared by method SW7470A*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

7439-97-6 Mercury	< 0.0002	mg/l	0.0002	0.0002	1	SW7470A	26-Jun-19	26-Jun-19 11:26	M-CT007	485085A		
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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<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>
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Total Metals by EPA 200/6000 Series MethodsPrepared by method General Prep-Metal

	Preservation	Field Preserved; pH<2 confirmed		N/A			1	EPA 200/6000 methods	18-Jun-19		ABW	1900830	
16065-83-1	Trivalent Chromium	<	U	mg/l	0.125		1	Calculation	18-Jun-19	28-Jun-19	EDT	1900829	
18540-29-9	Hexavalent Chromium	< 0.102	R01, U, D	mg/l	0.125	0.102	25	SM3500-Cr-B (11)/7196A	18-Jun-19 14:00	18-Jun-19 14:48	ABW	"	
	pH	6.15	pH	pH Units			1	ASTM D 1293-99B	18-Jun-19 14:45	18-Jun-19 14:45	ABW	1900838	X

Subcontracted AnalysesPrepared by method E504.1*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

106-93-4	1,2-Dibromoethane (EDB)	< 0.01		ug/l	0.01	0.01	1	E504.1	21-Jun-19	22-Jun-19 08:59	M-CT007	484474A	
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Subcontracted Analyses*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

91-57-6	2-Methylnaphthalene	< 0.05		ug/l	0.05	0.05	1	E625.1 SIM	19-Jun-19	20-Jun-19 21:02	M-CT007	484088A	
83-32-9	Acenaphthene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
56-55-3	Benz(a)anthracene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
191-24-2	Benzo(ghi)perylene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.05		ug/l	0.05	0.05	1	"	"	"	"	"	

Surrogate recoveries:

321-60-8	% 2-Fluorobiphenyl	52			30-130 %			"	"	"	"	"	
4165-60-0	% Nitrobenzene-d5	42			30-130 %			"	"	"	"	"	
98904-43-9	% Terphenyl-d14	70			30-130 %			"	"	"	"	"	

Prepared by method SW8015D*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

64-17-5	Ethanol	< 1.0		mg/l	1.0	1.0	1	SW8015D	"	20-Jun-19 00:21	M-CT007	484078A	
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Prepared by method SW3520C*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

87-86-5	Pentachlorophenol	< 1.0		ug/l	1.0	1.0	1	SW8270D	"	24-Jun-19 12:19	M-CT007	484088B	
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Subcontracted AnalysesPrepared by method General Preparation*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<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>
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Subcontracted AnalysesPrepared by method General Preparation*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

SGT-HEM (TPH)	< 1.4	mg/l	5.0	1.4	1	EPA 1664B	25-Jun-19 15:30	25-Jun-19 15:30	M-PA00917680780
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Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009

16887-00-6 Chloride	26.3	mg/l	4.0	2.0	10	EPA 300.0	22-Jun-19 06:05	22-Jun-19 06:05	M-PA00917252021
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Subcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

630-20-6	1,1,1,2-Tetrachloroethane	< 0.1	ug/l	0.5	0.1	1	EPA 524.2	26-Jun-19 16:51	26-Jun-19 16:51	M-PA009191771A
71-55-6	1,1,1-Trichloroethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
79-00-5	1,1,2-Trichloroethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
75-34-3	1,1-Dichloroethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
75-35-4	1,1-Dichloroethene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
563-58-6	1,1-Dichloropropene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	< 0.2	ug/l	0.5	0.2	1	"	"	"	"
96-18-4	1,2,3-Trichloropropane	< 0.2	ug/l	0.5	0.2	1	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	< 0.2	ug/l	0.5	0.2	1	"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
96-12-8	1,2-Dibromo-3-chloropropane	< 0.4	ug/l	1.0	0.4	1	"	"	"	"
106-93-4	1,2-Dibromoethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
95-50-1	1,2-Dichlorobenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
107-06-2	1,2-Dichloroethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
78-87-5	1,2-Dichloropropane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
541-73-1	1,3-Dichlorobenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
142-28-9	1,3-Dichloropropane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
106-46-7	1,4-Dichlorobenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
594-20-7	2,2-Dichloropropane	< 0.2	ug/l	0.5	0.2	1	"	"	"	"
78-93-3	2-Butanone	< 2.0	ug/l	5.0	2.0	1	"	"	"	"
95-49-8	2-Chlorotoluene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
591-78-6	2-Hexanone	< 0.6	ug/l	5.0	0.6	1	"	"	"	"
106-43-4	4-Chlorotoluene	< 0.2	ug/l	0.5	0.2	1	"	"	"	"
108-10-1	4-Methyl-2-pentanone	< 0.6	ug/l	5.0	0.6	1	"	"	"	"
67-64-1	Acetone	< 3.0	ug/l	5.0	3.0	1	"	"	"	"
107-13-1	Acrylonitrile	< 2.0	ug/l	10	2.0	1	"	"	"	"
71-43-2	Benzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
108-86-1	Bromobenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
74-97-5	Bromochloromethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
75-27-4	Bromodichloromethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
75-25-2	Bromoform	< 0.2	ug/l	0.5	0.2	1	"	"	"	"
74-83-9	Bromomethane	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
75-15-0	Carbon Disulfide	< 0.4	ug/l	2.0	0.4	1	"	"	"	"
56-23-5	Carbon Tetrachloride	< 0.1	ug/l	0.5	0.1	1	"	"	"	"
108-90-7	Chlorobenzene	< 0.1	ug/l	0.5	0.1	1	"	"	"	"

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

75-00-3	Chloroethane	< 0.2		ug/l	0.5	0.2	1	EPA 524.2	26-Jun-19 16:51	26-Jun-19 16:51	M-PA009	191771A	
67-66-3	Chloroform	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
74-87-3	Chloromethane	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl Ether	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
60-29-7	Ethyl Ether	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-Butyl Ether	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
76-13-1	Freon 113	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 0.3		ug/l	0.5	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
100-42-5	Styrene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
994-05-8	t-Amyl Methyl Ether	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
75-65-0	t-Butyl Alcohol	< 5.0		ug/l	25	5.0	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	0.7		ug/l	0.5	0.1	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 2.0		ug/l	7.0	2.0	1	"	"	"	"	"	
108-88-3	Toluene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	0.8		ug/l	0.5	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	

Surrogate recoveries:

2199-69-1	1,2-Dichlorobenzene-d4	98			80-120 %			"	"	"	"	"	
460-00-4	4-Bromofluorobenzene	96			80-120 %			"	"	"	"	"	

Subcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

12674-11-2	PCB-1016	< 0.100	D1	ug/l	0.500	0.100	1	EPA 608.3	21-Jun-19 20:24	24-Jun-19 11:03	M-PA009	1720016	
11104-28-2	PCB-1221	< 0.100	D1	ug/l	0.500	0.100	1	"	"	"	"	"	

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

11141-16-5	PCB-1232	< 0.100	D1	ug/l	0.500	0.100	1	EPA 608.3	21-Jun-19 20:24	24-Jun-19 11:03	M-PA009	91720016	
53469-21-9	PCB-1242	< 0.100	D1	ug/l	0.500	0.100	1	"	"	"	"	"	
12672-29-6	PCB-1248	< 0.100	D1	ug/l	0.500	0.100	1	"	"	"	"	"	
11097-69-1	PCB-1254	< 0.100	D1	ug/l	0.500	0.100	1	"	"	"	"	"	
11096-82-5	PCB-1260	< 0.100	D1	ug/l	0.500	0.100	1	"	"	"	"	"	
37324-23-5	PCB-1262	< 0.0740	D1	ug/l	0.500	0.0740	1	"	"	"	"	"	
11100-14-4	PCB-1268	< 0.0740	D1	ug/l	0.500	0.0740	1	"	"	"	"	"	
1336-36-3	Total PCBs	< 0.0740		ug/l	0.500	0.0740	1	"	"	"	"	"	

Surrogate recoveries:

2051-24-3	Decachlorobiphenyl-D1	41			10-127 %			"	"	"	"	"	
2051-24-3	Decachlorobiphenyl-D2	45			10-127 %			"	"	"	"	"	
877-09-8	Tetrachloro-m-xylene-D1	54			18-115 %			"	"	"	"	"	
877-09-8	Tetrachloro-m-xylene-D2	61			18-115 %			"	"	"	"	"	

Subcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

71-55-6	1,1,1-Trichloroethane	< 0.10		ug/l	1.00	0.10	1	EPA 624.1	26-Jun-19 01:12	26-Jun-19 01:12	M-PA009	191761A	
79-00-5	1,1,2-Trichloroethane	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.070		ug/l	1.00	0.070	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 0.060		ug/l	1.00	0.060	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
67-64-1	Acetone	< 2.00		ug/l	5.00	2.00	1	"	"	"	"	"	
71-43-2	Benzene	< 0.050		ug/l	1.00	0.050	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 0.30		ug/l	1.00	0.30	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.080		ug/l	1.00	0.080	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
108-88-3	Toluene	< 0.050		ug/l	1.00	0.050	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 0.30		ug/l	1.00	0.30	1	"	"	"	"	"	

Surrogate recoveries:

17060-07-0	1,2-Dichloroethane-d4	106			60-140 %			"	"	"	"	"	
460-00-4	4-Bromofluorobenzene	98			60-140 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	103			60-140 %			"	"	"	"	"	
2037-26-5	Toluene-d8	101			60-140 %			"	"	"	"	"	

Subcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009**This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<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>
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

117-81-7	bis(2-Ethylhexyl)phthalate	< 1		ug/l	7	1	1	EPA 625	24-Jun-19 10:00	25-Jun-19 11:21	M-PA009174WAA6		
85-68-7	Butylbenzylphthalate	< 1		ug/l	7	1	1	"	"	"	"	"	"
84-66-2	Diethylphthalate	< 0.4		ug/l	7	0.4	1	"	"	"	"	"	"
131-11-3	Dimethylphthalate	< 1		ug/l	7	1	1	"	"	"	"	"	"
84-74-2	Di-n-butylphthalate	< 0.7		ug/l	7	0.7	1	"	"	"	"	"	"
117-84-0	Di-n-octylphthalate	< 0.7		ug/l	7	0.7	1	"	"	"	"	"	"
91-20-3	Naphthalene	< 0.3		ug/l	7	0.3	1	"	"	"	"	"	"
87-86-5	Pentachlorophenol	< 4		ug/l	21	4	1	"	"	"	"	"	"
108-95-2	Phenol	< 0.6		ug/l	7	0.6	1	"	"	"	"	"	"

Surrogate recoveries:

118-79-6	2,4,6-Tribromophenol	97			32-136 %			"	"	"	"	"	"
321-60-8	2-Fluorobiphenyl	96			55-117 %			"	"	"	"	"	"
367-12-4	2-Fluorophenol	62			15-99 %			"	"	"	"	"	"
4165-60-0	Nitrobenzene-d5	86			53-119 %			"	"	"	"	"	"
13127-88-3	Phenol-d6	41			10-75 %			"	"	"	"	"	"
1718-51-0	Terphenyl-d14	97			54-124 %			"	"	"	"	"	"

Prepared by method General Preparation*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

TDS LAB-194	194			mg/l	30.0	10.0	1	SM 2540 C	20-Jun-19 14:10	20-Jun-19 14:10	M-PA00917196490		
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Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009

Total Suspended Solids	31.7			mg/l	9.00	3.00	1	SM 2540 D	20-Jun-19 15:06	20-Jun-19 15:06	M-PA00917138580		
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Subcontracted AnalysesPrepared by method SW-846 5030C*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

64-17-5	Ethanol	< 280		ug/l	750	280	1	SW-846 8260C	28-Jun-19 03:18	28-Jun-19 03:19	M-PA009191783A/		
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Surrogate recoveries:

17060-07-0	1,2-Dichloroethane-d4	106			70-130 %			"	"	"	"	"	"
460-00-4	4-Bromofluorobenzene	92			70-130 %			"	"	"	"	"	"
1868-53-7	Dibromofluoromethane	101			70-130 %			"	"	"	"	"	"
2037-26-5	Toluene-d8	99			70-130 %			"	"	"	"	"	"

Subcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

630-20-6	1,1,1,2-Tetrachloroethane	< 0.07		ug/l	0.5	0.07	1	SW-846 8260C 25mL purge	27-Jun-19 03:13	27-Jun-19 03:14	M-PA009191772A/		
71-55-6	1,1,1-Trichloroethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-34-3	1,1-Dichloroethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
75-35-4	1,1-Dichloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
563-58-6	1,1-Dichloropropene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
96-18-4	1,2,3-Trichloropropane	< 0.1		ug/l	1.0	0.1	1	"	"	"	"	"	"

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<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>
Subcontracted Analyses													
<u>Subcontracted Analyses</u>													
<i>Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009</i>													
120-82-1	1,2,4-Trichlorobenzene	< 0.06		ug/l	0.5	0.06	1	SW-846 8260C 25mL purge	27-Jun-19 03:13	27-Jun-19 03:14	M-PA009191772A/		
95-63-6	1,2,4-Trimethylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
96-12-8	1,2-Dibromo-3-chloropropane	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
106-93-4	1,2-Dibromoethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
107-06-2	1,2-Dichloroethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
78-87-5	1,2-Dichloropropane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
108-70-3	1,3,5-Trichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
142-28-9	1,3-Dichloropropane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
123-91-1	1,4-Dioxane	< 20		ug/l	100	20	1	"	"	"	"	"	"
594-20-7	2,2-Dichloropropane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
78-93-3	2-Butanone	< 0.6		ug/l	5.0	0.6	1	"	"	"	"	"	"
95-49-8	2-Chlorotoluene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
591-78-6	2-Hexanone	< 0.6		ug/l	5.0	0.6	1	"	"	"	"	"	"
106-43-4	4-Chlorotoluene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
108-10-1	4-Methyl-2-pentanone	< 0.7		ug/l	5.0	0.7	1	"	"	"	"	"	"
67-64-1	Acetone	< 0.9		ug/l	5.0	0.9	1	"	"	"	"	"	"
107-13-1	Acrylonitrile	< 0.4		ug/l	1.0	0.4	1	"	"	"	"	"	"
71-43-2	Benzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
108-86-1	Bromobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
74-97-5	Bromochloromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-27-4	Bromodichloromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-25-2	Bromoform	< 0.3		ug/l	1.0	0.3	1	"	"	"	"	"	"
74-83-9	Bromomethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
75-15-0	Carbon Disulfide	< 0.06		ug/l	1.0	0.06	1	"	"	"	"	"	"
56-23-5	Carbon Tetrachloride	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
108-90-7	Chlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-00-3	Chloroethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
67-66-3	Chloroform	< 0.09		ug/l	0.5	0.09	1	"	"	"	"	"	"
74-87-3	Chloromethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
124-48-1	Dibromochloromethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
74-95-3	Dibromomethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-71-8	Dichlorodifluoromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
108-20-3	di-Isopropyl ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
60-29-7	Ethyl ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
637-92-3	Ethyl t-butyl ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
100-41-4	Ethylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
76-13-1	Freon 113	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<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>
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Subcontracted AnalysesSubcontracted Analyses

Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009

87-68-3	Hexachlorobutadiene	< 0.07		ug/l	0.5	0.07	1	SW-846 8260C 25mL purge	27-Jun-19 03:13	27-Jun-19 03:14	M-PA009191772A/		
98-82-8	Isopropylbenzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
179601-23-1	m+p-Xylene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
1634-04-4	Methyl Tertiary Butyl Ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-09-2	Methylene Chloride	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
91-20-3	Naphthalene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
104-51-8	n-Butylbenzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
103-65-1	n-Propylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
95-47-6	o-Xylene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
99-87-6	p-Isopropyltoluene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
135-98-8	sec-Butylbenzene	0.7		ug/l	0.5	0.06	1	"	"	"	"	"	"
100-42-5	Styrene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
994-05-8	t-Amyl methyl ether	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	"
75-65-0	t-Butyl alcohol	< 1.1		ug/l	10	1.1	1	"	"	"	"	"	"
98-06-6	tert-Butylbenzene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
127-18-4	Tetrachloroethene	0.9		ug/l	0.5	0.06	1	"	"	"	"	"	"
109-99-9	Tetrahydrofuran	< 0.8		ug/l	5.0	0.8	1	"	"	"	"	"	"
108-88-3	Toluene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
110-57-6	trans-1,4-Dichloro-2-buten e	< 0.6		ug/l	5.0	0.6	1	"	"	"	"	"	"
79-01-6	Trichloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-69-4	Trichlorofluoromethane	0.7		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-01-4	Vinyl Chloride	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"

Surrogate recoveries:

17060-07-0	1,2-Dichloroethane-d4	99			70-130 %			"	"	"	"	"	"
460-00-4	4-Bromofluorobenzene	101			70-130 %			"	"	"	"	"	"
1868-53-7	Dibromofluoromethane	95			70-130 %			"	"	"	"	"	"
2037-26-5	Toluene-d8	105			70-130 %			"	"	"	"	"	"

Subcontracted Analyses

Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009

123-91-1	1,4-Dioxane	< 0.2		ug/l	0.4	0.2	1	SW-846 8260C SIM	27-Jun-19 12:16	27-Jun-19 12:17	M-PA009191781A/		
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Surrogate recoveries:

2037-26-5	Toluene-d8	97			80-120 %			"	"	"	"	"	"
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Subcontracted AnalysesPrepared by method SW-846 3510C

Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009

92-52-4	1,1'-Biphenyl	< 0.5		ug/l	2	0.5	1	SW-846 8270D	20-Jun-19 17:30	21-Jun-19 13:05	M-PA009171WAMC		
95-94-3	1,2,4,5-Tetrachlorobenzen e	< 0.6		ug/l	2	0.6	1	"	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

122-66-7	1,2-Diphenylhydrazine	< 0.5		ug/l	2	0.5	1	SW-846 8270D	20-Jun-19 17:30	21-Jun-19 13:05	M-PA009171WAMC		
541-73-1	1,3-Dichlorobenzene	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
58-90-2	2,3,4,6-Tetrachlorophenol	< 0.7		ug/l	2	0.7	1	"	"	"	"	"	"
95-95-4	2,4,5-Trichlorophenol	< 0.7		ug/l	2	0.7	1	"	"	"	"	"	"
88-06-2	2,4,6-Trichlorophenol	< 0.6		ug/l	2	0.6	1	"	"	"	"	"	"
120-83-2	2,4-Dichlorophenol	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
105-67-9	2,4-Dimethylphenol	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
51-28-5	2,4-Dinitrophenol	< 10		ug/l	31	10	1	"	"	"	"	"	"
121-14-2	2,4-Dinitrotoluene	< 1		ug/l	5	1	1	"	"	"	"	"	"
606-20-2	2,6-Dinitrotoluene	< 0.7		ug/l	2	0.7	1	"	"	"	"	"	"
91-58-7	2-Chloronaphthalene	< 0.4		ug/l	1	0.4	1	"	"	"	"	"	"
95-57-8	2-Chlorophenol	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
95-48-7	2-Methylphenol	< 0.7		ug/l	2	0.7	1	"	"	"	"	"	"
88-74-4	2-Nitroaniline	< 0.7		ug/l	2	0.7	1	"	"	"	"	"	"
88-75-5	2-Nitrophenol	< 0.7		ug/l	2	0.7	1	"	"	"	"	"	"
91-94-1	3,3'-Dichlorobenzidine	< 2		ug/l	5	2	1	"	"	"	"	"	"
99-09-2	3-Nitroaniline	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
534-52-1	4,6-Dinitro-2-methylphenol	< 5		ug/l	15	5	1	"	"	"	"	"	"
101-55-3	4-Bromophenyl-phenylether	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
59-50-7	4-Chloro-3-methylphenol	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
106-47-8	4-Chloroaniline	< 2		ug/l	5	2	1	"	"	"	"	"	"
7005-72-3	4-Chlorophenyl-phenylether	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
106-44-5	4-Methylphenol	< 0.5		ug/l	1	0.5	1	"	"	"	"	"	"
100-01-6	4-Nitroaniline	< 0.6		ug/l	2	0.6	1	"	"	"	"	"	"
100-02-7	4-Nitrophenol	< 10		ug/l	31	10	1	"	"	"	"	"	"
83-32-9	Acenaphthene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
208-96-8	Acenaphthylene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
98-86-2	Acetophenone	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
62-53-3	Aniline	< 1		ug/l	5	1	1	"	"	"	"	"	"
120-12-7	Anthracene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
1912-24-9	Atrazine	< 2		ug/l	5	2	1	"	"	"	"	"	"
100-52-7	Benzaldehyde	< 1		ug/l	5	1	1	"	"	"	"	"	"
92-87-5	Benztidine	< 21		ug/l	61	21	1	"	"	"	"	"	"
56-55-3	Benzo(a)anthracene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
50-32-8	Benzo(a)pyrene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
205-99-2	Benzo(b)fluoranthene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
191-24-2	Benzo(g,h,i)perylene	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	"
207-08-9	Benzo(k)fluoranthene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
65-85-0	Benzoic acid	< 8		ug/l	20	8	1	"	"	"	"	"	"

