GeoInsight®
Environmental Strategy & Engineering

October 26, 2020 GeoInsight Project 9353-000

United States Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109-3912

RE: Notice of Intent – Remediation General Permit
549 Main Street and 8 Post Office Square Behind
Acton, Massachusetts

To Whom It May Concern:

GeoInsight Inc. (GeoInsight) prepared the attached Notice of Intent (NOI) for the Remediation General Permit (RGP) at the request of the Water Supply District of Acton (the Acton Water District). A copy of the NOI is provided in Attachment A.

The purpose of this submittal is to obtain a permit to temporarily discharge water generated during an aquifer pumping test at 549 Main Street and 8 Post Office Square Behind in Acton, Massachusetts (herein referred to as the "Property"). Refer to Figure 1 for the location of the Property and Figure 2 for Property features.

BACKGROUND

In March 2019, bedrock water supply wells A, D, and E were installed at the Property. The locations of the wells are shown on Figure 2. During the initial pumping test on May 21, 2019, groundwater samples were collected from the wells and analyzed for volatile organic compounds (VOCs) along with other water quality parameters. On September 12, 2019, a supplemental pumping test was conducted and groundwater samples were collected at the beginning, end, and at three-hour intervals for nine hours (i.e., three interval samples) during the test. The samples were analyzed for VOCs and 1,4-dioxane, along with other water quality parameters.

Trichloroethene (TCE) and 1,4-dioxane were detected at concentrations above MADEP RCGW-1 reportable concentrations. Cis-1,2-dichloroethene (cis-1,2-DCE), dichlorodifluoromethane (Freon 12), toluene, Freon 113, and 1,2-dichlorotetrafluoroethane (Freon 114), were also detected in the groundwater samples at concentrations above laboratory reporting limits but below MADEP RCGW-1 reportable concentrations.

NEW HAMPSHIRE
186 Granite Street
3rd Floor, Suite A
Manchester, NH 03101
Tel 603.314.0820
www.geoinsightinc.com

MASSACHUSETTS
1 Monarch Drive
Suite 201
Littleton, MA 01460
Tel 978.679.1600

MAINE
4 Market Place Drive
2nd Floor, Suite 207
York, ME 03909
Tel 207.606.1043

CONNECTICUT
200 Court Street
2nd Floor
Middletown, CT 06457
Tel 860.894.1022

The detection of TCE and 1,4-dioxane above RCGW-1 reportable concentrations constituted a reportable release condition under the Massachusetts Contingency Plan (MCP), and a Release Notification Form (RNF) was filed with the MADEP on September 9, 2019. Release Tracking Number (RTN) 2-21031 was assigned by the MADEP to this release condition. Historical information suggested that the impacts detected in the bedrock water supply wells originated at one or more upgradient properties. A Downgradient Property Status (DPS) Submittal was filed for RTN 2-21031 on June 22, 2020.

REMEDIATION GENERAL PERMIT NOTICE OF INTENT

On September 25, 2020, groundwater samples were obtained from well Well-E. The groundwater samples were submitted to Alpha Analytical Laboratory (Alpha) of Westborough, Massachusetts for analysis of RGP permit parameters. The groundwater samples were analyzed for VOCs, semi-volatile organic compounds (SVOCs), total metals, total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), total suspended solids (TSS), chloride, cyanide, ammonia, hardness, and total residual chlorine (TRC).

On September 25, 2020 samples were collected from the receiving water body, the Nashoba Brook (Segment MA82B-14) and field analyzed for temperature and pH. Samples from the receiving water body were also collected for laboratory analysis of ammonia, hardness, and total metals.

During the pumping test, groundwater will be pumped from the pumping test wells (Well-E and Well-A), through the treatment system, and discharged to Nashoba Brook via aboveground piping/hoses.

DILUTION FACTOR AND EFFLUENT LIMITATION CALCULATIONS

A Dilution Factor (DF) was calculated using the methods described in Appendix V of the RGP. In order to calculate a DF, the seven day-ten-year low flow (7Q10) of the receiving water was identified in accordance with the instructions in Appendix V of the RGP and verified with MADEP. A copy of the correspondence with MADEP is included in Attachment F. A copy of the USEPA provided spreadsheet to calculate the DF and water quality-based effluent limitations (WQBELs) is included in Attachment G.

SUMMARY AND CONCLUSIONS

The purpose of this report is to summarize environmental conditions and groundwater data collected to date to support a Notice of Intent to discharge under the Remediation General Permit for the proposed pumping test at the Property.

If you have any questions or comments regarding the contents of this letter or the enclosed materials, please contact either of us at (978) 679-1600.

Sincerely,
GEOINSIGHT, INC.

Robert C. Reynolds
Senior Project Engineer

Kevin D. Trainer, C.P.G., P.G., L.S.P.
Senior Associate

Enclosures:

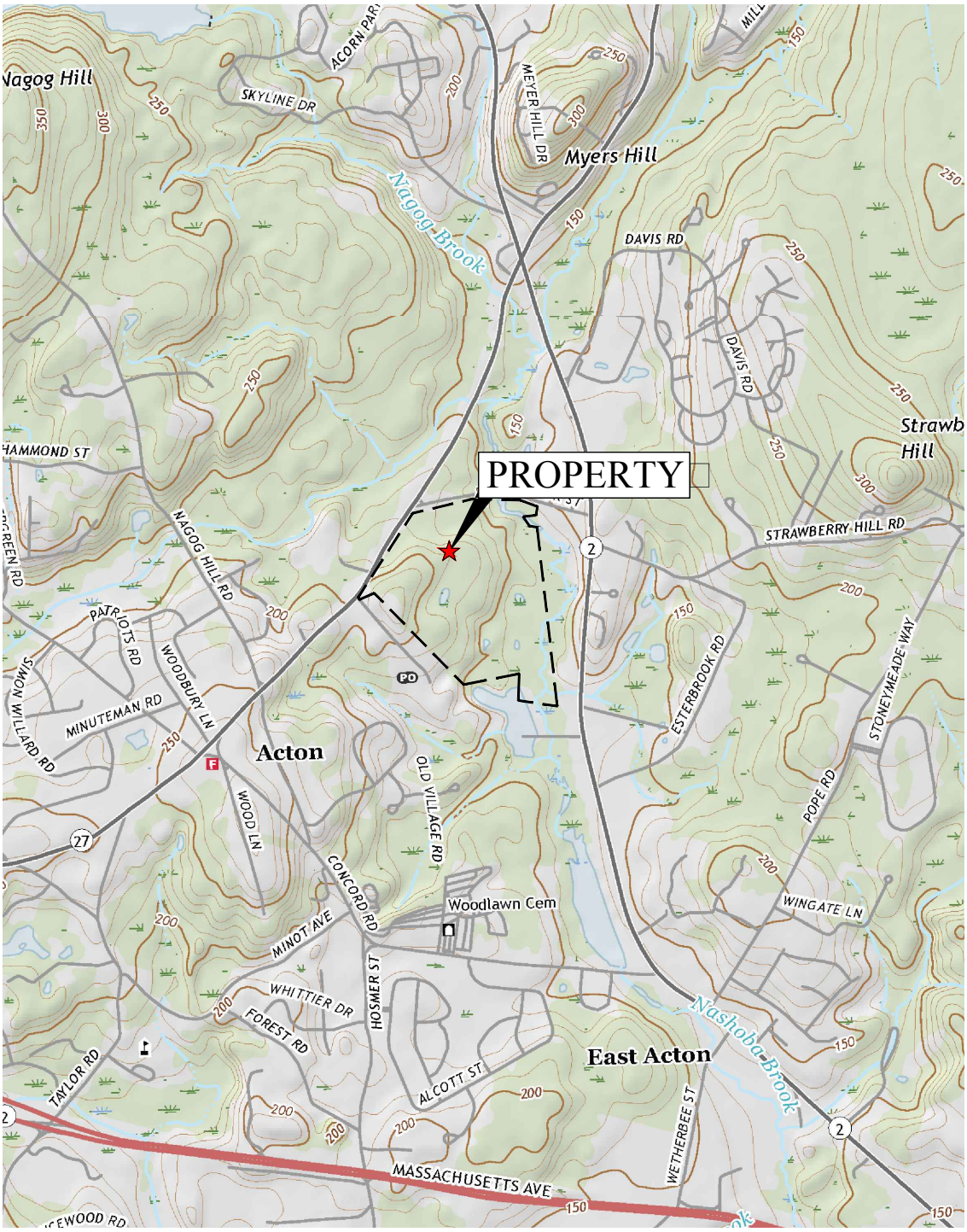
FIGURES

Figure 1 - Property Locus
Figure 2 - Property Plan
Figure 3 - Proposed Discharge Route

ATTACHMENTS

Attachment A - Notice of Intent for the Remediation General Permit
Attachment B - Endangered Species Act Documentation
Attachment C - National Historic Preservation Act Documentation
Attachment D - Receiving Water Hydrologic Information
Attachment E - Laboratory Report
Attachment F - MADEP Correspondence
Attachment G - USEPA Appendix V Dilution Factor and WQBEL Spreadsheet
Attachment H - MADEP BWSC Phase I Site Assessment Map

FIGURES



SOURCE:

USGS WESTFORD, -ND M-YN-RD, M-TOPOGR-PHIC QU-DR-NGLES 2018
CONTOUR INTERV-L: 10 FEET

0 2000 4000

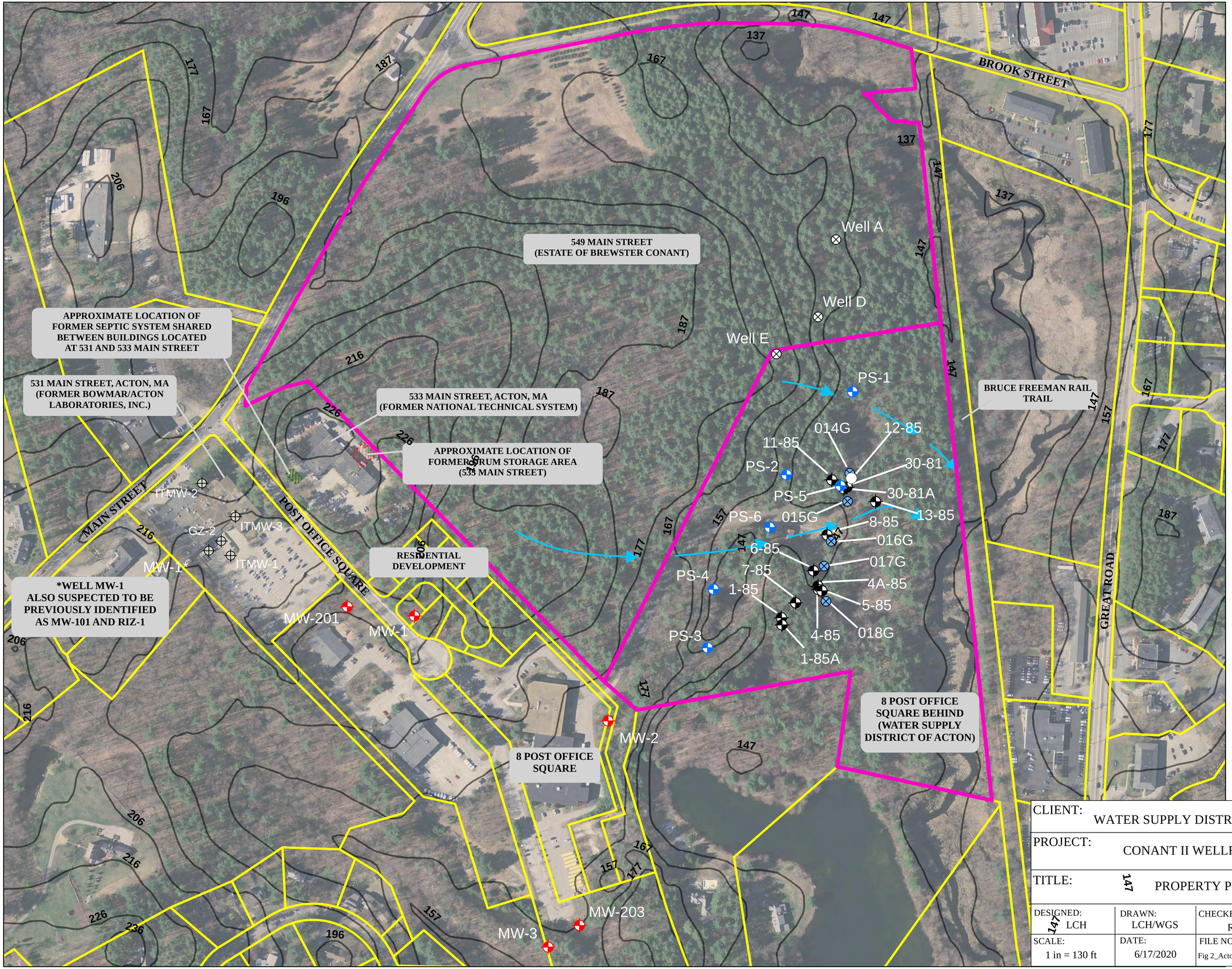
-PPROX. SC-LE IN FEET

CLIENT: WATER SUPPLY DISTRICT OF ACTON			
PROJECT: 549 MAIN STREET AND 8 POST OFFICE SQUARE BEHIND ACTON, MASSACHUSETTS			
TITLE: PROPERTY LOCUS			
DESIGNED: RCR	DR- N: WGS	CHECKED: WGS	-PPROVED: RCR
SC-LE: 1" = 2000'	D-TE: 10/18/19	FILE NO.: 9353-LOCUS	PROJECT NO.: 9353-000

GeoInsight
Practical in Nature

FIGURE NO.: 1

PLOT D-TE: 1-29-20
FILE: M:\9353-Conant Wellfield - -cton Water District\Figures\9353-LOCUS.dwg



Legend

- MW-1 — MONITORING WELL LOCATION AND DESIGNATION (INSTALLED 1990s)
- PS-1 — MONITORING WELL LOCATION AND DESIGNATION (INSTALLED 1988)
- MW-201 — MONITORING WELL LOCATION AND DESIGNATION (INSTALLATION DATE UNKNOWN)
- 1-85 — MONITORING WELL LOCATION AND DESIGNATION (INSTALLED 1980 AND 1985)
- WELL A — CONANT II WELLFIELD BEDROCK PRODUCTION WELL LOCATION AND DESIGNATION (INSTALLED MARCH 2019)
- 014G — CONANT II WELLFIELD OVERBURDEN PRODUCTION WELL LOCATION AND DESIGNATION (INSTALLED 1990s)
- PROPERTY BOUNDARY
- PARCEL BOUNDARIES
- GROUNDWATER FLOW DIRECTION ACCORDING TO 1988 CONANT II WELLFIELD INVESTIGATION
- GROUND SURFACE TOPOGRAPHY CONTOUR LINE (ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE LOCATION OF FORMER DRUM STORAGE AREA (533 MAIN STREET)
- APPROXIMATE LOCATION OF FORMER SEPTIC SYSTEM SHARED BETWEEN BUILDINGS LOCATED AT 531 AND 533 MAIN STREET

SOURCE

THIS MAP CONTAINS MASSGIS DATA AND AERIAL IMAGERY FROM USGS OBTAINED ON OCTOBER 17, 2019.

NOTES

1. THE LOCATION OF SITE AND SITE FEATURES ARE APPROXIMATE.

N

0 65 130 260 390 520 Feet

CLIENT: WATER SUPPLY DISTRICT OF ACTON			GeoInsight *Practical in Nature*
PROJECT: CONANT II WELLFIELD			
TITLE: PROPERTY PLAN			
DESIGNED: LCH	DRAWN: LCH/WGS	CHECKED: RCR	APPROVED: KDT
SCALE: 1 in = 130 ft	DATE: 6/17/2020	FILE NO: Fig 2_Acton Wellfieldv8	PROJECT NO: 9353-000
			FIGURE NO: 2

Imagery ©2020 MassGIS, Commonwealth of Massachusetts EOEA, Maxar Technologies, USDA Farm Service Agency, Map data ©2020 200 ft

FIGURE 3 - PROPOSED DISCHARGE ROUTE

ATTACHMENTS

ATTACHMENT A

NOTICE OF INTENT FOR THE REMEDIATION GENERAL PERMIT

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Conant II Wellfield</td><td colspan="3">Site address: 549 Main Street and 8 Post Office Square Behind
Street:</td></tr>
<tr><td>City: Acton</td><td>State: MA</td><td>Zip: 01720</td></tr>
<tr><td rowspan="4">2. Site owner
Water Supply District of Acton

Owner is (check one): ☐ Federal ☐ State/Tribal ☐ Private
■ Other; if so, specify: Municipal</td><td colspan="3">Contact Person: Matthew Mostoller</td></tr>
<tr><td colspan="2">Telephone: 978-263-9107</td><td>Email: Matt@actonwater.com</td></tr>
<tr><td colspan="3">Mailing address: P.O. Box 953
Street: 693 Massachusetts Avenue</td></tr>
<tr><td>City: Acton</td><td>State: MA</td><td>Zip: 01720</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, New Hampshire 03833</td><td colspan="3">Contact Person: Raymond Talkington, Ph.D., P.G.</td></tr>
<tr><td colspan="2">Telephone: 603-773-0075 x 11</td><td>Email: rtalkington@geospherenh.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 51 Portsmouth Avenue</td></tr>
<tr><td>City: Exeter</td><td>State: NH</td><td>Zip: 03833</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 2-21031
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Nashoba Brook	SEGMENT MA82B-14	B

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

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

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

If yes, specify: Zone II, med. yield PPA to south, vernal pools and surface waters, wetlands, supply wells 014G through 018G, and IWPAs near site.