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

100-51-6	Benzyl alcohol	< 10		ug/l	31	10	1	SW-846 8270D	20-Jun-19 17:30	21-Jun-19 13:05	M-PA009171WAMC		
111-91-1	bis(2-Chloroethoxy)methane	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
111-44-4	bis(2-Chloroethyl)ether	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
39638-32-9	bis(2-Chloroisopropyl)ether	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
117-81-7	bis(2-Ethylhexyl)phthalate	< 2		ug/l	5	2	1	"	"	"	"	"	"
85-68-7	Butylbenzylphthalate	< 2		ug/l	5	2	1	"	"	"	"	"	"
105-60-2	Caprolactam	< 5		ug/l	15	5	1	"	"	"	"	"	"
86-74-8	Carbazole	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
218-01-9	Chrysene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
53-70-3	Dibenz(a,h)anthracene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
132-64-9	Dibenzofuran	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
84-66-2	Diethylphthalate	< 2		ug/l	5	2	1	"	"	"	"	"	"
131-11-3	Dimethylphthalate	< 2		ug/l	5	2	1	"	"	"	"	"	"
84-74-2	Di-n-butylphthalate	< 2		ug/l	5	2	1	"	"	"	"	"	"
117-84-0	Di-n-octylphthalate	< 2		ug/l	5	2	1	"	"	"	"	"	"
206-44-0	Fluoranthene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
86-73-7	Fluorene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
118-74-1	Hexachlorobenzene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
87-68-3	Hexachlorobutadiene	< 0.6		ug/l	2	0.6	1	"	"	"	"	"	"
77-47-4	Hexachlorocyclopentadiene	< 5		ug/l	15	5	1	"	"	"	"	"	"
67-72-1	Hexachloroethane	< 1		ug/l	5	1	1	"	"	"	"	"	"
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
78-59-1	Isophorone	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
91-20-3	Naphthalene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
98-95-3	Nitrobenzene	< 0.8		ug/l	2	0.8	1	"	"	"	"	"	"
62-75-9	N-Nitrosodimethylamine	< 2		ug/l	5	2	1	"	"	"	"	"	"
621-64-7	N-Nitroso-di-n-propylamine	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
86-30-6	N-Nitrosodiphenylamine	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
82-68-8	Pentachloronitrobenzene	< 2		ug/l	5	2	1	"	"	"	"	"	"
87-86-5	Pentachlorophenol	< 1		ug/l	5	1	1	"	"	"	"	"	"
85-01-8	Phenanthrene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
108-95-2	Phenol	< 0.5		ug/l	2	0.5	1	"	"	"	"	"	"
129-00-0	Pyrene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
110-86-1	Pyridine	< 2		ug/l	5	2	1	"	"	"	"	"	"

Surrogate recoveries:

118-79-6	2,4,6-Tribromophenol	94			15-110 %			"	"	"	"	"	"
321-60-8	2-Fluorobiphenyl	80			30-130 %			"	"	"	"	"	"
367-12-4	2-Fluorophenol	52			15-110 %			"	"	"	"	"	"
4165-60-0	Nitrobenzene-d5	78			30-130 %			"	"	"	"	"	"
13127-88-3	Phenol-d6	35			15-110 %			"	"	"	"	"	"
1718-51-0	Terphenyl-d14	83			30-130 %			"	"	"	"	"	"

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Sample Identification

MW-5

SC55201-02

Client Project #

03216350.05

Matrix

Ground Water

Collection Date/Time

17-Jun-19 15:15

Received

18-Jun-19

<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>
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

	Hardness (CaCO3)	70.5		mg/l	0.1	0.1	1	E200.7	25-Jun-19	27-Jun-19 22:00	M-CT007	485044A	
7439-89-6	Iron	9.82		mg/l	0.010	0.010	1	"	"	"	"	"	"

Prepared by method E350.1*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

7664-41-7	Ammonia as Nitrogen	0.11		mg/l	0.05	0.05	1	E350.1	26-Jun-19 07:47	26-Jun-19 07:47	M-CT007	485053A	
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Subcontracted AnalysesPrepared by method SW6020B*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

7440-36-0	Antimony	< 0.0012		mg/l	0.0012	0.0012	2	SW6020B	25-Jun-19	27-Jun-19 20:07	M-CT007	485042A	
7440-38-2	Arsenic	0.0041		mg/l	0.0016	0.0016	2	"	"	"	"	"	"
7440-41-7	Beryllium	< 0.0016		mg/l	0.0016	0.0016	2	"	"	"	"	"	"
7440-43-9	Cadmium	< 0.0004		mg/l	0.0004	0.0004	2	"	"	"	"	"	"
7440-47-3	Chromium	< 0.004		mg/l	0.004	0.004	2	"	"	"	"	"	"
7440-50-8	Copper	0.0241		mg/l	0.0010	0.0010	2	"	"	"	"	"	"
7439-92-1	Lead	0.0010		mg/l	0.0002	0.0002	2	"	"	"	"	"	"
7440-22-4	Silver	< 0.0004		mg/l	0.0004	0.0004	2	"	"	"	"	"	"
7440-28-0	Thallium	< 0.0002		mg/l	0.0002	0.0002	2	"	"	"	"	"	"

Re-analysis of Subcontracted AnalysesPrepared by method SW6020B

7440-02-0	Nickel	0.0079		mg/l	0.0025	0.0025	5	SW6020B	25-Jun-19	28-Jun-19 18:22	M-CT007	485042A	
7782-49-2	Selenium	< 0.010		mg/l	0.010	0.010	5	"	"	"	"	"	"
7440-66-6	Zinc	0.020		mg/l	0.005	0.005	5	"	"	"	"	"	"

Prepared by method SW7470A*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

7439-97-6	Mercury	< 0.0002		mg/l	0.0002	0.0002	1	SW7470A	26-Jun-19	26-Jun-19 11:28	M-CT007	485085A	
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Sample Identification**Trip Blanks**

SC55201-03

Client Project #

03216350.05

Matrix

Trip Blank

Collection Date/Time

17-Jun-19 00:00

Received

18-Jun-19

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Subcontracted AnalysesPrepared by method E504.1*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*

106-93-4	1,2-Dibromoethane (EDB)	< 0.01		ug/l	0.01	0.01	1	E504.1	21-Jun-19	22-Jun-19 09:27	M-CT007	484474A	
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

71-55-6	1,1,1-Trichloroethane	< 0.10		ug/l	1.00	0.10	1	EPA 624.1	25-Jun-19 21:43	25-Jun-19 21:43	M-PA009	191761A	
79-00-5	1,1,2-Trichloroethane	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.070		ug/l	1.00	0.070	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 0.060		ug/l	1.00	0.060	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
67-64-1	Acetone	< 2.00		ug/l	5.00	2.00	1	"	"	"	"	"	
71-43-2	Benzene	< 0.050		ug/l	1.00	0.050	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 0.10		ug/l	1.00	0.10	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 0.30		ug/l	1.00	0.30	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.080		ug/l	1.00	0.080	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
108-88-3	Toluene	< 0.050		ug/l	1.00	0.050	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 0.20		ug/l	1.00	0.20	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 0.30		ug/l	1.00	0.30	1	"	"	"	"	"	

Surrogate recoveries:

17060-07-0	1,2-Dichloroethane-d4	106			60-140 %		"	"	"	"	"	
460-00-4	4-Bromofluorobenzene	100			60-140 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	103			60-140 %		"	"	"	"	"	
2037-26-5	Toluene-d8	100			60-140 %		"	"	"	"	"	

Subcontracted AnalysesPrepared by method SW-846 5030C*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

630-20-6	1,1,1,2-Tetrachloroethane	< 0.07		ug/l	0.5	0.07	1	SW-846 8260C 25mL purge	26-Jun-19 22:57	26-Jun-19 22:58	M-PA009	191772A/	
71-55-6	1,1,1-Trichloroethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 0.1		ug/l	1.0	0.1	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	

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Sample Identification**Trip Blanks**

SC55201-03

Client Project #

03216350.05

Matrix

Trip Blank

Collection Date/Time

17-Jun-19 00:00

Received

18-Jun-19

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Subcontracted Analyses													
<u>Subcontracted Analyses</u>													
<i>Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009</i>													
95-63-6	1,2,4-Trimethylbenzene	< 0.06		ug/l	0.5	0.06	1	SW-846 8260C 25mL purge	26-Jun-19 22:57	26-Jun-19 22:58	M-PA009191772A/		
96-12-8	1,2-Dibromo-3-chloroprop ane	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
106-93-4	1,2-Dibromoethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
107-06-2	1,2-Dichloroethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
78-87-5	1,2-Dichloropropane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
108-70-3	1,3,5-Trichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
142-28-9	1,3-Dichloropropane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
123-91-1	1,4-Dioxane	< 20		ug/l	100	20	1	"	"	"	"	"	"
594-20-7	2,2-Dichloropropane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
78-93-3	2-Butanone	< 0.6		ug/l	5.0	0.6	1	"	"	"	"	"	"
95-49-8	2-Chlorotoluene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
591-78-6	2-Hexanone	< 0.6		ug/l	5.0	0.6	1	"	"	"	"	"	"
106-43-4	4-Chlorotoluene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
108-10-1	4-Methyl-2-pentanone	< 0.7		ug/l	5.0	0.7	1	"	"	"	"	"	"
67-64-1	Acetone	< 0.9		ug/l	5.0	0.9	1	"	"	"	"	"	"
107-13-1	Acrylonitrile	< 0.4		ug/l	1.0	0.4	1	"	"	"	"	"	"
71-43-2	Benzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
108-86-1	Bromobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
74-97-5	Bromochloromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-27-4	Bromodichloromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-25-2	Bromoform	< 0.3		ug/l	1.0	0.3	1	"	"	"	"	"	"
74-83-9	Bromomethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
75-15-0	Carbon Disulfide	< 0.06		ug/l	1.0	0.06	1	"	"	"	"	"	"
56-23-5	Carbon Tetrachloride	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
108-90-7	Chlorobenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-00-3	Chloroethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
67-66-3	Chloroform	< 0.09		ug/l	0.5	0.09	1	"	"	"	"	"	"
74-87-3	Chloromethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
124-48-1	Dibromochloromethane	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
74-95-3	Dibromomethane	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-71-8	Dichlorodifluoromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
108-20-3	di-Isopropyl ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
60-29-7	Ethyl ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
637-92-3	Ethyl t-butyl ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
100-41-4	Ethylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
76-13-1	Freon 113	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
87-68-3	Hexachlorobutadiene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"

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

Sample Identification**Trip Blanks**

SC55201-03

Client Project #

03216350.05

Matrix

Trip Blank

Collection Date/Time

17-Jun-19 00:00

Received

18-Jun-19

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Subcontracted AnalysesSubcontracted Analyses*Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009*

98-82-8	Isopropylbenzene	< 0.05		ug/l	0.5	0.05	1	SW-846 8260C 25mL purge	26-Jun-19 22:57	26-Jun-19 22:58	M-PA009191772A/		
179601-23-1	m+p-Xylene	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"
1634-04-4	Methyl Tertiary Butyl Ether	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-09-2	Methylene Chloride	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
91-20-3	Naphthalene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
104-51-8	n-Butylbenzene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
103-65-1	n-Propylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
95-47-6	o-Xylene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
99-87-6	p-Isopropyltoluene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
135-98-8	sec-Butylbenzene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
100-42-5	Styrene	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
994-05-8	t-Amyl methyl ether	< 0.2		ug/l	0.5	0.2	1	"	"	"	"	"	"
75-65-0	t-Butyl alcohol	< 1.1		ug/l	10	1.1	1	"	"	"	"	"	"
98-06-6	tert-Butylbenzene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
127-18-4	Tetrachloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
109-99-9	Tetrahydrofuran	< 0.8		ug/l	5.0	0.8	1	"	"	"	"	"	"
108-88-3	Toluene	< 0.07		ug/l	0.5	0.07	1	"	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
110-57-6	trans-1,4-Dichloro-2-buten e	< 0.6		ug/l	5.0	0.6	1	"	"	"	"	"	"
79-01-6	Trichloroethene	< 0.06		ug/l	0.5	0.06	1	"	"	"	"	"	"
75-69-4	Trichlorofluoromethane	< 0.05		ug/l	0.5	0.05	1	"	"	"	"	"	"
75-01-4	Vinyl Chloride	< 0.1		ug/l	0.5	0.1	1	"	"	"	"	"	"

Surrogate recoveries:

17060-07-0	1,2-Dichloroethane-d4	102			70-130 %		"	"	"	"	"	"	"
460-00-4	4-Bromofluorobenzene	101			70-130 %		"	"	"	"	"	"	"
1868-53-7	Dibromofluoromethane	96			70-130 %		"	"	"	"	"	"	"
2037-26-5	Toluene-d8	106			70-130 %		"	"	"	"	"	"	"

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>ASTM D 1293-99B</u>										
Batch 1900838 - General Preparation										
<u>Duplicate (1900838-DUP1)</u>										
pH	6.06		pH Units			6.15			1	5
<u>Reference (1900838-SRM1)</u>										
pH	6.04		pH Units		6.00		101	97.5-102.5		
<u>Reference (1900838-SRM2)</u>										
pH	6.07		pH Units		6.00		101	97.5-102.5		
<u>SM3500-Cr-B (11)/7196A</u>										
Batch 1900829 - General Preparation										
<u>Blank (1900829-BLK1)</u>										
Hexavalent Chromium	< 0.004	U	mg/l	0.004						
<u>LCS (1900829-BS1)</u>										
Hexavalent Chromium	0.051		mg/l	0.004	0.0500		102	90-111		
<u>Calibration Blank (1900829-CCB1)</u>										
Hexavalent Chromium	-0.002	U	mg/l							
<u>Calibration Blank (1900829-CCB2)</u>										
Hexavalent Chromium	-0.002	U	mg/l							
<u>Calibration Check (1900829-CCV1)</u>										
Hexavalent Chromium	0.051		mg/l	0.004	0.0500		103	90-110		
<u>Calibration Check (1900829-CCV2)</u>										
Hexavalent Chromium	0.050		mg/l	0.004	0.0500		101	90-110		
<u>Duplicate (1900829-DUP1)</u>										
Hexavalent Chromium	< 0.102	R01, U, D	mg/l	0.102		BRL				20
<u>Matrix Spike (1900829-MS1)</u>										
Hexavalent Chromium	0.512	QM1, R01, D	mg/l	0.102	1.25	BRL	41	85-115		
<u>Matrix Spike Dup (1900829-MSD1)</u>										
Hexavalent Chromium	0.492	QM1, R01, D	mg/l	0.102	1.25	BRL	39	85-115	4	20
<u>Reference (1900829-SRM1)</u>										
Hexavalent Chromium	0.072		mg/l	0.004	0.0742		97	83.3-116		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
E504.1										
Batch 484474A - E504.1										
Blank (CD37193-BLK)					<u>Prepared & Analyzed: 21-Jun-19</u>					
1,2-Dibromoethane (EDB)	ND		mg/l	0.00001			ND	-		
LCS (CD37193-LCS)					<u>Prepared & Analyzed: 21-Jun-19</u>					
1,2-Dibromoethane (EDB)	0.000258		mg/l	0.00001	0.000228		113	70-130		25
LCS Dup (CD37193-LCSD)					<u>Source: CD37193-LCS</u> <u>Prepared & Analyzed: 21-Jun-19</u>					
1,2-Dibromoethane (EDB)	0.000261		mg/l	0.00001	0.000228		114	70-130	0.9	25
E625.1 SIM										
Batch 484088A - SW3520C										
Blank (CD37047-BLK)					<u>Prepared: 19-Jun-19 Analyzed: 21-Jun-19</u>					
Benzo(a)pyrene	ND		ug/l	0.50			ND	-		
Benzo(k)fluoranthene	ND		ug/l	0.50			ND	-		
Pyrene	ND		ug/l	0.50			ND	-		
Phenanthrene	ND		ug/l	0.50			ND	-		
Naphthalene	ND		ug/l	0.50			ND	-		
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.50			ND	-		
Fluorene	ND		ug/l	0.50			ND	-		
Fluoranthene	ND		ug/l	0.50			ND	-		
Dibenz(a,h)anthracene	ND		ug/l	0.50			ND	-		
Chrysene	ND		ug/l	0.50			ND	-		
Benzo(ghi)perylene	ND		ug/l	0.50			ND	-		
Benzo(b)fluoranthene	ND		ug/l	0.50			ND	-		
Benz(a)anthracene	ND		ug/l	0.50			ND	-		
Anthracene	ND		ug/l	0.50			ND	-		
Acenaphthylene	ND		ug/l	0.50			ND	-		
Acenaphthene	ND		ug/l	0.50			ND	-		
2-Methylnaphthalene	ND		ug/l	0.50			ND	-		
<hr/>										
Surrogate: % Terphenyl-d14	84		ug/l		5		84	30-130		
Surrogate: % Nitrobenzene-d5	81		ug/l		5		81	30-130		
Surrogate: % 2-Fluorobiphenyl	73		ug/l		5		73	30-130		
LCS (CD37047-LCS)					<u>Prepared: 19-Jun-19 Analyzed: 21-Jun-19</u>					
Acenaphthene	4.257		ug/l	0.50	5		85	30-130		20
Chrysene	5.002		ug/l	0.50	5		100	30-130		20
Indeno(1,2,3-cd)pyrene	5.149		ug/l	0.50	5		103	30-130		20
Naphthalene	3.884		ug/l	0.50	5		78	30-130		20
Fluorene	4.662		ug/l	0.50	5		93	30-130		20
Phenanthrene	4.525		ug/l	0.50	5		90	30-130		20
Fluoranthene	4.945		ug/l	0.50	5		99	30-130		20
Dibenz(a,h)anthracene	5.641		ug/l	0.50	5		113	30-130		20
Benzo(k)fluoranthene	5.680		ug/l	0.50	5		114	30-130		20
Benzo(b)fluoranthene	5.340		ug/l	0.50	5		107	30-130		20
Benz(a)anthracene	5.241		ug/l	0.50	5		105	30-130		20
Acenaphthylene	4.490		ug/l	0.50	5		90	30-130		20
2-Methylnaphthalene	4.247		ug/l	0.50	5		85	30-130		20
Benzo(ghi)perylene	4.767		ug/l	0.50	5		95	30-130		20
Pyrene	5.198		ug/l	0.50	5		104	30-130		20
Anthracene	4.882		ug/l	0.50	5		98	30-130		20
Benzo(a)pyrene	4.542		ug/l	0.50	5		91	30-130		20
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Surrogate: % Terphenyl-d14	4.581		ug/l		5		92	30-130		
Surrogate: % 2-Fluorobiphenyl	4.167		ug/l		5		83	30-130		
Surrogate: % Nitrobenzene-d5	4.047		ug/l		5		81	30-130		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>E625.1 SIM</u>										
Batch 484088A - SW3520C										
<u>LCS Dup (CD37047-LCSD)</u>						<u>Source: CD37047-LCS</u>	<u>Prepared: 19-Jun-19 Analyzed: 21-Jun-19</u>			
Phenanthrene	4.447		ug/l	0.50	5		89	30-130	1.1	20
Chrysene	4.790		ug/l	0.50	5		96	30-130	4.1	20
Indeno(1,2,3-cd)pyrene	4.917		ug/l	0.50	5		98	30-130	5.0	20
Fluorene	4.644		ug/l	0.50	5		93	30-130	0.0	20
Dibenz(a,h)anthracene	5.366		ug/l	0.50	5		107	30-130	5.5	20
Pyrene	5.095		ug/l	0.50	5		102	30-130	1.9	20
Fluoranthene	4.893		ug/l	0.50	5		98	30-130	1.0	20
Naphthalene	3.720		ug/l	0.50	5		74	30-130	5.3	20
2-Methylnaphthalene	3.993		ug/l	0.50	5		80	30-130	6.1	20
Acenaphthylene	4.461		ug/l	0.50	5		89	30-130	1.1	20
Anthracene	4.881		ug/l	0.50	5		98	30-130	0.0	20
Benz(a)anthracene	5.059		ug/l	0.50	5		101	30-130	3.9	20
Benzo(a)pyrene	4.322		ug/l	0.50	5		86	30-130	5.6	20
Acenaphthene	4.135		ug/l	0.50	5		83	30-130	2.4	20
Benzo(k)fluoranthene	5.444		ug/l	0.50	5		109	30-130	4.5	20
Benzo(ghi)perylene	4.551		ug/l	0.50	5		91	30-130	4.3	20
Benzo(b)fluoranthene	4.997		ug/l	0.50	5		100	30-130	6.8	20
Surrogate: % Terphenyl-d14	4.483		ug/l		5		90	30-130		
Surrogate: % Nitrobenzene-d5	4.018		ug/l		5		80	30-130		
Surrogate: % 2-Fluorobiphenyl	4.100		ug/l		5		82	30-130		

SW8015D

Batch 484078A - SW8015D

Blank (CD34661-BLK)

Prepared & Analyzed: 19-Jun-19

Ethanol	ND	mg/l	1.0		ND	-
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LCS (CD34661-LCS)

Prepared & Analyzed: 19-Jun-19

Ethanol	8.238	mg/l	1.0	10	82	70-130	30
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LCS Dup (CD34661-LCSD)

Source: CD34661-LCS

Prepared & Analyzed: 19-Jun-19

Ethanol	7.680	mg/l	1.0	10	77	70-130	6.3	30
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SW8270D

Batch 484088B - SW3520C

Blank (CD37047-BLK)

Prepared: 19-Jun-19 Analyzed: 23-Jun-19

Pentachlorophenol	ND	ug/l	3.5		ND	-
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LCS (CD37047-LCS)

Prepared: 19-Jun-19 Analyzed: 23-Jun-19

Pentachlorophenol	44.38	ug/l	3.5	50	89	30-130	20
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LCS Dup (CD37047-LCSD)

Source: CD37047-LCS

Prepared: 19-Jun-19 Analyzed: 23-Jun-19

Pentachlorophenol	44.19	ug/l	3.5	50	88	30-130	1.1	20
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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>EPA 1664B</u>										
Batch 19176807801A - General Preparation										
<u>Blank (B176431B)</u>						<u>Prepared & Analyzed: 25-Jun-19</u>				
SGT-HEM (TPH)	< 1.4		mg/l	1.4				-		
<u>LCS (L176431Q)</u>						<u>Prepared & Analyzed: 25-Jun-19</u>				
SGT-HEM (TPH)	17.3		mg/l	5.0	20.0		87	64-132		
<u>LCS Dup (L176431Y)</u>						<u>Prepared & Analyzed: 25-Jun-19</u>				
SGT-HEM (TPH)	17.5		mg/l	5.0	20.0		88	64-132	1	23
<u>EPA 300.0</u>										
Batch 19172520217A - General Preparation										
<u>Blank (P17220QBB)</u>						<u>Prepared & Analyzed: 22-Jun-19</u>				
Chloride	< 0.20		mg/l	0.20				-		
<u>LCS (P17220QQQ)</u>						<u>Prepared & Analyzed: 22-Jun-19</u>				
Chloride	3.1		mg/l	0.40	3.0		103	90-110		
<u>EPA 524.2</u>										
Batch K191771AA - General Preparation										
<u>LCS (LFBK06Q)</u>						<u>Prepared & Analyzed: 26-Jun-19</u>				
Bromodichloromethane	5.1		ug/l	0.5	5.0		101	70-130		
1,2,4-Trichlorobenzene	5.5		ug/l	0.5	5.0		111	70-130		
1,1-Dichloroethene	5.3		ug/l	0.5	5.0		106	70-130		
4-Methyl-2-pentanone	24		ug/l	5.0	25		97	70-130		
Acetone	38		ug/l	5.0	38		102	70-130		
Acrylonitrile	100		ug/l	10	110		92	70-130		
Benzene	5.1		ug/l	0.5	5.0		101	70-130		
1,1-Dichloropropene	5.1		ug/l	0.5	5.0		102	70-130		
Bromochloromethane	4.9		ug/l	0.5	5.0		97	70-130		
2-Hexanone	24		ug/l	5.0	25		96	70-130		
Bromoform	4.6		ug/l	0.5	5.0		91	70-130		
Bromomethane	1.8		ug/l	0.5	2.0		89	70-130		
1,1-Dichloroethane	4.7		ug/l	0.5	5.0		94	70-130		
1,1,2-Trichloroethane	5.3		ug/l	0.5	5.0		106	70-130		
1,1,2,2-Tetrachloroethane	5.0		ug/l	0.5	5.0		100	70-130		
1,1,1-Trichloroethane	5.1		ug/l	0.5	5.0		102	70-130		
Bromobenzene	5.2		ug/l	0.5	5.0		105	70-130		
1,3,5-Trimethylbenzene	5.3		ug/l	0.5	5.0		107	70-130		
1,2,3-Trichlorobenzene	5.5		ug/l	0.5	5.0		111	70-130		
1,2,3-Trichloropropane	5.5		ug/l	0.5	5.0		111	70-130		
1,2,4-Trimethylbenzene	5.3		ug/l	0.5	5.0		105	70-130		
1,2-Dibromo-3-chloropropane	4.9		ug/l	1.0	5.0		98	70-130		
1,2-Dibromoethane	5.2		ug/l	0.5	5.0		104	70-130		
1,2-Dichlorobenzene	5.2		ug/l	0.5	5.0		104	70-130		
4-Chlorotoluene	5.3		ug/l	0.5	5.0		105	70-130		
1,2-Dichloropropane	5.2		ug/l	0.5	5.0		103	70-130		
Naphthalene	5.4		ug/l	0.5	5.0		108	70-130		
1,3-Dichlorobenzene	5.4		ug/l	0.5	5.0		109	70-130		
1,3-Dichloropropane	5.1		ug/l	0.5	5.0		102	70-130		
1,4-Dichlorobenzene	5.5		ug/l	0.5	5.0		109	70-130		
2,2-Dichloropropane	5.1		ug/l	0.5	5.0		102	70-130		
2-Butanone	37		ug/l	5.0	38		98	70-130		
2-Chlorotoluene	5.4		ug/l	0.5	5.0		108	70-130		
1,2-Dichloroethane	5.4		ug/l	0.5	5.0		108	70-130		
Chloromethane	1.8		ug/l	0.5	2.0		92	70-130		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch K191771AA - General Preparation										
LCS (LFBK06Q)					<u>Prepared & Analyzed: 26-Jun-19</u>					
n-Propylbenzene	5.5		ug/l	0.5	5.0		109	70-130		
Ethyl t-Butyl Ether	4.5		ug/l	0.5	5.0		90	70-130		
Ethyl Ether	4.7		ug/l	0.5	5.0		93	70-130		
di-Isopropyl Ether	4.5		ug/l	0.5	5.0		90	70-130		
Dichlorodifluoromethane	1.8		ug/l	0.5	2.0		90	70-130		
Dibromomethane	5.1		ug/l	0.5	5.0		102	70-130		
Dibromochloromethane	5.1		ug/l	0.5	5.0		101	70-130		
Freon 113	5.2		ug/l	0.5	5.0		104	70-130		
cis-1,2-Dichloroethene	5.4		ug/l	0.5	5.0		107	70-130		
Hexachlorobutadiene	5.9		ug/l	0.5	5.0		119	70-130		
Chloroform	5.3		ug/l	0.5	5.0		105	70-130		
Chloroethane	1.9		ug/l	0.5	2.0		93	70-130		
Chlorobenzene	5.3		ug/l	0.5	5.0		105	70-130		
Carbon Tetrachloride	5.2		ug/l	0.5	5.0		105	70-130		
1,1,1,2-Tetrachloroethane	5.2		ug/l	0.5	5.0		104	70-130		
Carbon Disulfide	4.6		ug/l	2.0	5.0		93	70-130		
Tetrahydrofuran	44		ug/l	7.0	45		99	70-130		
cis-1,3-Dichloropropene	4.8		ug/l	0.5	5.0		97	70-130		
sec-Butylbenzene	5.4		ug/l	0.5	5.0		108	70-130		
Trichlorofluoromethane	1.9		ug/l	0.5	2.0		97	70-130		
Trichloroethene	5.2		ug/l	0.5	5.0		105	70-130		
trans-1,3-Dichloropropene	4.8		ug/l	0.5	5.0		95	70-130		
Toluene	5.0		ug/l	0.5	5.0		101	70-130		
Tetrachloroethene	5.8		ug/l	0.5	5.0		117	70-130		
tert-Butylbenzene	5.4		ug/l	0.5	5.0		108	70-130		
t-Butyl Alcohol	50		ug/l	25	50		100	70-130		
Ethylbenzene	5.2		ug/l	0.5	5.0		105	70-130		
Styrene	5.3		ug/l	0.5	5.0		107	70-130		
Vinyl Chloride	2.0		ug/l	0.5	2.0		99	70-130		
p-Isopropyltoluene	5.4		ug/l	0.5	5.0		108	70-130		
o-Xylene	5.2		ug/l	0.5	5.0		104	70-130		
n-Butylbenzene	5.4		ug/l	0.5	5.0		109	70-130		
Methylene Chloride	5.1		ug/l	0.5	5.0		101	70-130		
Methyl Tertiary Butyl Ether	4.7		ug/l	0.5	5.0		93	70-130		
m+p-Xylene	10		ug/l	0.5	10		104	70-130		
Isopropylbenzene	5.3		ug/l	0.5	5.0		105	70-130		
t-Amyl Methyl Ether	4.8		ug/l	0.5	5.0		96	70-130		
trans-1,2-Dichloroethene	4.9		ug/l	0.5	5.0		97	70-130		
Surrogate: 4-Bromofluorobenzene	5.0		ug/l		5.0		101	80-120		
Surrogate: 1,2-Dichlorobenzene-d4	5.0		ug/l		5.0		101	80-120		
Blank (VBLKK06B)					<u>Prepared & Analyzed: 26-Jun-19</u>					
1,4-Dichlorobenzene	< 0.1		ug/l	0.1				-		
2,2-Dichloropropane	< 0.2		ug/l	0.2				-		
2-Butanone	< 2.0		ug/l	2.0				-		
2-Chlorotoluene	< 0.1		ug/l	0.1				-		
2-Hexanone	< 0.6		ug/l	0.6				-		
4-Chlorotoluene	< 0.2		ug/l	0.2				-		
1,3-Dichloropropane	< 0.1		ug/l	0.1				-		
Acetone	< 3.0		ug/l	3.0				-		
1,2-Dichloropropane	< 0.1		ug/l	0.1				-		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch K191771AA - General Preparation										
Blank (VBLKK06B)	Prepared & Analyzed: 26-Jun-19									
Acrylonitrile	< 2.0		ug/l	2.0				-		
Benzene	< 0.1		ug/l	0.1				-		
Bromobenzene	< 0.1		ug/l	0.1				-		
Bromochloromethane	< 0.1		ug/l	0.1				-		
Bromodichloromethane	< 0.1		ug/l	0.1				-		
Bromoform	< 0.2		ug/l	0.2				-		
Bromomethane	< 0.1		ug/l	0.1				-		
4-Methyl-2-pentanone	< 0.6		ug/l	0.6				-		
1,2,3-Trichloropropane	< 0.2		ug/l	0.2				-		
Trichloroethene	< 0.1		ug/l	0.1				-		
1,1,1,2-Tetrachloroethane	< 0.1		ug/l	0.1				-		
1,1,1-Trichloroethane	< 0.1		ug/l	0.1				-		
1,1,2,2-Tetrachloroethane	< 0.1		ug/l	0.1				-		
1,1,2-Trichloroethane	< 0.1		ug/l	0.1				-		
1,1-Dichloroethane	< 0.1		ug/l	0.1				-		
1,1-Dichloroethene	< 0.1		ug/l	0.1				-		
1,3-Dichlorobenzene	< 0.1		ug/l	0.1				-		
1,2,3-Trichlorobenzene	< 0.2		ug/l	0.2				-		
Carbon Disulfide	< 0.4		ug/l	0.4				-		
1,2,4-Trichlorobenzene	< 0.2		ug/l	0.2				-		
1,2,4-Trimethylbenzene	< 0.1		ug/l	0.1				-		
1,2-Dibromo-3-chloropropane	< 0.4		ug/l	0.4				-		
1,2-Dibromoethane	< 0.1		ug/l	0.1				-		
1,2-Dichlorobenzene	< 0.1		ug/l	0.1				-		
1,2-Dichloroethane	< 0.1		ug/l	0.1				-		
1,3,5-Trimethylbenzene	< 0.1		ug/l	0.1				-		
1,1-Dichloropropene	< 0.1		ug/l	0.1				-		
t-Butyl Alcohol	< 5.0		ug/l	5.0				-		
Methylene Chloride	< 0.3		ug/l	0.3				-		
Naphthalene	< 0.2		ug/l	0.2				-		
Trichlorofluoromethane	< 0.2		ug/l	0.2				-		
n-Butylbenzene	< 0.2		ug/l	0.2				-		
Vinyl Chloride	< 0.1		ug/l	0.1				-		
o-Xylene	< 0.1		ug/l	0.1				-		
sec-Butylbenzene	< 0.1		ug/l	0.1				-		
Methyl Tertiary Butyl Ether	< 0.1		ug/l	0.1				-		
t-Amyl Methyl Ether	< 0.1		ug/l	0.1				-		
n-Propylbenzene	< 0.1		ug/l	0.1				-		
tert-Butylbenzene	< 0.1		ug/l	0.1				-		
Tetrachloroethene	< 0.1		ug/l	0.1				-		
Tetrahydrofuran	< 2.0		ug/l	2.0				-		
Toluene	< 0.1		ug/l	0.1				-		
trans-1,2-Dichloroethene	< 0.1		ug/l	0.1				-		
trans-1,3-Dichloropropene	< 0.1		ug/l	0.1				-		
Carbon Tetrachloride	< 0.1		ug/l	0.1				-		
Styrene	< 0.1		ug/l	0.1				-		
cis-1,3-Dichloropropene	< 0.1		ug/l	0.1				-		
Chlorobenzene	< 0.1		ug/l	0.1				-		
Chloroethane	< 0.2		ug/l	0.2				-		
Chloroform	< 0.1		ug/l	0.1				-		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>EPA 524.2</u>										
Batch K191771AA - General Preparation										
<u>Blank (VBLKK06B)</u>					<u>Prepared & Analyzed: 26-Jun-19</u>					
p-Isopropyltoluene	< 0.1		ug/l	0.1				-		
cis-1,2-Dichloroethene	< 0.1		ug/l	0.1				-		
m+p-Xylene	< 0.2		ug/l	0.2				-		
Dibromochloromethane	< 0.1		ug/l	0.1				-		
Dibromomethane	< 0.1		ug/l	0.1				-		
Dichlorodifluoromethane	< 0.2		ug/l	0.2				-		
Ethylbenzene	< 0.1		ug/l	0.1				-		
Isopropylbenzene	< 0.1		ug/l	0.1				-		
Chloromethane	< 0.2		ug/l	0.2				-		
di-Isopropyl Ether	< 0.1		ug/l	0.1				-		
Freon 113	< 0.2		ug/l	0.2				-		
Ethyl t-Butyl Ether	< 0.1		ug/l	0.1				-		
Ethyl Ether	< 0.2		ug/l	0.2				-		
Hexachlorobutadiene	< 0.2		ug/l	0.2				-		
Surrogate: 4-Bromofluorobenzene	4.7		ug/l		5.0		94	80-120		
Surrogate: 1,2-Dichlorobenzene-d4	4.9		ug/l		5.0		98	80-120		
<u>EPA 608.3</u>										
Batch 191720016A - METHOD										
<u>LCS (LCS16172Q)</u>					<u>Prepared: 21-Jun-19 Analyzed: 24-Jun-19</u>					
PCB-1016	3.44		ug/l	0.500	5.02		69	50-140		
PCB-1260	4.01		ug/l	0.500	5.05		79	50-140		
Surrogate: Tetrachloro-m-xylene-D2	0.0896		ug/l		0.300		30	18-115		
Surrogate: Decachlorobiphenyl-D2	0.257		ug/l		0.302		85	10-127		
Surrogate: Decachlorobiphenyl-D1	0.236		ug/l		0.302		78	10-127		
Surrogate: Tetrachloro-m-xylene-D1	0.0796		ug/l		0.300		27	18-115		
<u>LCS Dup (P91726AY)</u>					<u>Prepared: 21-Jun-19 Analyzed: 24-Jun-19</u>					
PCB-1260	3.93		ug/l	0.500	5.05		78	50-140	2	38
PCB-1016	3.29		ug/l	0.500	5.02		66	50-140	4	36
Surrogate: Decachlorobiphenyl-D1	0.253		ug/l		0.302		84	10-127		
Surrogate: Decachlorobiphenyl-D2	0.266		ug/l		0.302		88	10-127		
Surrogate: Tetrachloro-m-xylene-D2	0.0702		ug/l		0.300		23	18-115		
Surrogate: Tetrachloro-m-xylene-D1	0.0637		ug/l		0.300		21	18-115		
<u>Blank (PBLK16172B)</u>					<u>Prepared: 21-Jun-19 Analyzed: 24-Jun-19</u>					
PCB-1221	< 0.0740		ug/l	0.0740				-		
PCB-1242	< 0.0740		ug/l	0.0740				-		
Total PCBs	< 0.0740		ug/l	0.0740				-		
PCB-1268	< 0.0740		ug/l	0.0740				-		
PCB-1262	< 0.0740		ug/l	0.0740				-		
PCB-1260	< 0.0740		ug/l	0.0740				-		
PCB-1254	< 0.0740		ug/l	0.0740				-		
PCB-1248	< 0.0740		ug/l	0.0740				-		
PCB-1232	< 0.0740		ug/l	0.0740				-		
PCB-1016	< 0.0740		ug/l	0.0740				-		
Surrogate: Decachlorobiphenyl-D2	0.233		ug/l		0.302		77	10-127		
Surrogate: Decachlorobiphenyl-D1	0.221		ug/l		0.302		73	10-127		
Surrogate: Tetrachloro-m-xylene-D1	0.160		ug/l		0.300		53	18-115		
Surrogate: Tetrachloro-m-xylene-D2	0.173		ug/l		0.300		58	18-115		