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. Nashoba Brook is 303(d) listed. Impairments include: Dewatering (TMDL not required), E. Coli, and Fish Bioassessments. TMDLs are not listed.

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.538 MGD
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	2.07

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No

If yes, indicate date confirmation received: PENDING

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

C. Source water information:

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

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

2. Source water contaminants: Chlorinated VOCs (Trichloroethylene, cis-1,2 dichloroethylene, and 1,4-dioxane)	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ■ Yes ☐ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII. Freon 12 (7.18 ug/L), Freon 113 (5.94 ug/L), and Freon 114 (3.7 ug.L).	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): Nashoba Brook	Outfall location(s): (Latitude, Longitude) 42°29'20.01"N 71°25'6.94"W
Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): November to December 2020 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="4">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
■ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	SM4500	75	85	85	Report mg/L	---
Chloride		✔	1	300	500	11,900	11,900	Report µg/l	---
Total Residual Chlorine	✔		1	SM4500	20	<20	0.0	0.2 mg/L	0.023
Total Suspended Solids		✔	1	SM2540D	10,000	55,000	55,000	30 mg/L	---
Antimony	✔		1	200.8	4	<4	0.0	206 µg/L	1323
Arsenic		✔	1	200.8	1	1.01	1.01	104 µg/L	20
Cadmium	✔		1	200.8	0.2	<0.2	0.0	10.2 µg/L	0.1456
Chromium III	✔		1	Calculation	10	<10	0.0	323 µg/L	89.8
Chromium VI	✔		1	200.8	10	<10	0.0	323 µg/L	23.6
Copper		✔	1	200.8	1	6.84	6.84	242 µg/L	9.4
Iron		✔	1	200.7	50	32,400	32,400	5,000 µg/L	1762
Lead	✔		1	200.8	1	<1	0.0	160 µg/L	2.27
Mercury	✔		1	245.1	0.2	<0.2	0.0	0.739 µg/L	1.87
Nickel	✔		1	200.8	2	<2	0.0	1,450 µg/L	53.2
Selenium	✔		1	200.8	5	<5	0.0	235.8 µg/L	10.3
Silver	✔		1	200.8	0.4	<0.4	0.0	35.1 µg/L	1.9
Zinc	✔		1	200.8	10	<10	0.0	420 µg/L	122
Cyanide	✔		1	SM4500	5	<5	0.0	178 mg/L	10.8
B. Non-Halogenated VOCs									
Total BTEX	✔		1	624.1	6	<6	0.0	100 µg/L	---
Benzene	✔		1	624.1	1	<1	0.0	5.0 µg/L	---
1,4 Dioxane		✔	1	624.1-SIM	50	<50	0.37	200 µg/L	---
Acetone	✔		1	624.1	10	<10	0.0	7.97 mg/L	---
Phenol	✔		1	420.1	10	<10	0.0	1,080 µg/L	620

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	624.1	1	<1	0.0	4.4 µg/L	3.3
1,2 Dichlorobenzene	✔		1	624.1	5	<5	0.0	600 µg/L	---
1,3 Dichlorobenzene	✔		1	624.1	5	<5	0.0	320 µg/L	---
1,4 Dichlorobenzene	✔		1	624.1	5	<5	0.0	5.0 µg/L	---
Total dichlorobenzene	✔		1	624.1	15	<15	0.0	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	624.1	1	<1	0.0	70 µg/L	---
1,2 Dichloroethane	✔		1	624.1	1.5	<1.5	0.0	5.0 µg/L	---
1,1 Dichloroethylene	✔		1	624.1	1	<1	0.0	3.2 µg/L	---
Ethylene Dibromide	✔		1	624.1	0.010	<0.010	0.0	0.05 µg/L	---
Methylene Chloride	✔		1	624.1	1	<1	0.0	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	624.1	2	<2	0.0	200 µg/L	---
1,1,2 Trichloroethane	✔		1	624.1	1.5	<1.5	0.0	5.0 µg/L	---
Trichloroethylene		✔	1	624.1	1	11	11	5.0 µg/L	---
Tetrachloroethylene	✔		1	624.1	1	<1	0.0	5.0 µg/L	6.8
cis-1,2 Dichloroethylene		✔	1	624.1	1	2.9	2.9	70 µg/L	---
Vinyl Chloride	✔		1	624.1	1	<1	0.0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	625.1	27.20	<27.20	0.0	190 µg/L	---
Diethylhexyl phthalate	✔		1	625.1	2.2	<2.2	0.0	101 µg/L	4.5
Total Group I PAHs	✔		1	625.1	0.700	<0.700	0.0	1.0 µg/L	---
Benzo(a)anthracene	✔		1	625.1	0.100	<0.100	0.0	As Total PAHs	0.0079
Benzo(a)pyrene	✔		1	625.1	0.100	<0.100	0.0		0.0079
Benzo(b)fluoranthene	✔		1	625.1	0.100	<0.100	0.0		0.0079
Benzo(k)fluoranthene	✔		1	625.1	0.100	<0.100	0.0		0.0079
Chrysene	✔		1	625.1	0.100	<0.100	0.0		0.0079
Dibenzo(a,h)anthracene	✔		1	625.1	0.100	<0.100	0.0		0.0079
Indeno(1,2,3-cd)pyrene	✔		1	625.1	0.100	<0.100	0.0		0.0079

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔		1	625.1	0.900	<0.900	0.0	100 µg/L	---
Naphthalene	✔		1	625.1	0.100	<0.100	0.0	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608.3	1.70	<1.7	0.0	0.000064 µg/L	---
Pentachlorophenol	✔		1	625.1	1.00	<1.00	0.0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	1664A	400	<400	0.0	5.0 mg/L	---
Ethanol	✔		1	1671A	20,000	<20,000	0.0	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	624.1	10	<10	0.0	70 µg/L	41
tert-Butyl Alcohol	✔		1	624.1	100	<100	0.0	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	624.1	20	<20	0.0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Hardness		✔	1	200.7	660	37,600	37,600		
Total Chromium	✔		1	200.8	1.0	2.04	2.04		
Freon 12		✔	1	624.1	1.0	7.62	7.62		
Freon 113		✔	1	624.1	1.0	5.94	5.94		
Freon 114		✔	1	624.1	1.0	3.70	3.70		

E. Treatment system information

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

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

The treatment system will generally consist of pumps to remove water from the wells, pumps or gravity to move the water to the treatment system, bag filters, and granulated activated carbon to treat the water. Additional treatment will be conducted as necessary to meet the RGP discharge requirements.