EPA 624.1

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>EPA 624.1</u>										
Batch U191761AA - General Preparation										
<u>LCS (QSTD020Q)</u>	<u>Prepared & Analyzed: 25-Jun-19</u>									
Tetrachloroethene	22.0		ug/l	1.00	20.0		110	70-130		
Benzene	21.4		ug/l	1.00	20.0		107	65-135		
1,1-Dichloroethane	21.7		ug/l	1.00	20.0		108	70-130		
1,1-Dichloroethene	22.1		ug/l	1.00	20.0		111	50-150		
1,2-Dichlorobenzene	21.3		ug/l	1.00	20.0		106	65-135		
1,2-Dichloroethane	21.1		ug/l	1.00	20.0		105	70-130		
1,3-Dichlorobenzene	20.9		ug/l	1.00	20.0		104	70-130		
1,4-Dichlorobenzene	21.3		ug/l	1.00	20.0		107	65-135		
Acetone	146		ug/l	5.00	150		97	60-140		
1,1,2-Trichloroethane	22.1		ug/l	1.00	20.0		111	70-130		
Carbon Tetrachloride	21.9		ug/l	1.00	20.0		109	70-130		
cis-1,2-Dichloroethene	23.2		ug/l	1.00	20.0		116	60-140		
Ethylbenzene	21.2		ug/l	1.00	20.0		106	60-140		
m+p-Xylene	43.4		ug/l	1.00	40.0		108	60-140		
Methyl Tertiary Butyl Ether	19.9		ug/l	1.00	20.0		99	60-140		
o-Xylene	21.2		ug/l	1.00	20.0		106	60-140		
Toluene	21.3		ug/l	1.00	20.0		106	70-130		
Trichloroethene	21.1		ug/l	1.00	20.0		106	65-135		
1,1,1-Trichloroethane	21.6		ug/l	1.00	20.0		108	70-130		
Vinyl Chloride	20.8		ug/l	1.00	20.0		104	10-195		
Methylene Chloride	21.5		ug/l	1.00	20.0		108	60-140		
Surrogate: Toluene-d8	50.8		ug/l		50.0		102	60-140		
Surrogate: Dibromofluoromethane	49.8		ug/l		50.0		100	60-140		
Surrogate: 1,2-Dichloroethane-d4	50.7		ug/l		50.0		101	60-140		
Surrogate: 4-Bromofluorobenzene	48.6		ug/l		50.0		97	60-140		
<u>Blank (VBLKU76B)</u>	<u>Prepared & Analyzed: 25-Jun-19</u>									
1,1-Dichloroethane	< 0.10		ug/l	0.10				-		
Toluene	< 0.050		ug/l	0.050				-		
1,1,2-Trichloroethane	< 0.20		ug/l	0.20				-		
1,1-Dichloroethene	< 0.20		ug/l	0.20				-		
1,2-Dichlorobenzene	< 0.070		ug/l	0.070				-		
1,2-Dichloroethane	< 0.20		ug/l	0.20				-		
1,3-Dichlorobenzene	< 0.060		ug/l	0.060				-		
1,4-Dichlorobenzene	< 0.10		ug/l	0.10				-		
Acetone	< 2.00		ug/l	2.00				-		
Benzene	< 0.050		ug/l	0.050				-		
Methylene Chloride	< 0.30		ug/l	0.30				-		
1,1,1-Trichloroethane	< 0.10		ug/l	0.10				-		
Vinyl Chloride	< 0.30		ug/l	0.30				-		
Carbon Tetrachloride	< 0.10		ug/l	0.10				-		
o-Xylene	< 0.080		ug/l	0.080				-		
Trichloroethene	< 0.20		ug/l	0.20				-		
Methyl Tertiary Butyl Ether	< 0.10		ug/l	0.10				-		
m+p-Xylene	< 0.10		ug/l	0.10				-		
Ethylbenzene	< 0.10		ug/l	0.10				-		
cis-1,2-Dichloroethene	< 0.10		ug/l	0.10				-		
Tetrachloroethene	< 0.20		ug/l	0.20				-		
Surrogate: 1,2-Dichloroethane-d4	51.0		ug/l		50.0		102	60-140		
Surrogate: 4-Bromofluorobenzene	50.2		ug/l		50.0		100	60-140		
Surrogate: Dibromofluoromethane	51.2		ug/l		50.0		102	60-140		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 624.1										
Batch U191761AA - General Preparation										
Blank (VBLKU76B)					<u>Prepared & Analyzed: 25-Jun-19</u>					
Surrogate: Toluene-d8	50.4		ug/l		50.0		101	60-140		
EPA 625										
Batch 19174WAA625 - METHOD										
LCS (174WALCSQ)					<u>Prepared: 24-Jun-19 Analyzed: 25-Jun-19</u>					
bis(2-Ethylhexyl)phthalate	42		ug/l	5	50		85	10-158		
Butylbenzylphthalate	42		ug/l	5	50		85	10-152		
Diethylphthalate	48		ug/l	5	50		95	10-114		
Dimethylphthalate	47		ug/l	5	50		93	10-112		
Di-n-butylphthalate	44		ug/l	5	50		88	10-118		
Phenol	25		ug/l	5	50		49	10-112		
Naphthalene	46		ug/l	5	50		92	21-133		
Pentachlorophenol	48		ug/l	15	50		96	14-176		
Di-n-octylphthalate	45		ug/l	5	50		89	10-146		
Surrogate: Nitrobenzene-d5	82		ug/l		100		82	53-119		
Surrogate: 2-Fluorobiphenyl	100		ug/l		100		104	55-117		
Surrogate: 2-Fluorophenol	66		ug/l		100		66	15-99		
Surrogate: Terphenyl-d14	92		ug/l		100		92	54-124		
Surrogate: 2,4,6-Tribromophenol	87		ug/l		100		87	32-136		
Surrogate: Phenol-d6	41		ug/l		100		41	10-75		
LCS Dup (P4WALCSY)					<u>Prepared: 24-Jun-19 Analyzed: 25-Jun-19</u>					
Naphthalene	48		ug/l	5	50		96	21-133	5	30
Pentachlorophenol	49		ug/l	15	50		97	14-176	1	30
Phenol	25		ug/l	5	50		50	10-112	2	30
bis(2-Ethylhexyl)phthalate	49		ug/l	5	50		97	10-158	13	30
Butylbenzylphthalate	45		ug/l	5	50		91	10-152	7	30
Diethylphthalate	48		ug/l	5	50		95	10-114	0	30
Di-n-octylphthalate	51		ug/l	5	50		103	10-146	14	30
Di-n-butylphthalate	47		ug/l	5	50		93	10-118	6	30
Dimethylphthalate	46		ug/l	5	50		91	10-112	2	30
Surrogate: Nitrobenzene-d5	88		ug/l		100		88	53-119		
Surrogate: 2-Fluorobiphenyl	95		ug/l		100		95	55-117		
Surrogate: 2-Fluorophenol	63		ug/l		100		63	15-99		
Surrogate: 2,4,6-Tribromophenol	82		ug/l		100		82	32-136		
Surrogate: Terphenyl-d14	92		ug/l		100		92	54-124		
Surrogate: Phenol-d6	42		ug/l		100		42	10-75		
Blank (SBLKWA174B)					<u>Prepared: 24-Jun-19 Analyzed: 25-Jun-19</u>					
Butylbenzylphthalate	< 0.8		ug/l	0.8				-		
Phenol	< 0.4		ug/l	0.4				-		
Pentachlorophenol	< 3		ug/l	3				-		
Naphthalene	< 0.2		ug/l	0.2				-		
Di-n-octylphthalate	< 0.5		ug/l	0.5				-		
Di-n-butylphthalate	< 0.5		ug/l	0.5				-		
Diethylphthalate	< 0.3		ug/l	0.3				-		
bis(2-Ethylhexyl)phthalate	< 1		ug/l	1				-		
Dimethylphthalate	< 1		ug/l	1				-		
Surrogate: Phenol-d6	44		ug/l		100		44	10-75		
Surrogate: 2,4,6-Tribromophenol	82		ug/l		100		82	32-136		
Surrogate: Nitrobenzene-d5	85		ug/l		100		85	53-119		
Surrogate: 2-Fluorophenol	70		ug/l		100		70	15-99		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>EPA 625</u>										
Batch 19174WAA625 - METHOD										
<u>Blank (SBLKWA174B)</u>	<u>Prepared: 24-Jun-19 Analyzed: 25-Jun-19</u>									
Surrogate: 2-Fluorobiphenyl	94		ug/l		100		94	55-117		
Surrogate: Terphenyl-d14	100		ug/l		100		103	54-124		
<u>SM 2540 C</u>										
Batch 19171964901A - General Preparation										
<u>Blank (B171881B)</u>	<u>Prepared & Analyzed: 20-Jun-19</u>									
TDS LAB-194	< 10.0		mg/l	10.0				-		
<u>LCS (L171881Q)</u>	<u>Prepared & Analyzed: 20-Jun-19</u>									
TDS LAB-194	203		mg/l	30.0	200		102	74-127		
<u>SM 2540 D</u>										
Batch 19171385802A - General Preparation										
<u>Blank (B171712B)</u>	<u>Prepared & Analyzed: 20-Jun-19</u>									
Total Suspended Solids	< 1.00		mg/l	1.00				-		
<u>LCS (L171712Q)</u>	<u>Prepared & Analyzed: 20-Jun-19</u>									
Total Suspended Solids	146		mg/l	3.00	150		97	89-105		
<u>SW-846 8260C</u>										
Batch 4191783AA - SW-846 5030C										
<u>LCS (LCS426Q)</u>	<u>Prepared & Analyzed: 27-Jun-19</u>									
Ethanol	< 280		ug/l	280	500		86	70-130		
Surrogate: Toluene-d8	51		ug/l		50		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	52		ug/l		50		104	70-130		
Surrogate: 4-Bromofluorobenzene	48		ug/l		50		96	70-130		
Surrogate: Dibromofluoromethane	48		ug/l		50		96	70-130		
<u>LCS Dup (LCS426Y)</u>	<u>Prepared & Analyzed: 27-Jun-19</u>									
Ethanol	< 280		ug/l	280	500		87	70-130	1	20
Surrogate: 1,2-Dichloroethane-d4	51		ug/l		50		102	70-130		
Surrogate: 4-Bromofluorobenzene	48		ug/l		50		95	70-130		
Surrogate: Toluene-d8	51		ug/l		50		102	70-130		
Surrogate: Dibromofluoromethane	48		ug/l		50		96	70-130		
<u>Blank (VBLK426B)</u>	<u>Prepared & Analyzed: 27-Jun-19</u>									
Ethanol	< 280		ug/l	280				-		
Surrogate: Dibromofluoromethane	49		ug/l		50		98	70-130		
Surrogate: 4-Bromofluorobenzene	46		ug/l		50		92	70-130		
Surrogate: 1,2-Dichloroethane-d4	52		ug/l		50		104	70-130		
Surrogate: Toluene-d8	50		ug/l		50		100	70-130		
<u>SW-846 8260C 25mL purge</u>										
Batch I191772AA - SW-846 5030C										
<u>LCS (LCSI79Q)</u>	<u>Prepared & Analyzed: 26-Jun-19</u>									
cis-1,3-Dichloropropene	5.0		ug/l	0.5	5.0		99	70-130		
m+p-Xylene	11		ug/l	0.5	10		109	70-130		
Isopropylbenzene	5.4		ug/l	0.5	5.0		108	70-130		
Hexachlorobutadiene	5.6		ug/l	0.5	5.0		111	70-130		
Freon 113	5.1		ug/l	0.5	5.0		102	70-130		
Ethylbenzene	5.4		ug/l	0.5	5.0		109	70-130		
Ethyl t-butyl ether	5.0		ug/l	0.5	5.0		100	70-130		
Ethyl ether	5.4		ug/l	0.5	5.0		109	70-130		
di-Isopropyl ether	5.5		ug/l	0.5	5.0		110	70-130		
Dichlorodifluoromethane	3.5		ug/l	0.5	5.0		70	70-130		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8260C 25mL purge</u>										
Batch I191772AA - SW-846 5030C										
<u>LCS (LCSI79Q)</u>	<u>Prepared & Analyzed: 26-Jun-19</u>									
Methyl Tertiary Butyl Ether	4.8		ug/l	0.5	5.0		96	70-130		
Dibromochloromethane	4.5		ug/l	0.5	5.0		91	70-130		
n-Propylbenzene	5.6		ug/l	0.5	5.0		113	70-130		
cis-1,2-Dichloroethene	5.4		ug/l	0.5	5.0		108	70-130		
Chloromethane	4.2		ug/l	0.5	5.0		83	70-130		
Chloroform	5.0		ug/l	0.5	5.0		100	70-130		
Chloroethane	3.8		ug/l	0.5	5.0		76	70-130		
Carbon Tetrachloride	4.6		ug/l	0.5	5.0		93	70-130		
Dibromomethane	4.9		ug/l	0.5	5.0		97	70-130		
tert-Butylbenzene	5.3		ug/l	0.5	5.0		107	70-130		
Vinyl Chloride	4.1		ug/l	0.5	5.0		83	70-130		
Trichlorofluoromethane	3.5	*	ug/l	0.5	5.0		69	70-130		
Trichloroethene	5.3		ug/l	0.5	5.0		106	70-130		
trans-1,4-Dichloro-2-butene	12	*	ug/l	5.0	25		47	70-130		
trans-1,3-Dichloropropene	4.9		ug/l	0.5	5.0		98	70-130		
trans-1,2-Dichloroethene	5.1		ug/l	0.5	5.0		102	70-130		
Toluene	5.7		ug/l	0.5	5.0		113	70-130		
Naphthalene	4.9		ug/l	0.5	5.0		99	70-130		
Tetrachloroethene	5.4		ug/l	0.5	5.0		108	70-130		
Methylene Chloride	5.4		ug/l	0.5	5.0		109	70-130		
t-Butyl alcohol	42		ug/l	10	50		84	70-130		
t-Amyl methyl ether	4.9		ug/l	0.5	5.0		99	70-130		
Styrene	5.5		ug/l	0.5	5.0		111	70-130		
sec-Butylbenzene	5.5		ug/l	0.5	5.0		111	70-130		
p-Isopropyltoluene	5.4		ug/l	0.5	5.0		107	70-130		
o-Xylene	5.4		ug/l	0.5	5.0		107	70-130		
Carbon Disulfide	4.9		ug/l	1.0	5.0		98	70-130		
n-Butylbenzene	5.5		ug/l	0.5	5.0		111	70-130		
Tetrahydrofuran	28		ug/l	5.0	25		111	70-130		
1,2,3-Trichloropropane	5.2		ug/l	1.0	5.0		104	70-130		
1,3,5-Trichlorobenzene	5.2		ug/l	0.5	5.0		104	70-130		
Bromomethane	3.2	*	ug/l	0.5	5.0		63	70-130		
1,2-Dichloroethane	4.9		ug/l	0.5	5.0		97	70-130		
Chlorobenzene	5.5		ug/l	0.5	5.0		110	70-130		
1,2-Dichlorobenzene	5.3		ug/l	0.5	5.0		105	70-130		
1,2-Dibromoethane	5.2		ug/l	0.5	5.0		104	70-130		
1,2-Dibromo-3-chloropropane	5.4		ug/l	0.5	5.0		109	70-130		
1,3,5-Trimethylbenzene	5.4		ug/l	0.5	5.0		107	70-130		
1,2,4-Trichlorobenzene	5.2		ug/l	0.5	5.0		104	70-130		
1,2-Dichloropropane	5.8		ug/l	0.5	5.0		117	70-130		
1,2,3-Trichlorobenzene	5.2		ug/l	0.5	5.0		103	70-130		
1,1-Dichloropropene	5.5		ug/l	0.5	5.0		111	70-130		
1,1-Dichloroethene	5.4		ug/l	0.5	5.0		109	70-130		
1,1-Dichloroethane	5.6		ug/l	0.5	5.0		112	70-130		
1,1,2-Trichloroethane	5.6		ug/l	0.5	5.0		113	70-130		
1,1,2,2-Tetrachloroethane	5.5		ug/l	0.5	5.0		111	70-130		
1,1,1-Trichloroethane	4.7		ug/l	0.5	5.0		95	70-130		
1,1,1,2-Tetrachloroethane	5.1		ug/l	0.5	5.0		102	70-130		
1,2,4-Trimethylbenzene	5.3		ug/l	0.5	5.0		105	70-130		
Acetone	32		ug/l	5.0	38		84	70-130		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8260C 25mL purge</u>										
Batch I191772AA - SW-846 5030C										
<u>LCS (LCSI79Q)</u>					<u>Prepared & Analyzed: 26-Jun-19</u>					
Bromoform	3.8		ug/l	1.0	5.0		75	70-130		
Bromodichloromethane	4.7		ug/l	0.5	5.0		95	70-130		
Bromochloromethane	4.5		ug/l	0.5	5.0		90	70-130		
Bromobenzene	5.1		ug/l	0.5	5.0		102	70-130		
Benzene	5.4		ug/l	0.5	5.0		108	70-130		
Acrylonitrile	28		ug/l	1.0	25		114	70-130		
1,3-Dichlorobenzene	5.2		ug/l	0.5	5.0		104	70-130		
4-Methyl-2-pentanone	28		ug/l	5.0	25		114	70-130		
2,2-Dichloropropane	5.0		ug/l	0.5	5.0		100	70-130		
1,3-Dichloropropane	5.7		ug/l	0.5	5.0		115	70-130		
1,4-Dioxane	160		ug/l	100	130		124	70-130		
4-Chlorotoluene	5.2		ug/l	0.5	5.0		104	70-130		
2-Butanone	42		ug/l	5.0	38		111	70-130		
2-Chlorotoluene	5.2		ug/l	0.5	5.0		105	70-130		
2-Hexanone	30		ug/l	5.0	25		119	70-130		
1,4-Dichlorobenzene	5.2		ug/l	0.5	5.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	9.7		ug/l		10		97	70-130		
Surrogate: Dibromofluoromethane	9.4		ug/l		10		94	70-130		
Surrogate: Toluene-d8	11		ug/l		10		108	70-130		
Surrogate: 4-Bromofluorobenzene	10		ug/l		10		101	70-130		
<u>LCS Dup (LCSI79Y)</u>					<u>Prepared & Analyzed: 26-Jun-19</u>					
1,1-Dichloropropene	5.5		ug/l	0.5	5.0		111	70-130	0	20
1,1,1,2-Tetrachloroethane	5.0		ug/l	0.5	5.0		101	70-130	1	20
1,1,1-Trichloroethane	4.7		ug/l	0.5	5.0		94	70-130	0	20
1,1,2,2-Tetrachloroethane	5.4		ug/l	0.5	5.0		109	70-130	2	20
1,1,2-Trichloroethane	5.7		ug/l	0.5	5.0		113	70-130	1	20
Ethyl ether	5.3		ug/l	0.5	5.0		107	70-130	2	20
Chloroform	5.0		ug/l	0.5	5.0		100	70-130	0	20
Methyl Tertiary Butyl Ether	4.8		ug/l	0.5	5.0		95	70-130	1	20
m+p-Xylene	11		ug/l	0.5	10		108	70-130	1	20
Isopropylbenzene	5.4		ug/l	0.5	5.0		107	70-130	1	20
Hexachlorobutadiene	5.3		ug/l	0.5	5.0		106	70-130	5	20
Freon 113	5.0		ug/l	0.5	5.0		100	70-130	2	20
Naphthalene	4.7		ug/l	0.5	5.0		95	70-130	4	20
Ethyl t-butyl ether	5.0		ug/l	0.5	5.0		100	70-130	0	20
n-Butylbenzene	5.4		ug/l	0.5	5.0		108	70-130	2	20
di-Isopropyl ether	5.4		ug/l	0.5	5.0		108	70-130	2	20
Dichlorodifluoromethane	3.5		ug/l	0.5	5.0		70	70-130	0	20
Dibromomethane	4.9		ug/l	0.5	5.0		98	70-130	1	20
Dibromochloromethane	4.5		ug/l	0.5	5.0		90	70-130	1	20
cis-1,3-Dichloropropene	4.8		ug/l	0.5	5.0		97	70-130	2	20
cis-1,2-Dichloroethene	5.4		ug/l	0.5	5.0		109	70-130	1	20
Chloromethane	4.1		ug/l	0.5	5.0		82	70-130	1	20
Ethylbenzene	5.4		ug/l	0.5	5.0		108	70-130	0	20
Tetrahydrofuran	25		ug/l	5.0	25		102	70-130	8	20
1,1-Dichloroethene	5.4		ug/l	0.5	5.0		108	70-130	1	20
Vinyl Chloride	4.1		ug/l	0.5	5.0		82	70-130	1	20
Trichlorofluoromethane	3.4	*	ug/l	0.5	5.0		68	70-130	1	20
Trichloroethene	5.3		ug/l	0.5	5.0		106	70-130	0	20
trans-1,4-Dichloro-2-butene	10	*	ug/l	5.0	25		42	70-130	11	20

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8260C 25mL purge</u>										
Batch I191772AA - SW-846 5030C										
<u>LCS Dup (LCSI79Y)</u>					<u>Prepared & Analyzed: 26-Jun-19</u>					
trans-1,3-Dichloropropene	4.8		ug/l	0.5	5.0		96	70-130	2	20
Methylene Chloride	5.5		ug/l	0.5	5.0		110	70-130	1	20
Toluene	5.6		ug/l	0.5	5.0		112	70-130	1	20
o-Xylene	5.4		ug/l	0.5	5.0		108	70-130	0	20
Tetrachloroethene	5.3		ug/l	0.5	5.0		106	70-130	2	20
tert-Butylbenzene	5.1		ug/l	0.5	5.0		102	70-130	4	20
t-Butyl alcohol	36		ug/l	10	50		73	70-130	15	20
t-Amyl methyl ether	4.9		ug/l	0.5	5.0		98	70-130	0	20
Styrene	5.5		ug/l	0.5	5.0		110	70-130	1	20
p-Isopropyltoluene	5.2		ug/l	0.5	5.0		105	70-130	2	20
n-Propylbenzene	5.5		ug/l	0.5	5.0		111	70-130	2	20
trans-1,2-Dichloroethene	5.1		ug/l	0.5	5.0		101	70-130	1	20
1,2-Dibromo-3-chloropropane	5.0		ug/l	0.5	5.0		99	70-130	9	20
1,4-Dioxane	140		ug/l	100	130		115	70-130	7	20
1,4-Dichlorobenzene	5.1		ug/l	0.5	5.0		103	70-130	2	20
1,3-Dichloropropane	5.8		ug/l	0.5	5.0		116	70-130	1	20
1,3-Dichlorobenzene	5.1		ug/l	0.5	5.0		102	70-130	1	20
1,3,5-Trimethylbenzene	5.3		ug/l	0.5	5.0		106	70-130	2	20
1,3,5-Trichlorobenzene	5.1		ug/l	0.5	5.0		101	70-130	3	20
1,2-Dichloropropane	5.8		ug/l	0.5	5.0		117	70-130	0	20
2,2-Dichloropropane	5.0		ug/l	0.5	5.0		100	70-130	0	20
1,2-Dibromoethane	5.3		ug/l	0.5	5.0		105	70-130	1	20
1,2-Dichloroethane	4.9		ug/l	0.5	5.0		98	70-130	1	20
1,2,4-Trimethylbenzene	5.2		ug/l	0.5	5.0		104	70-130	1	20
1,2,4-Trichlorobenzene	5.0		ug/l	0.5	5.0		99	70-130	4	20
1,2,3-Trichloropropane	5.3		ug/l	1.0	5.0		105	70-130	2	20
1,2,3-Trichlorobenzene	4.9		ug/l	0.5	5.0		98	70-130	5	20
1,1-Dichloroethane	5.6		ug/l	0.5	5.0		112	70-130	0	20
Chloroethane	3.8		ug/l	0.5	5.0		76	70-130	0	20
sec-Butylbenzene	5.5		ug/l	0.5	5.0		109	70-130	1	20
1,2-Dichlorobenzene	5.1		ug/l	0.5	5.0		102	70-130	3	20
Bromomethane	3.2	*	ug/l	0.5	5.0		63	70-130	0	20
Chlorobenzene	5.5		ug/l	0.5	5.0		109	70-130	0	20
Carbon Disulfide	4.9		ug/l	1.0	5.0		97	70-130	1	20
2-Butanone	38		ug/l	5.0	38		101	70-130	9	20
Bromoform	3.7		ug/l	1.0	5.0		74	70-130	1	20
Bromodichloromethane	4.7		ug/l	0.5	5.0		94	70-130	1	20
Bromochloromethane	4.5		ug/l	0.5	5.0		90	70-130	0	20
Bromobenzene	5.0		ug/l	0.5	5.0		101	70-130	2	20
Benzene	5.4		ug/l	0.5	5.0		109	70-130	1	20
2-Hexanone	27		ug/l	5.0	25		107	70-130	10	20
Carbon Tetrachloride	4.7		ug/l	0.5	5.0		94	70-130	1	20
Acetone	31		ug/l	5.0	38		82	70-130	3	20
Acrylonitrile	26		ug/l	1.0	25		104	70-130	9	20
2-Chlorotoluene	5.2		ug/l	0.5	5.0		103	70-130	1	20
4-Methyl-2-pentanone	26		ug/l	5.0	25		105	70-130	8	20
4-Chlorotoluene	5.2		ug/l	0.5	5.0		105	70-130	0	20
Surrogate: 1,2-Dichloroethane-d4	9.9		ug/l		10		99	70-130		
Surrogate: 4-Bromofluorobenzene	10		ug/l		10		102	70-130		
Surrogate: Dibromofluoromethane	9.4		ug/l		10		94	70-130		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8260C 25mL purge</u>										
Batch I191772AA - SW-846 5030C										
<u>LCS Dup (LCSI79Y)</u>					<u>Prepared & Analyzed: 26-Jun-19</u>					
Surrogate: Toluene-d8	11		ug/l		10		107	70-130		
<u>Blank (VBLKI79B)</u>					<u>Prepared & Analyzed: 26-Jun-19</u>					
Carbon Tetrachloride	< 0.07		ug/l	0.07				-		
Benzene	< 0.05		ug/l	0.05				-		
2-Chlorotoluene	< 0.07		ug/l	0.07				-		
4-Chlorotoluene	< 0.07		ug/l	0.07				-		
2-Butanone	< 0.6		ug/l	0.6				-		
4-Methyl-2-pentanone	< 0.7		ug/l	0.7				-		
2,2-Dichloropropane	< 0.05		ug/l	0.05				-		
Acetone	< 0.9		ug/l	0.9				-		
Acrylonitrile	< 0.4		ug/l	0.4				-		
2-Hexanone	< 0.6		ug/l	0.6				-		
Bromobenzene	< 0.06		ug/l	0.06				-		
Bromochloromethane	< 0.05		ug/l	0.05				-		
Bromodichloromethane	< 0.05		ug/l	0.05				-		
Bromoform	< 0.3		ug/l	0.3				-		
Carbon Disulfide	< 0.06		ug/l	0.06				-		
Chloroethane	< 0.07		ug/l	0.07				-		
cis-1,2-Dichloroethene	< 0.05		ug/l	0.05				-		
Chloromethane	< 0.06		ug/l	0.06				-		
1,4-Dioxane	< 20		ug/l	20				-		
1,1,1,2-Tetrachloroethane	< 0.07		ug/l	0.07				-		
Bromomethane	< 0.07		ug/l	0.07				-		
1,2,4-Trimethylbenzene	< 0.06		ug/l	0.06				-		
Chloroform	< 0.09		ug/l	0.09				-		
cis-1,3-Dichloropropene	< 0.05		ug/l	0.05				-		
1,1,1-Trichloroethane	< 0.06		ug/l	0.06				-		
1,1,2-Trichloroethane	< 0.06		ug/l	0.06				-		
1,1-Dichloroethane	< 0.07		ug/l	0.07				-		
1,1-Dichloroethene	< 0.06		ug/l	0.06				-		
1,1-Dichloropropene	< 0.05		ug/l	0.05				-		
1,2,3-Trichlorobenzene	< 0.05		ug/l	0.05				-		
1,1,2,2-Tetrachloroethane	< 0.07		ug/l	0.07				-		
1,2,4-Trichlorobenzene	< 0.06		ug/l	0.06				-		
1,4-Dichlorobenzene	< 0.07		ug/l	0.07				-		
1,2-Dibromo-3-chloropropane	< 0.1		ug/l	0.1				-		
1,2-Dibromoethane	< 0.06		ug/l	0.06				-		
1,2-Dichlorobenzene	< 0.06		ug/l	0.06				-		
1,2-Dichloroethane	< 0.05		ug/l	0.05				-		
1,2-Dichloropropane	< 0.06		ug/l	0.06				-		
1,3,5-Trichlorobenzene	< 0.06		ug/l	0.06				-		
1,3,5-Trimethylbenzene	< 0.06		ug/l	0.06				-		
1,3-Dichlorobenzene	< 0.06		ug/l	0.06				-		
1,3-Dichloropropane	< 0.07		ug/l	0.07				-		
1,2,3-Trichloropropane	< 0.1		ug/l	0.1				-		
t-Butyl alcohol	< 1.1		ug/l	1.1				-		
n-Propylbenzene	< 0.06		ug/l	0.06				-		
Trichlorofluoromethane	< 0.05		ug/l	0.05				-		
o-Xylene	< 0.05		ug/l	0.05				-		
p-Isopropyltoluene	< 0.05		ug/l	0.05				-		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8260C 25mL purge</u>										
Batch I191772AA - SW-846 5030C										
<u>Blank (VBLKI79B)</u>	<u>Prepared & Analyzed: 26-Jun-19</u>									
sec-Butylbenzene	< 0.06		ug/l	0.06				-		
trans-1,2-Dichloroethene	< 0.06		ug/l	0.06				-		
t-Amyl methyl ether	< 0.2		ug/l	0.2				-		
Methylene Chloride	< 0.07		ug/l	0.07				-		
tert-Butylbenzene	< 0.07		ug/l	0.07				-		
Tetrachloroethene	< 0.06		ug/l	0.06				-		
Tetrahydrofuran	< 0.8		ug/l	0.8				-		
Trichloroethene	< 0.06		ug/l	0.06				-		
trans-1,4-Dichloro-2-butene	< 0.6		ug/l	0.6				-		
trans-1,3-Dichloropropene	< 0.06		ug/l	0.06				-		
Styrene	< 0.05		ug/l	0.05				-		
Ethylbenzene	< 0.06		ug/l	0.06				-		
Dibromochloromethane	< 0.07		ug/l	0.07				-		
Dibromomethane	< 0.06		ug/l	0.06				-		
Dichlorodifluoromethane	< 0.05		ug/l	0.05				-		
Chlorobenzene	< 0.06		ug/l	0.06				-		
di-Isopropyl ether	< 0.05		ug/l	0.05				-		
Vinyl Chloride	< 0.1		ug/l	0.1				-		
n-Butylbenzene	< 0.05		ug/l	0.05				-		
Ethyl t-butyl ether	< 0.05		ug/l	0.05				-		
Naphthalene	< 0.05		ug/l	0.05				-		
Freon 113	< 0.06		ug/l	0.06				-		
Hexachlorobutadiene	< 0.07		ug/l	0.07				-		
Isopropylbenzene	< 0.05		ug/l	0.05				-		
m+p-Xylene	< 0.1		ug/l	0.1				-		
Methyl Tertiary Butyl Ether	< 0.05		ug/l	0.05				-		
Toluene	< 0.07		ug/l	0.07				-		
Ethyl ether	< 0.05		ug/l	0.05				-		
Surrogate: Toluene-d8	11		ug/l		10		105	70-130		
Surrogate: 4-Bromofluorobenzene	10		ug/l		10		100	70-130		
Surrogate: Dibromofluoromethane	9.5		ug/l		10		95	70-130		
Surrogate: 1,2-Dichloroethane-d4	10		ug/l		10		101	70-130		
<u>SW-846 8260C SIM</u>										
Batch E191781AA - SW-846 5030C										
<u>LCS (LCSE60Q)</u>	<u>Prepared & Analyzed: 27-Jun-19</u>									
1,4-Dioxane	5.7		ug/l	0.4	5.0		114	74-133		
Surrogate: Toluene-d8	9.9		ug/l		10		99	80-120		
<u>Blank (VBLKE60B)</u>	<u>Prepared & Analyzed: 27-Jun-19</u>									
1,4-Dioxane	< 0.2		ug/l	0.2				-		
Surrogate: Toluene-d8	9.9		ug/l		10		99	80-120		
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>LCS (171WMLCS1Q)</u>	<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>									
Pentachloronitrobenzene	44		ug/l	5	50		88	40-140		
<u>LCS (171WMLCSQ)</u>	<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>									
4-Chloroaniline	29		ug/l	5	50		58	40-140		
4-Chloro-3-methylphenol	48		ug/l	2	50		96	30-130		
4,6-Dinitro-2-methylphenol	56		ug/l	15	50		112	30-130		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>LCS (171WMLCSQ)</u>					Prepared: 20-Jun-19 Analyzed: 21-Jun-19					
Benzaldehyde	42		ug/l	5	50		84	40-140		
3-Nitroaniline	50		ug/l	2	50		99	40-140		
3,3'-Dichlorobenzidine	33		ug/l	5	50		66	40-140		
4-Bromophenyl-phenylether	49		ug/l	2	50		97	40-140		
4-Chlorophenyl-phenylether	47		ug/l	2	50		94	40-140		
4-Nitroaniline	38		ug/l	2	50		77	40-140		
2-Nitrophenol	49		ug/l	2	50		99	30-130		
4-Nitrophenol	< 10		ug/l	10	50		32	30-130		
Acenaphthene	48		ug/l	0.5	50		96	40-140		
Acenaphthylene	48		ug/l	0.5	50		96	40-140		
Acetophenone	48		ug/l	2	50		96	40-140		
Aniline	32		ug/l	5	50		63	40-140		
Anthracene	49		ug/l	0.5	50		99	40-140		
Atrazine	48		ug/l	5	50		96	40-140		
1,3-Dichlorobenzene	41		ug/l	2	50		83	40-140		
4-Methylphenol	41		ug/l	1	50		83	30-130		
2,4-Dichlorophenol	48		ug/l	2	50		96	30-130		
1,2,4,5-Tetrachlorobenzene	47		ug/l	2	50		94	40-140		
1,2,4-Trichlorobenzene	44		ug/l	2	50		88	40-140		
1,2-Dichlorobenzene	43		ug/l	2	50		86	40-140		
1,2-Diphenylhydrazine	49		ug/l	2	50		98	40-140		
Di-n-butylphthalate	50		ug/l	5	50		100	40-140		
1,4-Dichlorobenzene	42		ug/l	2	50		85	40-140		
Benzidine	140		ug/l	60	250		55	40-140		
2,3,4,6-Tetrachlorophenol	46		ug/l	2	50		92	30-130		
1-Methylnaphthalene	45		ug/l	0.5	50		90	40-140		
2,4,6-Trichlorophenol	51		ug/l	2	50		103	30-130		
2-Nitroaniline	54		ug/l	2	50		108	40-140		
2,4-Dimethylphenol	39		ug/l	2	50		78	30-130		
2,4-Dinitrophenol	110		ug/l	30	100		113	30-130		
2,4-Dinitrotoluene	50		ug/l	5	50		100	40-140		
2,6-Dinitrotoluene	49		ug/l	2	50		97	40-140		
2-Chloronaphthalene	49		ug/l	1	50		98	40-140		
2-Chlorophenol	45		ug/l	2	50		90	30-130		
2-Methylnaphthalene	48		ug/l	0.5	50		95	40-140		
2-Methylphenol	39		ug/l	2	50		78	30-130		
2,4,5-Trichlorophenol	48		ug/l	2	50		95	30-130		
Nitrobenzene	44		ug/l	2	50		89	40-140		
Pyrene	48		ug/l	0.5	50		95	40-140		
Benzo(a)anthracene	48		ug/l	0.5	50		96	40-140		
1,1'-Biphenyl	48		ug/l	2	50		96	40-140		
Diethylphthalate	48		ug/l	5	50		96	40-140		
Hexachlorocyclopentadiene	45		ug/l	15	100		45	40-140		
Hexachloroethane	39		ug/l	5	50		78	40-140		
Indeno(1,2,3-cd)pyrene	49		ug/l	0.5	50		97	40-140		
Fluorene	49		ug/l	0.5	50		97	40-140		
Naphthalene	44		ug/l	0.5	50		88	40-140		
Fluoranthene	48		ug/l	0.5	50		95	40-140		
Phenanthrene	48		ug/l	0.5	50		97	40-140		
N-Nitrosodimethylamine	28		ug/l	5	50		55	40-140		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>LCS (171WMLCSQ)</u>					<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>					
N-Nitroso-di-n-propylamine	47		ug/l	2	50		94	40-140		
N-Nitrosodiphenylamine	50		ug/l	2	50		100	40-140		
Phenol	25		ug/l	2	50		50	30-130		
Pentachlorophenol	43		ug/l	5	50		86	30-130		
Pyridine	23		ug/l	5	50		45	40-140		
Isophorone	46		ug/l	2	50		92	40-140		
bis(2-Ethylhexyl)phthalate	48		ug/l	5	50		96	40-140		
Benzo(a)pyrene	51		ug/l	0.5	50		101	40-140		
Benzo(b)fluoranthene	51		ug/l	0.5	50		103	40-140		
Benzo(g,h,i)perylene	48		ug/l	0.5	50		96	40-140		
Benzo(k)fluoranthene	44		ug/l	0.5	50		89	40-140		
Benzoic acid	45		ug/l	20	100		45	30-130		
Benzyl alcohol	48		ug/l	30	50		96	30-130		
bis(2-Chloroethoxy)methane	45		ug/l	2	50		90	40-140		
Hexachlorobenzene	47		ug/l	0.5	50		94	40-140		
bis(2-Chloroisopropyl)ether	41		ug/l	2	50		83	40-140		
Hexachlorobutadiene	44		ug/l	2	50		88	40-140		
Butylbenzylphthalate	47		ug/l	5	50		95	40-140		
Caprolactam	< 5	*	ug/l	5	50		24	40-140		
Carbazole	50		ug/l	2	50		99	40-140		
Chrysene	45		ug/l	0.5	50		91	40-140		
Dibenz(a,h)anthracene	52		ug/l	0.5	50		104	40-140		
Dibenzofuran	47		ug/l	2	50		95	40-140		
Dimethylphthalate	47		ug/l	5	50		95	40-140		
Di-n-octylphthalate	47		ug/l	5	50		93	40-140		
bis(2-Chloroethyl)ether	45		ug/l	2	50		91	40-140		
Surrogate: Phenol-d6	88		ug/l		200		44	15-110		
Surrogate: Terphenyl-d14	97		ug/l		100		97	30-130		
Surrogate: 2,4,6-Tribromophenol	200		ug/l		200		101	15-110		
Surrogate: Nitrobenzene-d5	87		ug/l		100		87	30-130		
Surrogate: 2-Fluorophenol	110		ug/l		200		57	15-110		
Surrogate: 2-Fluorobiphenyl	90		ug/l		100		90	30-130		
<u>LCS Dup (P1WMLCSY)</u>					<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>					
Pentachloronitrobenzene	45		ug/l	5	50		90	40-140	1	20
bis(2-Chloroethyl)ether	43		ug/l	2	50		87	40-140	5	20
Diethylphthalate	46		ug/l	5	50		93	40-140	4	20
Dibenzofuran	45		ug/l	2	50		91	40-140	5	20
Dibenz(a,h)anthracene	47		ug/l	0.5	50		94	40-140	10	20
Chrysene	46		ug/l	0.5	50		92	40-140	1	20
Carbazole	47		ug/l	2	50		93	40-140	6	20
Caprolactam	< 5	*	ug/l	5	50		29	40-140	18	20
Butylbenzylphthalate	47		ug/l	5	50		94	40-140	1	20
Benidine	160		ug/l	60	250		62	40-140	12	20
bis(2-Chloroisopropyl)ether	39		ug/l	2	50		78	40-140	6	20
Di-n-octylphthalate	48		ug/l	5	50		96	40-140	2	20
bis(2-Chloroethoxy)methane	43		ug/l	2	50		86	40-140	4	20
Benzyl alcohol	50		ug/l	30	50		100	30-130	4	20
Benzoic acid	50		ug/l	20	100		50	30-130	10	20
Benzo(k)fluoranthene	43		ug/l	0.5	50		87	40-140	3	20
Benzo(g,h,i)perylene	43		ug/l	0.5	50		87	40-140	10	20