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

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

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Bag filters Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	350
Provide the average effluent flow in gpm.	300
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA

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

F. Chemical and additive information

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

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

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

J. Certification requirement

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

BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: 	Date: 10/27/2020
Print Name and Title: Matthew Mostoller, Environmental Manager	

ATTACHMENT B

ENDANGERED SPECIES ACT DOCUMENTATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: June 23, 2020
Consultation Code: 05E1NE00-2020-SLI-3033
Event Code: 05E1NE00-2020-E-09247
Project Name: Conant II Wellfield Pump Test

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2020-SLI-3033

Event Code: 05E1NE00-2020-E-09247

Project Name: Conant II Wellfield Pump Test

Project Type: WATER SUPPLY / DELIVERY

Project Description: The project includes pumping water from up to three potential potable drinking water wells and discharging the water under a Remediation General Permit to the Nashoba Brook.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.488748188439544N71.41849849612385W

Counties: Middlesex, MA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

IPaC Record Locator: 807-22282710 June 23, 2020

Subject: Consistency letter for the 'Conant II Wellfield Pump Test' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Robert Reynolds:

The U.S. Fish and Wildlife Service (Service) received on June 23, 2020 your effects determination for the 'Conant II Wellfield Pump Test' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Conant II Wellfield Pump Test

2. Description

The following description was provided for the project 'Conant II Wellfield Pump Test':

> The project includes pumping water from up to three potential potable drinking water wells and discharging the water under a Remediation General Permit to the Nashoba Brook.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.488748188439544N71.41849849612385W

Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule
This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   No

2. Will your activity purposefully **Take** northern long-eared bats?

   No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

   Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

6. Will the action involve Tree Removal?

   No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

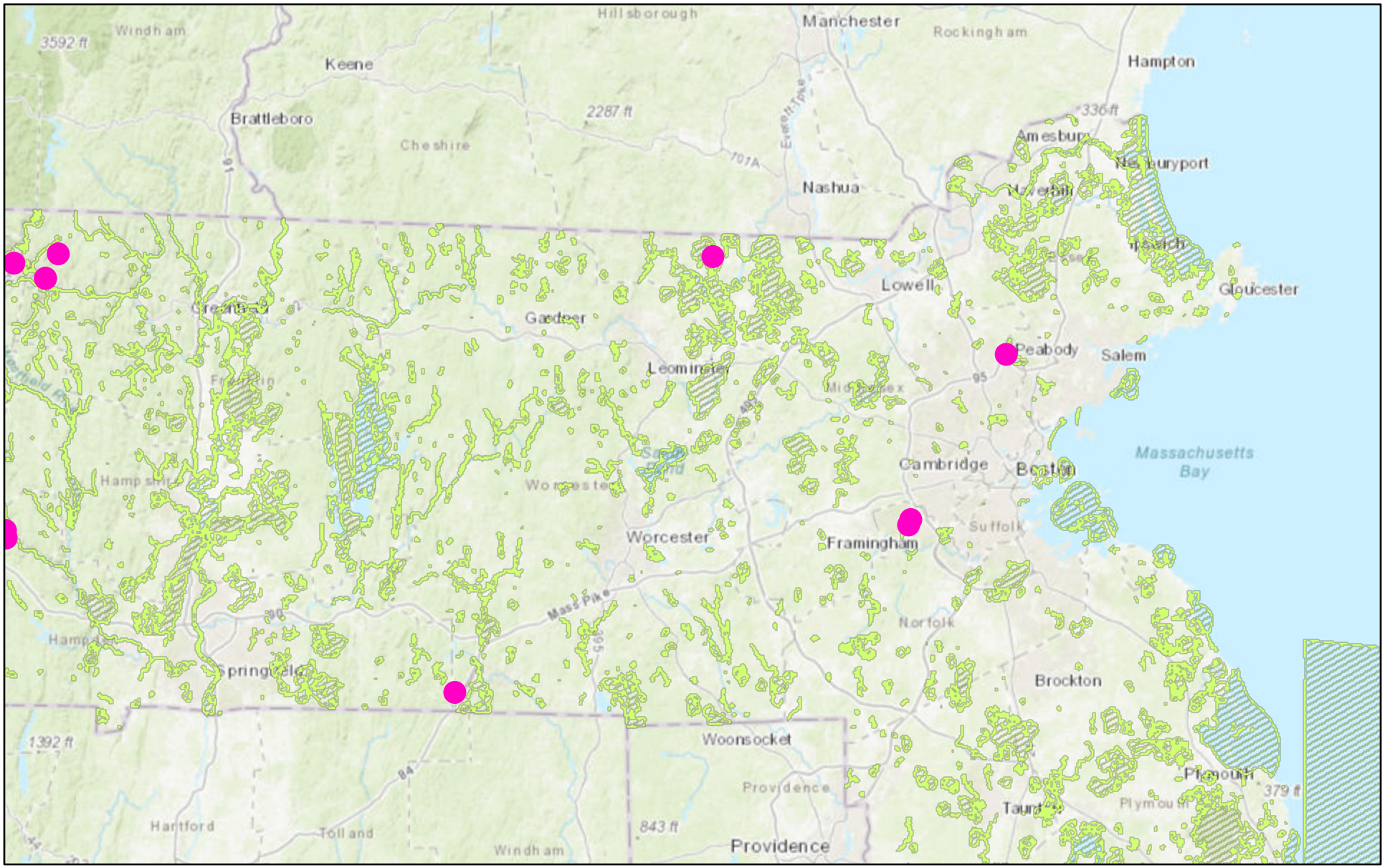
9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?
0