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>LCS Dup (P1WMLCSY)</u>					Prepared: 20-Jun-19 Analyzed: 21-Jun-19					
N-Nitroso-di-n-propylamine	44		ug/l	2	50		88	40-140	6	20
Benzo(a)pyrene	47		ug/l	0.5	50		94	40-140	8	20
1,2,4,5-Tetrachlorobenzene	42		ug/l	2	50		84	40-140	11	20
bis(2-Ethylhexyl)phthalate	48		ug/l	5	50		95	40-140	1	20
Isophorone	44		ug/l	2	50		88	40-140	4	20
Pyridine	25		ug/l	5	50		49	40-140	8	20
Pyrene	44		ug/l	0.5	50		89	40-140	7	20
Phenol	26		ug/l	2	50		51	30-130	3	20
Phenanthrene	44		ug/l	0.5	50		88	40-140	10	20
Pentachlorophenol	43		ug/l	5	50		85	30-130	1	20
N-Nitrosodiphenylamine	45		ug/l	2	50		91	40-140	10	20
1,1'-Biphenyl	45		ug/l	2	50		90	40-140	6	20
N-Nitrosodimethylamine	29		ug/l	5	50		59	40-140	6	20
Dimethylphthalate	45		ug/l	5	50		90	40-140	5	20
Naphthalene	40		ug/l	0.5	50		80	40-140	10	20
Di-n-butylphthalate	46		ug/l	5	50		92	40-140	8	20
Indeno(1,2,3-cd)pyrene	44		ug/l	0.5	50		88	40-140	10	20
Hexachloroethane	33		ug/l	5	50		66	40-140	17	20
Hexachlorocyclopentadiene	37	*	ug/l	15	100		37	40-140	20	20
Hexachlorobutadiene	37		ug/l	2	50		74	40-140	17	20
Hexachlorobenzene	44		ug/l	0.5	50		87	40-140	7	20
Fluorene	46		ug/l	0.5	50		92	40-140	5	20
Fluoranthene	46		ug/l	0.5	50		92	40-140	4	20
Benzo(a)anthracene	47		ug/l	0.5	50		95	40-140	1	20
Nitrobenzene	42		ug/l	2	50		84	40-140	6	20
2,4,6-Trichlorophenol	51		ug/l	2	50		102	30-130	0	20
2-Methylnaphthalene	43		ug/l	0.5	50		87	40-140	9	20
1,2-Diphenylhydrazine	44		ug/l	2	50		88	40-140	11	20
Benzo(b)fluoranthene	48		ug/l	0.5	50		97	40-140	6	20
2-Chloronaphthalene	46		ug/l	1	50		91	40-140	8	20
2,6-Dinitrotoluene	48		ug/l	2	50		96	40-140	2	20
2,4-Dinitrotoluene	48		ug/l	5	50		97	40-140	3	20
2,4-Dinitrophenol	120		ug/l	30	100		117	30-130	4	20
2-Chlorophenol	46		ug/l	2	50		91	30-130	1	20
2,4-Dichlorophenol	48		ug/l	2	50		95	30-130	0	20
2-Methylphenol	38		ug/l	2	50		77	30-130	2	20
1,2,4-Trichlorobenzene	39		ug/l	2	50		77	40-140	13	20
1,2-Dichlorobenzene	37		ug/l	2	50		75	40-140	14	20
2,4,5-Trichlorophenol	49		ug/l	2	50		97	30-130	2	20
2,3,4,6-Tetrachlorophenol	48		ug/l	2	50		96	30-130	5	20
1-Methylnaphthalene	40		ug/l	0.5	50		80	40-140	11	20
1,4-Dichlorobenzene	37		ug/l	2	50		74	40-140	14	20
1,3-Dichlorobenzene	36		ug/l	2	50		71	40-140	15	20
2,4-Dimethylphenol	37		ug/l	2	50		75	30-130	5	20
4-Chlorophenyl-phenylether	45		ug/l	2	50		90	40-140	5	20
Atrazine	45		ug/l	5	50		91	40-140	6	20
Anthracene	45		ug/l	0.5	50		90	40-140	10	20
Aniline	35		ug/l	5	50		69	40-140	9	20
Acetophenone	45		ug/l	2	50		90	40-140	6	20
Acenaphthylene	45		ug/l	0.5	50		91	40-140	5	20

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>LCS Dup (P1WMLCSY)</u>					<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>					
Acenaphthene	45		ug/l	0.5	50		90	40-140	7	20
4-Nitrophenol	< 10	*	ug/l	10	50		40	30-130	22	20
Benzaldehyde	38		ug/l	5	50		76	40-140	10	20
4-Methylphenol	41		ug/l	1	50		82	30-130	1	20
2-Nitroaniline	51		ug/l	2	50		102	40-140	6	20
4-Chloroaniline	36	*	ug/l	5	50		73	40-140	22	20
4-Chloro-3-methylphenol	48		ug/l	2	50		95	30-130	0	20
4-Bromophenyl-phenylether	45		ug/l	2	50		90	40-140	7	20
4,6-Dinitro-2-methylphenol	55		ug/l	15	50		110	30-130	2	20
3-Nitroaniline	49		ug/l	2	50		99	40-140	0	20
3,3'-Dichlorobenzidine	38		ug/l	5	50		77	40-140	15	20
2-Nitrophenol	49		ug/l	2	50		98	30-130	1	20
4-Nitroaniline	41		ug/l	2	50		81	40-140	6	20
Surrogate: Terphenyl-d14	99		ug/l		100		99	30-130		
Surrogate: Phenol-d6	90		ug/l		200		45	15-110		
Surrogate: Nitrobenzene-d5	83		ug/l		100		83	30-130		
Surrogate: 2,4,6-Tribromophenol	210		ug/l		200		103	15-110		
Surrogate: 2-Fluorophenol	120		ug/l		200		62	15-110		
Surrogate: 2-Fluorobiphenyl	85		ug/l		100		85	30-130		
<u>Blank (SBLKWM171B)</u>					<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>					
Indeno(1,2,3-cd)pyrene	< 0.1		ug/l	0.1				-		
Acenaphthene	< 0.1		ug/l	0.1				-		
3-Nitroaniline	< 0.5		ug/l	0.5				-		
4,6-Dinitro-2-methylphenol	< 5		ug/l	5				-		
4-Bromophenyl-phenylether	< 0.5		ug/l	0.5				-		
4-Chloro-3-methylphenol	< 0.5		ug/l	0.5				-		
4-Chloroaniline	< 2		ug/l	2				-		
4-Chlorophenyl-phenylether	< 0.5		ug/l	0.5				-		
4-Methylphenol	< 0.5		ug/l	0.5				-		
1,3-Dichlorobenzene	< 0.5		ug/l	0.5				-		
4-Nitrophenol	< 10		ug/l	10				-		
2-Nitroaniline	< 0.7		ug/l	0.7				-		
Acenaphthylene	< 0.1		ug/l	0.1				-		
Acetophenone	< 0.5		ug/l	0.5				-		
Aniline	< 1		ug/l	1				-		
Anthracene	< 0.1		ug/l	0.1				-		
Atrazine	< 2		ug/l	2				-		
Benzaldehyde	< 1		ug/l	1				-		
Benzidine	< 21		ug/l	21				-		
4-Nitroaniline	< 0.6		ug/l	0.6				-		
2,4-Dinitrotoluene	< 1		ug/l	1				-		
1,4-Dichlorobenzene	< 0.5		ug/l	0.5				-		
1-Methylnaphthalene	< 0.1		ug/l	0.1				-		
2,3,4,6-Tetrachlorophenol	< 0.7		ug/l	0.7				-		
2,4,5-Trichlorophenol	< 0.7		ug/l	0.7				-		
1,2-Diphenylhydrazine	< 0.5		ug/l	0.5				-		
2,4,6-Trichlorophenol	< 0.6		ug/l	0.6				-		
2,4-Dichlorophenol	< 0.5		ug/l	0.5				-		
3,3'-Dichlorobenzidine	< 2		ug/l	2				-		
2,4-Dinitrophenol	< 10		ug/l	10				-		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>Blank (SBLKWM171B)</u>	<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>									
2-Nitrophenol	< 0.7		ug/l	0.7				-		
2,6-Dinitrotoluene	< 0.7		ug/l	0.7				-		
2-Chloronaphthalene	< 0.4		ug/l	0.4				-		
Naphthalene	< 0.1		ug/l	0.1				-		
1,2-Dichlorobenzene	< 0.5		ug/l	0.5				-		
1,2,4-Trichlorobenzene	< 0.5		ug/l	0.5				-		
2-Methylnaphthalene	< 0.1		ug/l	0.1				-		
2-Methylphenol	< 0.7		ug/l	0.7				-		
Benzo(b)fluoranthene	< 0.1		ug/l	0.1				-		
2,4-Dimethylphenol	< 0.5		ug/l	0.5				-		
N-Nitroso-di-n-propylamine	< 0.5		ug/l	0.5				-		
Benzo(a)anthracene	< 0.1		ug/l	0.1				-		
Hexachlorobenzene	< 0.1		ug/l	0.1				-		
Hexachlorobutadiene	< 0.6		ug/l	0.6				-		
Hexachlorocyclopentadiene	< 5		ug/l	5				-		
Hexachloroethane	< 1		ug/l	1				-		
Isophorone	< 0.5		ug/l	0.5				-		
Nitrobenzene	< 0.8		ug/l	0.8				-		
Fluoranthene	< 0.1		ug/l	0.1				-		
N-Nitrosodimethylamine	< 2		ug/l	2				-		
Di-n-octylphthalate	< 2		ug/l	2				-		
N-Nitrosodiphenylamine	< 0.5		ug/l	0.5				-		
Pentachloronitrobenzene	< 2		ug/l	2				-		
Pentachlorophenol	< 1		ug/l	1				-		
Phenanthrene	< 0.1		ug/l	0.1				-		
Phenol	< 0.5		ug/l	0.5				-		
1,1'-Biphenyl	< 0.5		ug/l	0.5				-		
Pyrene	< 0.1		ug/l	0.1				-		
Pyridine	< 2		ug/l	2				-		
1,2,4,5-Tetrachlorobenzene	< 0.6		ug/l	0.6				-		
Butylbenzylphthalate	< 2		ug/l	2				-		
2-Chlorophenol	< 0.5		ug/l	0.5				-		
Benzo(g,h,i)perylene	< 0.2		ug/l	0.2				-		
Benzo(k)fluoranthene	< 0.1		ug/l	0.1				-		
Benzoic acid	< 8		ug/l	8				-		
Benzyl alcohol	< 10		ug/l	10				-		
bis(2-Chloroethoxy)methane	< 0.5		ug/l	0.5				-		
bis(2-Chloroethyl)ether	< 0.5		ug/l	0.5				-		
Fluorene	< 0.1		ug/l	0.1				-		
bis(2-Ethylhexyl)phthalate	< 2		ug/l	2				-		
Benzo(a)pyrene	< 0.1		ug/l	0.1				-		
Caprolactam	< 5		ug/l	5				-		
Carbazole	< 0.5		ug/l	0.5				-		
Chrysene	< 0.1		ug/l	0.1				-		
Dibenz(a,h)anthracene	< 0.1		ug/l	0.1				-		
Dibenzofuran	< 0.5		ug/l	0.5				-		
Diethylphthalate	< 2		ug/l	2				-		
Dimethylphthalate	< 2		ug/l	2				-		
Di-n-butylphthalate	< 2		ug/l	2				-		
bis(2-Chloroisopropyl)ether	< 0.5		ug/l	0.5				-		

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW-846 8270D</u>										
Batch 19171WAM026 - SW-846 3510C										
<u>Blank (SBLKWM171B)</u>					<u>Prepared: 20-Jun-19 Analyzed: 21-Jun-19</u>					
Surrogate: 2-Fluorophenol	100		ug/l		200		52	15-110		
Surrogate: Terphenyl-d14	91		ug/l		100		91	30-130		
Surrogate: Nitrobenzene-d5	72		ug/l		100		72	30-130		
Surrogate: Phenol-d6	75		ug/l		200		37	15-110		
Surrogate: 2-Fluorobiphenyl	73		ug/l		100		73	30-130		
Surrogate: 2,4,6-Tribromophenol	190		ug/l		200		93	15-110		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>E200.7</u>										
Batch 485044A - SW3005A/SW3010A										
<u>Blank (CD41853-BLK)</u>					<u>Prepared: 25-Jun-19 Analyzed: 27-Jun-19</u>					
Iron	< 0.010		mg/l	0.010			BRL	-		
<u>LCS (CD41853-LCS)</u>					<u>Prepared: 25-Jun-19 Analyzed: 27-Jun-19</u>					
Iron	1.006		mg/l	0.010	1		101	75-125		20
<u>LCS Dup (CD41853-LCSD)</u>					<u>Source: CD41853-LCS</u>		<u>Prepared: 25-Jun-19 Analyzed: 27-Jun-19</u>			
Iron	1.054		mg/l	0.010	1		105	75-125	3.9	20
<u>E350.1</u>										
Batch 485053A - E350.1										
<u>Blank (CD41712-BLK)</u>					<u>Prepared: 25-Jun-19 Analyzed: 26-Jun-19</u>					
Ammonia as Nitrogen	< 0.05		mg/l	0.05			BRL	-		
<u>LCS (CD41712-LCS)</u>					<u>Prepared: 25-Jun-19 Analyzed: 26-Jun-19</u>					
Ammonia as Nitrogen	4.680		mg/l	0.05	4.72		99.2	90-110		20
<u>SW6020B</u>										
Batch 485042A - SW6020B										
<u>Blank (CD41852-BLK)</u>					<u>Prepared: 25-Jun-19 Analyzed: 27-Jun-19</u>					
Nickel	< 0.0025		mg/l	0.0025			BRL	-		
Beryllium	< 0.0040		mg/l	0.0040			BRL	-		
Zinc	< 0.005		mg/l	0.005			BRL	-		
Thallium	< 0.0005		mg/l	0.0005			BRL	-		
Silver	< 0.0010		mg/l	0.0010			BRL	-		
Selenium	< 0.010		mg/l	0.010			BRL	-		
Lead	< 0.0005		mg/l	0.0005			BRL	-		
Copper	< 0.0025		mg/l	0.0025			BRL	-		
Cadmium	< 0.0010		mg/l	0.0010			BRL	-		
Arsenic	< 0.0040		mg/l	0.0040			BRL	-		
Antimony	< 0.0030		mg/l	0.0030			BRL	-		
Chromium	< 0.010		mg/l	0.010			BRL	-		
<u>LCS (CD41852-LCS)</u>					<u>Prepared: 25-Jun-19 Analyzed: 27-Jun-19</u>					
Nickel	0.05430		mg/l	0.0025	0.05		109	75-125		20
Antimony	0.05540		mg/l	0.0030	0.05		111	75-125		20
Thallium	0.05170		mg/l	0.0005	0.05		103	75-125		20
Zinc	0.05940		mg/l	0.005	0.05		119	75-125		20
Silver	0.05200		mg/l	0.0010	0.05		104	75-125		20
Selenium	0.06020		mg/l	0.010	0.05		120	75-125		20
Copper	0.05850		mg/l	0.0025	0.05		117	75-125		20
Chromium	0.05530		mg/l	0.010	0.05		111	75-125		20
Cadmium	0.05720		mg/l	0.0010	0.05		114	75-125		20
Arsenic	0.05960		mg/l	0.0040	0.05		119	75-125		20
Lead	0.05320		mg/l	0.0005	0.05		106	75-125		20
Beryllium	0.05630		mg/l	0.0040	0.05		113	75-125		20
<u>LCS Dup (CD41852-LCSD)</u>					<u>Source: CD41852-LCS</u>		<u>Prepared: 25-Jun-19 Analyzed: 27-Jun-19</u>			
Cadmium	0.05200		mg/l	0.0010	0.05		104	75-125	9.2	20
Zinc	0.06110		mg/l	0.005	0.05		122	75-125	2.5	20
Thallium	0.04760		mg/l	0.0005	0.05		95.2	75-125	7.9	20
Silver	0.04780		mg/l	0.0010	0.05		95.6	75-125	8.4	20
Selenium	0.05640		mg/l	0.010	0.05		113	75-125	6.0	20
Nickel	0.05220		mg/l	0.0025	0.05		104	75-125	4.7	20
Lead	0.04870		mg/l	0.0005	0.05		97.4	75-125	8.5	20
Chromium	0.04950		mg/l	0.010	0.05		99.0	75-125	11.4	20
Beryllium	0.05200		mg/l	0.0040	0.05		104	75-125	8.3	20

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Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW6020B</u>										
Batch 485042A - SW6020B										
<u>LCS Dup (CD41852-LCSD)</u>				<u>Source: CD41852-LCS</u>			<u>Prepared: 25-Jun-19</u>	<u>Analyzed: 27-Jun-19</u>		
Arsenic	0.05640		mg/l	0.0040	0.05		113	75-125	5.2	20
Antimony	0.05120		mg/l	0.0030	0.05		102	75-125	8.5	20
Copper	0.04940		mg/l	0.0025	0.05		98.8	75-125	16.9	20
<u>SW7470A</u>										
Batch 485085A - SW7470A										
<u>Blank (CD42043-BLK)</u>							<u>Prepared & Analyzed: 26-Jun-19</u>			
Mercury	< 0.0002		mg/l	0.0002			BRL	-		
<u>LCS (CD42043-LCS)</u>							<u>Prepared & Analyzed: 26-Jun-19</u>			
Mercury	0.002270		mg/l	0.0002	0.0025		90.8	75-125		30

Notes and Definitions

*	Outside of specification
D	Data reported from a dilution
D1	Indicates for dual column analyses that the result is reported from column 1
QM1	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
R01	The Reporting Limit has been raised to account for matrix interference.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
[2C]	Indicates concentration was reported from the secondary, confirmation column.
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.

Interpretation of Total Petroleum Hydrocarbon Report

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

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

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

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

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

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

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

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

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

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

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



Spectrum Analytical

CHAIN OF CUSTODY RECORD

SC55201 *Br*

Special Handling:

Page 1 of 1

☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: ATC WorcesterRebecca AueInvoice To: CTLProject No: 03 216 35005Site Name: Westborough, MALocation: Westborough, MASample(s): 1508-756-0151Telephone #: 508-756-0151P.O. No.: 316981

Quote #: _____

F=Field Filtered 1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= _____ 12= _____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= _____ X2= _____ X3= _____

G=Grab

C=Composite

Lab ID:

Sample ID:

Date:

Time:

Type Matrix

of VOA Vials
of Amber Glass
of Clear Glass
of Plastic
Iron, ChloridepH, Ammonia, Hardness
P/Ps for metalsVOC G24, VOC G260
SVOC SEM G25
SVOC G270
VOC+TRIA/TAME G24, 2
Iron, Hexachrome 7196
Mercury PCBs G68
Cyanide, 1,4 Dioxane
Pentachloroethene, 1,2 DDB
FSS TDS
TPH 1664, Ethanol 1666

Check if chlorinated

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

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may apply

Relinquished by:

Received by:

Date:

Time:

Temp °C

Observed
Concentration FactorCorrected
IR ID #Condition upon receipt: ☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar FrozenCustody Seals: ☐ Present ☐ Intact ☐ BrokenE-mail to: Mathew.Aue@atc5.com

EDD format: _____

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EDD format: _____

Condition upon receipt: ☐ Ambient ☐ Iced ☒ Refrigerated

**EPA Discharge Permit for
Diesel UST replacement
Westboro Plant
MA0555/6760
165 Flanders Road**

Lab Fees

<u>GWS for new RGP parameters</u>	<u>Lab Code</u>	<u>Lab Method</u>	<u>Glassware</u>	<u>Comments</u>
VOCs-8260	122	8260	3 VOAs-HCl	
VOCs-624	108	624	3 VOAs-HCl	
VOCs + TBA/TAME-524.2	103	524.2	3 VOAs-HCl	
EDB	121	504.1	Glass Jar with NaS2O3	
1,4 Dioxane	113	624 SIM	1 VOA-HCl	
Ethanol 1666	121	1666	1 VOA-HCl	
SVOCs-SIM 625	138	625 SIM	1 Amber Liter-unpreserved	
SVOCs-8270	134	8270	1 Amber Liter-unpreserved	
Pentachlorophenol	133	625	1 Plastic Liter-Unpreserved	
PP13 Total Metals,	164	200.8	1 Plastic Liter-Unpreserved	Stream Sample too
Iron	154	200.7		
Mercury	154	245.1	1 Plastic Liter-Preserved HNO3	
Hex Chrome-7196	172	7196		
PCBs 608	112	608	1 Amber Liter-unpreserved	
Cyanide	168	335.4	500 ml Plastic with NaOH	
Chloride	167	300		
Total Suspended Solids (TSS)	195	SM 2540D	1 Plastic Liter-Unpreserved	
Total Dissolved Solids (TDS)	194	SM18-22	1 Plastic Liter-Unpreserved	
TPH 1664	153	1664	1 Amber Liter-preserved HCl	
pH	181	ASTM 1293		Stream Sample too
Ammonia	166	E350.1	500 ml Plastic with H2SO4	Stream Sample too
Hardness	171	2340B	250 ml Plastic with HNO3	Stream Sample too
Misc/Add-on/Other	217			

\$0.00

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

Parameter ² / Method / RL	Effluent Limitation ^{3,4}	
	TBEL ⁵	WQBEL ⁶
A. Inorganics		
Ammonia ⁷ 350.1 / 0.1 ug/L or 0.0001 mg/L	Report mg/L	
Chloride ⁸ 300.0 / 1000 ug/L or 1.0 mg/L	Report µg/L	
Total Residual Chlorine ⁹ SM4500-Cl-G (11) / 0.02 mg/L	0.2 mg/L	FW= 11 µg/L SW= 7.5 µg/L
Total Suspended Solids SM2540 D / 5 mg/L	30 mg/L	
Antimony ¹⁰ 200.8 / 0.5 ug/L	206 µg/L	640 µg/L in MA 4.3 mg/L in NH
Arsenic ¹⁰ 200.8 / 0.5 ug/L	104 µg/L	FW= 10 µg/L SW= 36 µg/L
Cadmium ^{11,12} 200.8 / 0.5 ^{0.25} 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	0.05 µg/L	
Methylene Chloride 624 / 10 ug/L *2ug/L when requested	4.6 µg/L	
1,1,1 Trichloroethane 624 / 1 ug/L	200 µg/L	
1,1,2 Trichloroethane 624 / 1 ug/L	5.0 µg/L	
Trichloroethylene 624 / 1 ug/L	5.0 µg/L	
Tetrachloroethylene 624 / 1 ug/L	5.0 µg/L	3.3 µg/L in MA
cis-1,2 Dichloroethylene 624 / 1 ug/L	70 µg/L	
Vinyl Chloride 624 / 1 ug/L	2.0 µg/L	
D. Non-Halogenated Semi-Volatile Organic Compounds		
Total Phthalates ¹⁸ 625 / Phthalates reported 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		0.0038 µg/L
Indeno(1,2,3-cd)pyrene ¹⁹ 625 / 0.05 ug/L		0.0038 µg/L
Total Group II Polycyclic Aromatic Hydrocarbons ²⁰	100 µg/L	
Naphthalene ²⁰ 625 / 0.05 ug/L	20 µg/L	
E. Halogenated Semi-Volatile Organic Compounds		
Total Polychlorinated Biphenyls ²¹ 608 / 0.2 ug/L reported individ.	0.000064 µg/L	
Pentachlorophenol 625 / 1.0 ug/L	1.0 µg/L	

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

Table 2 Footnotes:

¹ The following abbreviations are used in Table 2, above:

^a TBEL = technology-based effluent limitation

^b WQBEL = water quality-based effluent limitation

^c mg/L = milligrams per liter

^d avg = average

^e µg/L = micrograms per liter

^f FW = freshwater

^g SW = saltwater

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

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

^a Activity Category I:

all parameters in contamination type A. Inorganics;

any present in contamination type B. non-halogenated VOCs;

(if) present in contamination type C. halogenated VOCs;

any present in contamination type D. non-halogenated SVOCs;

(if) present in contamination type E. halogenated SVOCs; and

any present in contamination type F. fuels parameters.

^b Activity Category II:

all parameters in contamination type A. Inorganics;

any present in contamination type B. non-halogenated VOCs;

any present in contamination type C. halogenated VOCs;

any present in contamination type D. non-halogenated SVOCs;

if present in contamination type E. halogenated SVOCs; and

if present in contamination type F. fuels parameters.

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>
SC55201-02	MW-5	Trivalent Chromium (Water)	6/20/2019
SC55201-02	MW-5	1,4-Dioxane by SW846 8260 SIM	6/25/2019
SC55201-02	MW-5	Semivolatile Organic Compounds	6/25/2019

Batch Summary

1900829

General Chemistry Parameters

1900829-BLK1
1900829-BS1
1900829-CCB1
1900829-CCB2
1900829-CCV1
1900829-CCV2
1900829-DUP1
1900829-MS1
1900829-MSD1
1900829-SRM1
SC55201-02 (MW-5)

1900830

Total Metals by EPA 200/6000 Series Methods

SC55201-01 (Stream)
SC55201-02 (MW-5)

1900838

General Chemistry Parameters

1900838-DUP1
1900838-SRM1
1900838-SRM2
SC55201-01 (Stream)
SC55201-02 (MW-5)

19171385802A

Subcontracted Analyses

B171712B
L171712Q
SC55201-02 (MW-5)

19171964901A

Subcontracted Analyses

B171881B
L171881Q
SC55201-02 (MW-5)

19171WAM026

Subcontracted Analyses

171WMLCS1Q
171WMLCSQ
P1WMLCSY
SBLKWM171B
SC55201-02 (MW-5)

191720016A

Subcontracted Analyses

LCS16172Q
P91726AY
PBLK16172B

SC55201-02 (MW-5)

19172520217A

Subcontracted Analyses

P17220QBB
P17220QQQ
SC55201-02 (MW-5)

19174WAA625

Subcontracted Analyses

174WALCSQ
P4WALCSY
SBLKWA174B
SC55201-02 (MW-5)

19176807801A

Subcontracted Analyses

B176431B
L176431Q
L176431Y
SC55201-02 (MW-5)

4191783AA

Subcontracted Analyses

LCS426Q
LCS426Y
SC55201-02 (MW-5)
VBLK426B

484078A

Subcontracted Analyses

CD34661-BLK
CD34661-LCS
CD34661-LCSD
SC55201-02 (MW-5)

484088A

Subcontracted Analyses

CD37047-BLK
CD37047-LCS
CD37047-LCSD
SC55201-02 (MW-5)

484088B

Subcontracted Analyses

CD37047-BLK
CD37047-LCS
CD37047-LCSD
SC55201-02 (MW-5)

484474A**Subcontracted Analyses**

CD37193-BLK
CD37193-LCS
CD37193-LCSD
SC55201-02 (MW-5)
SC55201-03 (Trip Blanks)

485042A**Subcontracted Analyses**

CD41852-BLK
CD41852-LCS
CD41852-LCSD
SC55201-01 (Stream)
SC55201-01RE2 (Stream)
SC55201-02 (MW-5)
SC55201-02RE2 (MW-5)

485044A**Subcontracted Analyses**

CD41853-BLK
CD41853-LCS
CD41853-LCSD
SC55201-01 (Stream)
SC55201-02 (MW-5)

485053A**Subcontracted Analyses**

CD41712-BLK
CD41712-LCS
SC55201-01 (Stream)
SC55201-02 (MW-5)

485085A**Subcontracted Analyses**

CD42043-BLK
CD42043-LCS
SC55201-01 (Stream)
SC55201-02 (MW-5)

E191781AA**Subcontracted Analyses**

LCSE60Q
SC55201-02 (MW-5)
VBLKE60B

I191772AA**Subcontracted Analyses**

LCSI79Q
LCSI79Y
SC55201-02 (MW-5)
SC55201-03 (Trip Blanks)
VBLKI79B

K191771AA**Subcontracted Analyses**

LFBK06Q
SC55201-02 (MW-5)
VBLKK06B

U191761AA**Subcontracted Analyses**

QSTD020Q
SC55201-02 (MW-5)
SC55201-03 (Trip Blanks)
VBLKU76B

September 11, 2019
Project Number 03-216350

Ms. Xiaodan Ruan
MassDEP Surface Water Permit Program
1 Winter Street
Boston, MA 02018

RE: Notice of Intent for Remediation General Permit, Request for Information Response
Cumberland Farms Distribution Facility #MA0555
165 Flanders Road
Westboro, MA 01581
WM15, Transmittal #X284095

Dear Ms. Ruan:

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 September 5, 2019 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 re-use and conservation of discharge water is not a feasible as there is nowhere onsite to store and re-use the discharge water for any practical purpose. As the depth to groundwater is shallow (3 to 4 feet below grade), any type of land application or shallow injection system would likely flood the work area and ultimately drain to the wetlands near the work area. 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 wetlands along the western portion of the site and work area, 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. Also, 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.

The work area is limited to the existing area as allowed by town planning and zoning requirements, so relocating the proposed activity is not feasible. Also, relocating the construction work activity to another area of the site would still require the dewatering and discharge as discussed above and the ultimate receiving water for any other discharge location would still be the same resource, the Sudbury River.

The applicant is evaluating the use of the town of Westboro sewer system as a potential discharge option. The building at the Site is currently connected to the sewer system, but the flow in the existing sewer service is restricted by the small diameter four-inch force main. The town indicated that a temporary connection to the onsite force main might be viable, but discharge flow rates might be limited due to downstream structures, especially during the temporary peak flow rates that are needed for the initial portion of the project. The sewer discharge, if approved, would be the primary discharge option for a majority of the discharge flow.

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 1-2 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. Furthermore, the sample collected from the receiving water had a pH of 5.76, which is lower than the more neutral pH of 6.15 detected in the onsite groundwater. 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, will maintain the resource, and may actually enhance the receiving water quality based on the pH buffering.



Should you have any questions or concerns regarding the contents of this letter, please do not hesitate to contact me at (508) 926-1315.

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

December 9, 2019
Project Number 03-216350

Ms. Xiaodan Ruan
MassDEP Surface Water Permit Program
1 Winter Street
Boston, MA 02018

RE: Notice of Intent for Remediation General Permit, Request for Information Response
Cumberland Farms Distribution Facility #MA0555
165 Flanders Road
Westboro, MA 01581
WM15, Transmittal #X284095

Dear Ms. Ruan:

On behalf of Cumberland Farms, Inc. (CFI), ATC Group Services LLC (ATC) is pleased to provide a secondary response to MassDEP's Request for Information (RFI) to support the approval of the discharge permit application for the above referenced location (the "Site"). Below is a response to the additional information requested.

Item 1: Discuss the need for velocity dissipation at the discharge point and the likely duration of peak flow.

Response 1:

It is expected that the duration of peak flow will likely occur during a 3 to 5 day period when the new petroleum UST is replaced. In order to dissipate flow velocity at the outfall area, CFI will replace and install more stone (rip rap) at the primary outfall location. The current condition of the stone at the primary outfall area indicates maintenance is needed. Also, treated groundwater will be pumped into the catch basin in the parking lot, instead of the drainage manhole next to it, with the intent of enhancing solids removal and dissipating flow velocity. Photodocumentation of the current state of the primary outfall area is attached, along with the Site Plan depicting the updated discharge point.

Also, during peak flow, a secondary discharge point can be used, which is located at the southwest corner of the CFI property. The primary and secondary discharge points both drain to the same wetlands area and their locations are shown on the attached plan. The secondary discharge point is an engineered stormwater detention basin, with extensive rip rap, and is capable of handling the peak overflow. The water will be pumped to the secondary discharge point via overland hose. The local Conservation Commission agent inspected both discharge points and outfall areas on November 20, 2019 and has indicated that no additional approvals are needed to implement the scope of work. Attached is a memo which documents their approval.



Item 2: Demonstration of how the discharge is for the express purpose and intent of maintaining and enhancing the resource for its designated use.

Response 2:

Prior to discharge, debris and trash near the outfall area will be removed to better protect the resource. Also prior to discharge, maintenance will be done to allow for the removal of the accumulated sediment in the outfall pipe and the installation of new rip rap at the outfall area. These actions will improve solids and sediment removal and reduce outwash into the wetlands, which will enhance the resource for its designated use.

Ultimately, the discharge will facilitate the removal of an old petroleum UST that is near the resource area and installation of a new, state-of-the-art UST system with more leak detection equipment and secondary containment. The new UST system will reduce the likelihood of spills, better protect the environment, and enhance the resource for years to come.

Should you have any questions or concerns regarding the contents of this letter, please do not hesitate to contact me at (508) 926-1315.

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



November 26, 2019

Ms. Sheri Widdiss, Asst. Conservation Officer
Conservation Commission
45 West Main Street, Room 209
Westborough, MA 01581

**Re: Construction Dewatering
Cumberland Farms
165 Flanders Road
Westborough, MA 01581**

Dear Ms. Widdiss,


This memorandum is to memorialize the discussion during our site walk at the Cumberland Farms Distribution Center on the morning of November 20, 2019, as it relates to the proposed construction dewatering processes associated with the work permitted under MassDEP File No.332-894 and the Order of Conditions issued for same on March 12, 2019. During our review of the existing conditions of the drainage system and outfalls, the following was discussed:

1. No exception was taken to the proposed discharge of construction dewatering flows to the existing catch basin located west of the main building and south of the existing fuel dispenser island, which outlets to a 10" PVC outfall to the west;
2. Ms. Widdiss requested that accumulated sediment be removed from the 10" PVC outfall, additional rip-rap stone be added, and litter be removed at the outfall prior to discharging of construction dewatering waters;
3. No exception was taken to the pumping of construction dewatering flows to the surface detention basin located at the southwest corner of the parking area, should the volume of discharge exceed the capacity of the existing 10" PVC pipe mentioned above;
4. The submission of revised Site Plans documenting these proposed maintenance activities to the outfall is not necessary;
5. The requested scope of maintenance and improvement activities at the outfall will be coordinated directly with the Contractor and Conservation Agent during a pre-construction meeting on site;
6. An amendment to the Order of Conditions will not be required for the proposed maintenance and improvements to the 10" PVC outfall as described above.

We ask that you please review this memo and advise if the information contained herein is consistent with your records and intent for the permitted work moving forward. Please do not hesitate to contact us should you have any questions, comments or require any additional information. We look forward to continuing to work with you on the Development Project. Thank you.

Sincerely,

BOHLER ENGINEERING



Devon A. Ward

cc: Matthew Lyne, ATC Group Services LLC
Matthew Young, Cumberland Farms, Inc.

PHOTOGRAPHIC LOG

ATC Group Services LLC
240 Barber Avenue, Unit 6
Worcester, MA 01606

www.atcgroupservices.com



Client: Cumberland Farms, Inc.

Site Location: 165 Flanders Road, Westboro, MA

Project #: 03-216350

Photograph #1

Description:

Primary outfall area #1 for discharge point #1.



Photograph #2

Description:

Primary outfall area #1.



PHOTOGRAPHIC LOG

ATC Group Services LLC
240 Barber Avenue, Unit 6
Worcester, MA 01606

www.atcgroupservices.com



Client: Cumberland Farms, Inc.

Site Location: 165 Flanders Road, Westboro, MA

Project #: 03-216350

Photograph #3

Description:

Current state of stone around outfall pipe #1.