NHESP No. Long-eared Bat Locations



June 23, 2020

Statewide_NLEB_Symbology

Hibernaculum

MA Northern Long-eared Bat Winter Hibernacula (with ¼ mile buffer)

1:1,155,581

0 5 10 20 mi

0 10 20 40 km

ATTACHMENT C

NATIONAL HISTORIC PRESERVATION ACT DOCUMENTATION

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Acton; Place: Acton; Resource Type(s): Area;

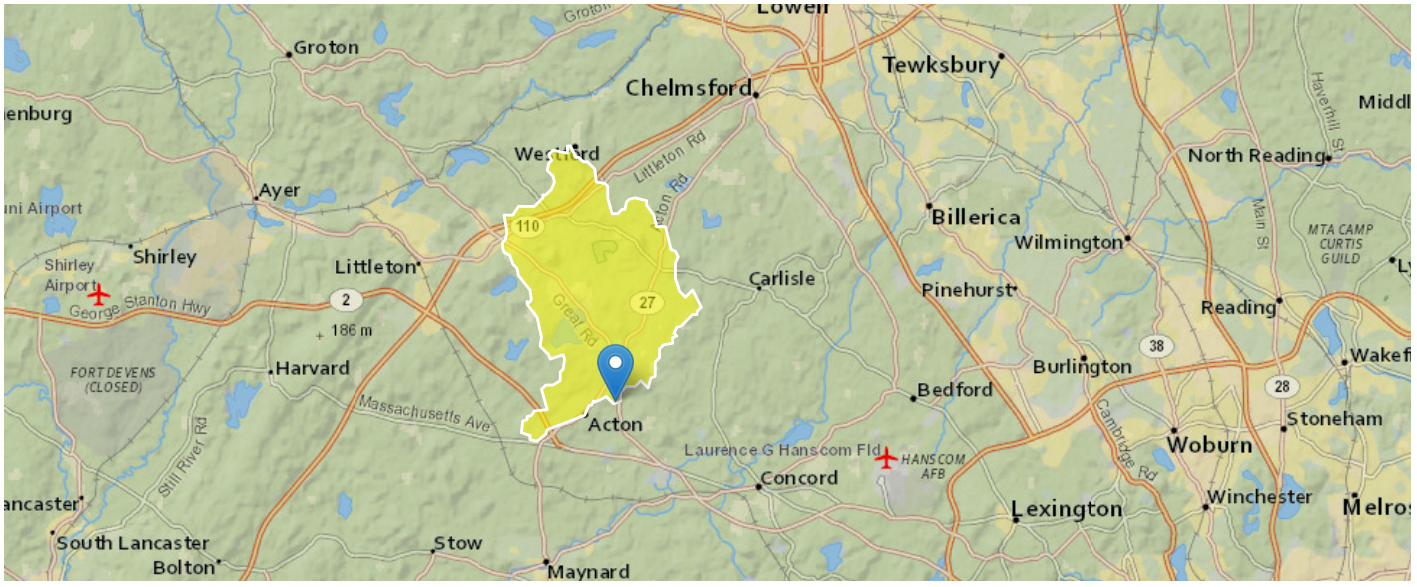
Inv. No.	Property Name	Street	Town	Year
ACT.B	Acton Centre Historic District		Acton	
ACT.K	Acton Centre Historic District		Acton	

ATTACHMENT D

RECEIVING WATER HYDROLOGIC INFORMATION

StreamStats Report

Region ID: MA
Workspace ID: MA20201026184442329000
Clicked Point (Latitude, Longitude): 42.48903, -71.41854
Time: 2020-10-26 14:44:59 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	18.2	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.398	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.18	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	18.2	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.398	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.18	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

Statistic	Value	Unit	PII	PIu	SE	SEp
7 Day 2 Year Low Flow	1.95	ft^3/s	0.722	5.07	49.5	49.5
7 Day 10 Year Low Flow	0.832	ft^3/s	0.241	2.68	70.8	70.8

Low-Flow Statistics Citations

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

Application Version: 4.4.0

StreamStats Output Report														
State/Region ID	MA													
Workspace ID	MA20200618144340098000													
Latitude	42.48906													
Longitude	-71.41854													
Time	6/18/2020	10:43:55 AM												
Basin Characteristics														
Parameter Code	Parameter Description	Value	Unit											
DRNAREA	Area that drains to a point	18.2	square miles											
DRFTPERSTR	Area of stratified drift per u	0.18	square mile per mile											
MAREGION	Region of Massachusetts 0	0	dimensionless											
BSLDEM250	Mean basin slope computed	2.398	percent											
PCTSNDGRV	Percentage of land surface	46.56	percent											
FOREST	Percentage of area covered	63.59	percent											
BSLDEM10M	Mean basin slope computed	5.259	percent											
ELEV	Mean Basin Elevation	231	feet											
LC06STOR	Percentage of water bodies	13.74	percent											
Flow-Duration Statistics Parameters	100 Percent Statewide Low Flow WRIR00 4135													
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit									
DRNAREA	Drainage Area	18.2	square mile	1.61	149									
DRFTPERSTR	Stratified Drift per Stream L	0.18	square mile	0	1.29									
MAREGION	Massachusetts Region	0	dimensionl	0	1									
BSLDEM250	Mean Basin Slope from 250	2.398	percent	0.32	24.6									
Flow-Duration Statistics Flow Report	100 Percent Statewide Low Flow WRIR00 4135													
PII: Prediction Interval- Lower, PIu: Prediction Interval- Upper, SEp: Standard Error of Prediction, SE: Standard Error (other-- see report)														
Statistic	Value	Unit	PII	PIu	SE	SEp								
50 Percent Duration	18.4	ft^3/s	11.1	30.4	17.6	17.6								
60 Percent Duration	13.7	ft^3/s	7.38	25.4	19.8	19.8								
70 Percent Duration	8.59	ft^3/s	4.19	17.5	23.5	23.5								
75 Percent Duration	6.74	ft^3/s	3.28	13.7	25.8	25.8								
80 Percent Duration	5.37	ft^3/s	2.56	11.1	28.4	28.4								
85 Percent Duration	4.05	ft^3/s	1.84	8.76	31.9	31.9								
90 Percent Duration	3.05	ft^3/s	1.31	6.96	36.6	36.6								
95 Percent Duration	1.84	ft^3/s	0.701	4.69	45.6	45.6								
98 Percent Duration	1.19	ft^3/s	0.388	3.45	60.3	60.3								
99 Percent Duration	0.906	ft^3/s	0.278	2.77	65.1	65.1								