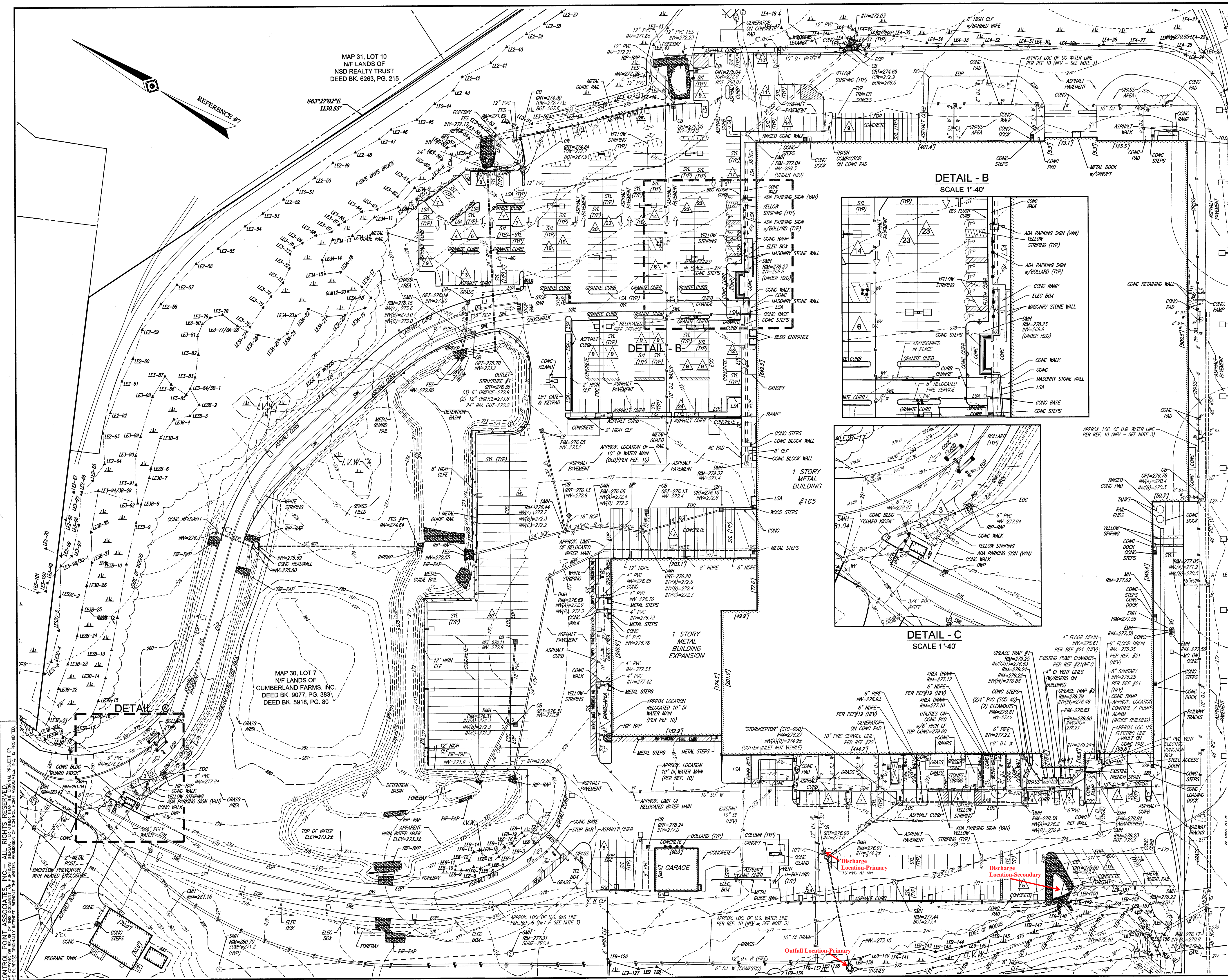


Photograph #4

Description:

Secondary discharge point #2, with overflow to wetlands area.





- LEGEND**
- 124 --- EXISTING CONTOUR
 - 125 --- EXISTING SPOT ELEVATION
 - 123.45 --- EXISTING TOP OF CURB ELEVATION
 - 122.85 --- EXISTING GUTTER ELEVATION
 - 123.45 --- EXISTING TOP OF WALL ELEVATION
 - 122.85 --- EXISTING BOTTOM OF WALL ELEVATION
 - 123.45 --- EXISTING FINISHED FLOOR ELEVATION
 - 123.45 --- HYDRANT
 - 123.45 --- WATER VALVE
 - 123.45 --- PRESSURE INDICATOR VALVE
 - 123.45 --- UNKNOWN VALVE
 - 123.45 --- GAS VALVE
 - 123.45 --- GAS METER
 - 123.45 --- ELECTRIC METER
 - 123.45 --- OVERHEAD WIRES
 - 123.45 --- APPROX. LOC. UNDERGROUND GAS LINE
 - 123.45 --- APPROX. LOC. UNDERGROUND ELECTRIC LINE
 - 123.45 --- APPROX. LOC. UNDERGROUND SANITARY / SEWER LINE
 - 123.45 --- APPROX. LOC. UNDERGROUND WATER LINE
 - 123.45 --- UTILITY POLE
 - 123.45 --- GUY WIRE
 - 123.45 --- AREA LIGHT
 - 123.45 --- CLEAN OUT
 - 123.45 --- SIGN
 - 123.45 --- BOLLARD
 - 123.45 --- U-BOLLARD
 - 123.45 --- METAL GUIDE RAIL
 - 123.45 --- POST
 - 123.45 --- PAINTED ARROWS
 - 123.45 --- UNDER GROUND
 - 123.45 --- CHAIN LINK FENCE
 - 123.45 --- DEPRESSURE CURB
 - 123.45 --- EDGE OF CONCRETE
 - 123.45 --- EDGE OF PAVEMENT
 - 123.45 --- LANDSCAPED AREA
 - 123.45 --- METAL COVER
 - 123.45 --- TYPICAL
 - 123.45 --- DRAINAGE/STORM MANHOLE
 - 123.45 --- ELECTRIC MANHOLE
 - 123.45 --- SANITARY/SEWER MANHOLE
 - 123.45 --- TELEPHONE MANHOLE
 - 123.45 --- UNKNOWN MANHOLE
 - 123.45 --- WATER MANHOLE
 - 123.45 --- CATCH BASIN OR INLET
 - 123.45 --- DELINEATION FLAG
 - 123.45 --- TREE & TRUNK SIZE
 - 123.45 --- PARKING SPACE COT
 - 123.45 --- DETECTABLE WARNING PAD
 - 123.45 --- SOLID WHITE LINE
 - 123.45 --- SOLID YELLOW LINE
 - 123.45 --- DOUBLE YELLOW LINE
 - 123.45 --- HT
 - 123.45 --- BUILDING
 - 123.45 --- NO VISIBLE PIPE
 - 123.45 --- DUCTILE IRON PIPE
 - 123.45 --- INVERT ELEVATION
 - 123.45 --- GRATE ELEVATION
 - 123.45 --- BOT
 - 123.45 --- TOP OF WATER
 - 123.45 --- POLYVINYL CHLORIDE PIPE
 - 123.45 --- NOT FIELD VERIFIED
 - 123.45 --- HIGH DENSITY POLYETHYLENE
 - 123.45 --- CORRUGATED PLASTIC PIPE
 - 123.45 --- BUILDING DIMENSION

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

NO.	DESCRIPTION OF REVISION	FIELD CREW	DATE
4	CONTOURS ADJUSTED IN WETLAND AREA	S.P.P.	12-18-16
3	WETLAND LINES MODIFIED	J.A.R.K.	9-18-16
2	BUILDING COMMISSIONER COMMENTS	NA	1-28-17
1	REVISED PER TOWN ENGINEER COMMENTS	A.M.M.	1-18-17

THIS SURVEY HAS BEEN PERFORMED IN THE FIELD UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, BELIEF, AND INFORMATION, THIS SURVEY HAS BEEN PERFORMED IN ACCORDANCE WITH CURRENTLY ACCEPTED ACCURACY STANDARDS.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL.

GERRY L. HOLDRIGHT
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

12-19-16

RECORD SURVEY

165 FLANDERS ROAD
ASSESSOR'S MAP 31, LOT 7
TOWN OF WESTBOROUGH
WORCESTER COUNTY
COMMONWEALTH OF MASSACHUSETTS

CONTROL POINT ASSOCIATES, INC.
352 TURNPIKE ROAD
SOUTH BORO, MA 01772
508.948.3000 • 508.948.3003 FAX

CHALFONTS, PA 215.712.9800
WARREN, NJ 908.668.0099

PRIMA
REVIEWED: S.P.P.
APPROVED: G.L.H.
DATE: 11-21-16
SCALE: 1"=60'
FILE NO.: CM12145-03
DWP NO.: 02.1
(SHEET 2 OF 2)

Ruan, Xiaodan (DEP)

From: Matthew Lyne <Matthew.Lyne@atcgs.com>
Sent: Thursday, January 9, 2020 12:30 PM
To: Ruan, Xiaodan (DEP)
Subject: Cumberland Farms Distribution Facility #MA0555, Westboro- RGP, Request for Information
Attachments: Figure 2 Site Plan with Outfall Location, rev1.pdf; DPW Approval 1-9-20 part 2.pdf

Hi Xiaodan, I heard back from the town sewer dept. today and the discharge of some of the water should be okay by them.

See attached for their official response.

Also, there appears to be a sewer connection on-site that is a gravity drain and not under the force main, so that is now a viable option for some of the discharge.

The town does require their own discharge permit application and I think we should be able to get that approved before start up.

Below are the official responses to your questions.

1. I understand your explanation of how the force main function and the problems related to the pumps. Would it be possible to discharge a portion of the volume to the force main, and if so, how much would that be? Also, are there any other possible sewer connections on-site that the entire volume or a portion of the discharge may be routed and discharged to? **We were told by the engineer for CFI there is a manhole near the maintenance building near the front of the property near Flanders Road that has a drain pipe that gravity feeds to the municipal sewer main in Flanders Road. The town verbally agreed to allow up to 100 gpm of groundwater discharge to the sewer. However, according to their approval (attached), this higher flow would be restricted to the overnight hours when overall municipal flow is not a peak flow. During the day, we would need to discharge some of the flow to the wetlands via RGP.**
2. In your response to the Item 1 in the letter dated September 11th, you described that infiltration at 10 GPM or less is feasible. Although, at this rate, only a small portion of the entire volume can be infiltrated, this would reduce the volume discharged to the ORW and should be considered. Are there other possible areas on-site for infiltration? And if so, how much of the discharge can be infiltrated? **Discharge via land infiltration of 10 gpm is something that could probably be done at the site. The state allows for up to 18" of stone bed to be installed and as long as the infiltrated water does not reach a surface water, it is allowed. Given the shallow water table (4-5'), the swampy conditions at the site, and the large amount of pavement near the work area, I would not recommend anything more than 10 gpm. And other than near the work area, there is no other possible areas for infiltration. Given the small amount of flow that surficial infiltration can handle, it doesn't appear to be a cost effective approach to managing the discharged groundwater.**
3. Can some of the discharge be held on-site (e.g., in a tank) or be trucked off-site to reduce the volume discharged to the wetland? You explained during our phone call that it is not reasonably practicable to truck the water off-site. Could you explain this in writing? **The treatment system will be set up with a 20,000 gallon settling tank. So there will be a tank on site. For the trucking of water off-site, a flow rate of 100 gpm would produce approximately 144,000 gallons of water in a 24-hour period and 1 million gallons of water in a 1-week period. The disposal facilities do not have the capacity to handle this type of flow and it is cost prohibitive for CFI do so.**
4. Would it be possible to combine the above multiple alternatives to avoid surface water discharge or significantly reduce the volume that will be discharged to the wetland? Please provide detailed descriptions. **Yes, by combining the sewer option and the limited surficial infiltration option, it is possible to reduce the amount of**

water discharged to the wetlands, but it would not eliminate the discharge to the wetlands entirely. For the sewer discharge option discussed in Item 1 and the land infiltration option discussed in Item 2, approximately 110 gpm of the discharge flow could be reduced from the overall discharge. And as a practical matter, the land infiltration option would be implemented first for low discharge flow periods, then the sewer discharge option for the next step up to 110 gpm, and then during work when higher discharge flows are experienced or when the town restricts the sewer discharge flow to off-peak hours, the discharge to the wetlands would be the last resort.

Overall, I think with the information stated above, we can minimize the discharge to the wetlands while at the same time implement steps to maintain and enhance the protected resource. And the main project will involve replacing an old petroleum UST, which will reduce spills and better protect the environment in the long term.

Please review this response and let me know if you should need any additional information to process the permit approval.

Thank you.

Matt

Matthew Lyne | SENIOR PROJECT MANAGER, P.E. | **ATC Group Services LLC**
Office +1 508 926 1315 | Cell +1 508 641 0476



240 Barber Avenue, Suite 6 | Worcester, MA 01606
Fax +1 508 926 1334 | matthew.lyne@atcgs.com | www.atcgroupservices.com

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From: Ruan, Xiaodan (DEP) [<mailto:xiaodan.ruan@state.ma.us>]

Sent: Wednesday, December 11, 2019 3:17 PM

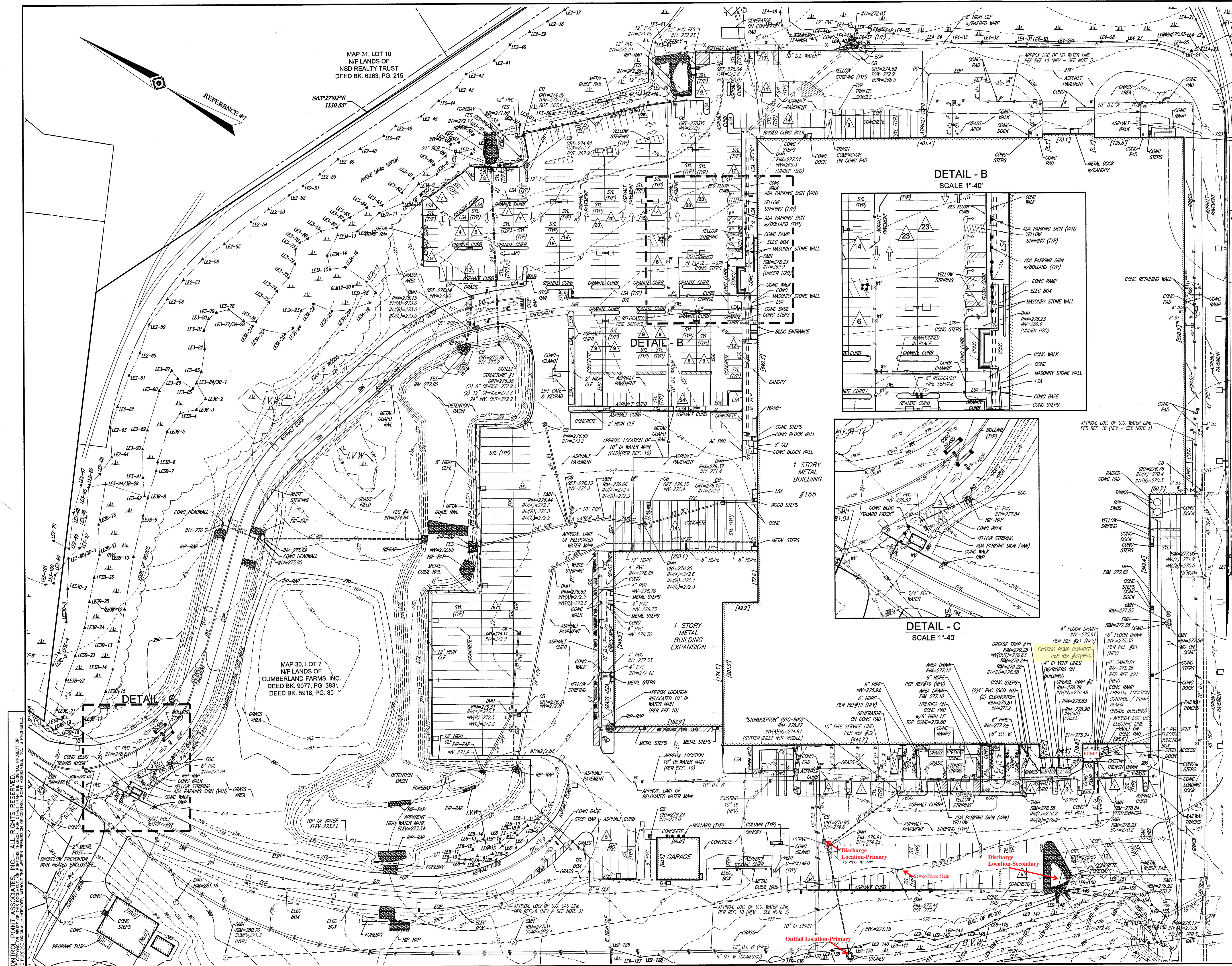
To: Matthew Lyne <Matthew.Lyne@atcgs.com>

Subject: [EXTERNAL] RE: Cumberland Farms Distribution Facility #MA0555, Westboro- RGP, Request for Information

[External Email] This email originated from outside of the ATC mail system. Please use caution when opening attachments.

Thanks, Matt. I am reviewing the materials that you have submitted. Based on the information you have provided, I have some more questions for you to look into:

1. I understand your explanation of how the force main function and the problems related to the pumps. Would it be possible to discharge a portion of the volume to the force main, and if so, how much would that be? Also, are there any other possible sewer connections on-site that the entire volume or a portion of the discharge may be routed and discharged to?



LEGEND

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- CORRUGATED PLASTIC PIPE
- BUILDING DIMENSION

GRAPHIC SCALE

(IN FEET)

1 inch = 60 ft.

0 30 60 90 120 150 180 210 240

NO.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE
4	CONTOURS ADJUSTED IN WETLAND AREA	S.P.P.	S.P.P.	G.L.H.	12-18-16
3	WETLAND LINES MODIFIED	J.A.R.K.	S.P.P.	G.L.H.	9-18-16
2	BUILDING COMMISSIONER COMMENTS	NA	A.M.M.	G.L.H.	1-28-17
1	REVISED PER TOWN ENGINEER COMMENTS	A.M.M.	A.M.M.	G.L.H.	1-18-17

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GERRY L. HOLDRIGHT
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

12-19-16

RECORD SURVEY

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ASSESSOR'S MAP 31, LOT 7
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WORCESTER COUNTY
COMMONWEALTH OF MASSACHUSETTS

CONTROL POINT ASSOCIATES, INC.
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
508.948.3000 • 508.948.3003 FAX

CHALFANT, PA 215.712.9800
WARREN, NJ 908.668.0099

PRIMA

REVIEWED: S.P.P. APPROVED: G.L.H. DATE: 11-21-16 SCALE: 1"=60' FILE NO.: CM12145-03 DWG. NO.: CPG 02.1 (SHEET 2 OF 2)

Matthew Lyne

From: Lisa Allain <lallain@town.westborough.ma.us>
Sent: Thursday, January 09, 2020 11:01 AM
To: Matthew Lyne
Subject: [EXTERNAL] FW: Cumberland Farms Plant-165 Flanders Road

[External Email] This email originated from outside of the Atlas mail system. Please use caution when opening attachments.

From: Jared Kelley [mailto:jkelly@town.westborough.ma.us]
Sent: Tuesday, January 7, 2020 2:46 PM
To: Lisa Allain <lallain@town.westborough.ma.us>; 'Brian Antonioli' <bantonioli@town.westborough.ma.us>
Cc: Chris Payant <cpayant@town.westborough.ma.us>; Derek Saari <dsaari@town.westborough.ma.us>
Subject: RE: Cumberland Farms Plant-165 Flanders Road

Lisa,

Cumberland is currently on bypass. Probably (guessing) will be for at least another month or so. By the time they are looking to discharge we may very well be up and running. I don't really foresee it being an issue either way. If they can either batch discharge overnight or during off peak hours that'd be best. Otherwise a steady low flow would be the way to go. Thanks!

Jared Kelley
Sewer Division Leadsman
Dept. of Public Works
131 Oak Street
Westborough, MA 01581
Tel. (508) 366-3070
Fax (508) 366-3074