Low-Flow Statistics Parameters	100 Percent Statewide Low Flow WRIR00 4135													
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit									
DRNAREA	Drainage Area	18.2	square mile	1.61	149									
BSLDEM250	Mean Basin Slope from 250	2.398	percent	0.32	24.6									
DRFTPERSTR	Stratified Drift per Stream L	0.18	square mile	0	1.29									
MAREGION	Massachusetts Region	0	dimensionl	0	1									
Low-Flow Statistics Flow Report	100 Percent Statewide Low Flow WRIR00 4135													
PII: Prediction Interval- Lower, PIu: Prediction Interval- Upper, SEp: Standard Error of Prediction, SE: Standard Error (other-- see report)														
Statistic	Value	Unit	PII	PIu	SE	SEp								
7 Day 2 Year Low Flow	1.95	ft^3/s	0.723	5.08	49.5	49.5								
7 Day 10 Year Low Flow	0.832	ft^3/s	0.241	2.68	70.8	70.8								
August Flow-Duration Statistics Parameters	100 Percent Statewide Low Flow WRIR00 4135													
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit									
DRNAREA	Drainage Area	18.2	square mile	1.61	149									
BSLDEM250	Mean Basin Slope from 250	2.398	percent	0.32	24.6									
DRFTPERSTR	Stratified Drift per Stream L	0.18	square mile	0	1.29									
MAREGION	Massachusetts Region	0	dimensionl	0	1									
August Flow-Duration Statistics Flow Report	100 Percent Statewide Low Flow WRIR00 4135													
PII: Prediction Interval- Lower, PIu: Prediction Interval- Upper, SEp: Standard Error of Prediction, SE: Standard Error (other-- see report)														
Statistic	Value	Unit	PII	PIu	SE	SEp								
August 50 Percent Duration	4.33	ft^3/s	1.95	9.46	33.2	33.2								
Probability Statistics Parameters	100 Percent Perennial Flow Probability													
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit									
DRNAREA	Drainage Area	18.2	square mile	0.01	1.99									
PCTSNDGRV	Percent Underlain By Sand /	46.56	percent	0	100									
FOREST	Percent Forest	63.59	percent	0	100									
MAREGION	Massachusetts Region	0	dimensionl	0	1									
*** Probability Statistics Disclaimers ***														
Warnings	One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors													
Probability Statistics Flow Report	100 Percent Perennial Flow Probability													
Statistic	Value	Unit												
Probability Stream Flowing Perennially	0.991	dim												

Bankfull Statistics Parameters	100 Percent Bankfull Statewide SIR2013 5155													
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit									
DRNAREA	Drainage Area	18.2	square mile	0.6	329									
BSLDEM10M	Mean Basin Slope from 10m	5.259	percent	2.2	23.9									
Bankfull Statistics Flow Report	100 Percent Bankfull Statewide SIR2013 5155													
Statistic	Value	Unit	SEp											
Bankfull Width	44.7	ft	21.3											
Bankfull Depth	2.1	ft	19.8											
Bankfull Area	93.5	ft^2	29											
Bankfull Streamflow	263	ft^3/s	55											
Peak-Flow Statistics Parameters	100 Percent Peak Statewide 2016 5156													
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit									
DRNAREA	Drainage Area	18.2	square mile	0.16	512									
ELEV	Mean Basin Elevation	231	feet	80.6	1948									
LC06STOR	Percent Storage from NLCD	13.74	percent	0	32.3									
Peak-Flow Statistics Flow Report	100 Percent Peak Statewide 2016 5156													
PII: Prediction Interval- Lower, PIu: Prediction Interval- Upper, SEp: Standard Error of Prediction, SE: Standard Error (other-- see report)														
Statistic	Value	Unit	PII	PIu	SEp									
2 Year Peak Flood	335	ft^3/s	172	653	42.3									
5 Year Peak Flood	543	ft^3/s	275	1070	43.4									
10 Year Peak Flood	704	ft^3/s	349	1420	44.7									
25 Year Peak Flood	935	ft^3/s	448	1950	47.1									
50 Year Peak Flood	1130	ft^3/s	522	2420	49.4									
100 Year Peak Flood	1320	ft^3/s	596	2940	51.8									
200 Year Peak Flood	1540	ft^3/s	674	3520	54.1									
500 Year Peak Flood	1850	ft^3/s	772	4420	57.6									

ATTACHMENT E

LABORATORY REPORT

ANALYTICAL REPORT

Lab Number:	L2040729
Client:	Acton Water District 693 Mass Ave PoBox 953 Acton, MA 01720
ATTN:	Rob Reynolds
Phone:	(978) 263-9107
Project Name:	CONANT WELLFIELD-ACTON
Project Number:	9350
Report Date:	10/06/20

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2040729-01	WELL-E	WATER	ACTON, MA	09/25/20 11:00	09/25/20
L2040729-02	SURFACE WATER	WATER	ACTON, MA	09/25/20 11:40	09/25/20

Project Name:	CONANT WELLFIELD-ACTON	**Lab Number:**	L2040729
Project Number:	9350	**Report Date:**	10/06/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CONANT WELLFIELD-ACTON	**Lab Number:**	L2040729
Project Number:	9350	**Report Date:**	10/06/20

Case Narrative (continued)

Report Submission

The analysis of Ethanol was subcontracted. A copy of the laboratory report is included as an addendum.

Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

L2040729-02: Sample containers identified as "SURFACE WATER" for Hexavalent Chromium and Tri Chromium were listed on the Chain of Custody, but not received. This was verified by the client.

Microextractables

The WG1416614-2 LCS recovery for 1,2-dibromo-3-chloropropane (126%), associated with L2040729-01, is outside Alpha's acceptance criteria, but within the acceptance criteria specified in the method.

Anions by Ion Chromatography

The WG1415649-3 MS recovery, performed on L2040729-01, is outside the acceptance criteria for chloride (88%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Caitlin Walukevich

Title: Technical Director/Representative Date: 10/06/20

ORGANICS

VOLATILES

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01 Date Collected: 09/25/20 11:00
Client ID: WELL-E Date Received: 09/25/20
Sample Location: ACTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 09/30/20 20:15
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	2.9		ug/l	1.0	--	1
Trichloroethene	11		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01 Date Collected: 09/25/20 11:00

Client ID: WELL-E Date Received: 09/25/20

Sample Location: ACTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	99		60-140
4-Bromofluorobenzene	97		60-140

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01 Date Collected: 09/25/20 11:00
Client ID: WELL-E Date Received: 09/25/20
Sample Location: ACTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 09/30/20 20:15
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	100		60-140
4-Bromofluorobenzene	104		60-140

Project Name: CONANT WELLFIELD-ACTON
Lab Number: L2040729
Project Number: 9350
Report Date: 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01
Client ID: WELL-E
Sample Location: ACTON, MA

Date Collected: 09/25/20 11:00
Date Received: 09/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 09/30/20 22:35
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 09/30/20 19:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A
1,2,3-Trichloropropane	ND		ug/l	0.030	--	1	A

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350
Lab Number: L2040729
Report Date: 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 09/30/20 21:25
Analyst: AJK

Extraction Method: EPA 504.1
Extraction Date: 09/30/20 19:44

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1416614-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	A
1,2,3-Trichloropropane	ND		ug/l	0.030	--	A

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 09/30/20 17:24
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1416838-4					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 09/30/20 17:24
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1416838-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		60-140
Fluorobenzene	100		60-140
4-Bromofluorobenzene	94		60-140

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 09/30/20 17:24
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1416851-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	101		60-140
4-Bromofluorobenzene	109		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1416614-2						
1,2-Dibromoethane	116		-		80-120	-			A
1,2-Dibromo-3-chloropropane	**126**	Q	-		80-120	-			A
1,2,3-Trichloropropane	115		-		80-120	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1416838-3								
Methylene chloride	105		-		60-140	-		28
1,1-Dichloroethane	105		-		50-150	-		49
Carbon tetrachloride	110		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	105		-		70-130	-		39
1,2-Dichloroethane	105		-		70-130	-		49
1,1,1-Trichloroethane	110		-		70-130	-		36
Benzene	110		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	105		-		60-140	-		63
Vinyl chloride	100		-		5-195	-		66
1,1-Dichloroethene	110		-		50-150	-		32
cis-1,2-Dichloroethene	105		-		60-140	-		30
Trichloroethene	105		-		65-135	-		48
1,2-Dichlorobenzene	100		-		65-135	-		57
1,3-Dichlorobenzene	90		-		70-130	-		43
1,4-Dichlorobenzene	95		-		65-135	-		57
p/m-Xylene	100		-		60-140	-		30
o-xylene	95		-		60-140	-		30
Acetone	104		-		40-160	-		30
Methyl tert butyl ether	95		-		60-140	-		30
Tert-Butyl Alcohol	120		-		60-140	-		30
Tertiary-Amyl Methyl Ether	95		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1416838-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	103				60-140
Fluorobenzene	103				60-140
4-Bromofluorobenzene	95				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1416851-3								
1,4-Dioxane	100		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	101				60-140
4-Bromofluorobenzene	112				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1416614-3 QC Sample: L2040363-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.246	0.282	115		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.246	0.320	**130**	Q	-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.246	0.298	**121**	Q	-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: CONANT WELLFIELD-ACTON
Lab Number: L2040729
Project Number: 9350
Report Date: 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01
Client ID: WELL-E
Sample Location: ACTON, MA

Date Collected: 09/25/20 11:00
Date Received: 09/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 10/02/20 09:01
Analyst: WR

Extraction Method: EPA 625.1
Extraction Date: 09/30/20 02:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.20	--	1
Butyl benzyl phthalate	ND		ug/l	5.00	--	1
Di-n-butylphthalate	ND		ug/l	5.00	--	1
Di-n-octylphthalate	ND		ug/l	5.00	--	1
Diethyl phthalate	ND		ug/l	5.00	--	1
Dimethyl phthalate	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	100		42-122
2-Fluorobiphenyl	80		46-121
4-Terphenyl-d14	77		47-138

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01
Client ID: WELL-E
Sample Location: ACTON, MA

Date Collected: 09/25/20 11:00
Date Received: 09/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 10/01/20 12:47
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 09/30/20 02:59

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.100	--	1
Fluoranthene	ND		ug/l	0.100	--	1
Naphthalene	ND		ug/l	0.100	--	1
Benzo(a)anthracene	ND		ug/l	0.100	--	1
Benzo(a)pyrene	ND		ug/l	0.100	--	1
Benzo(b)fluoranthene	ND		ug/l	0.100	--	1
Benzo(k)fluoranthene	ND		ug/l	0.100	--	1
Chrysene	ND		ug/l	0.100	--	1
Acenaphthylene	ND		ug/l	0.100	--	1
Anthracene	ND		ug/l	0.100	--	1
Benzo(ghi)perylene	ND		ug/l	0.100	--	1
Fluorene	ND		ug/l	0.100	--	1
Phenanthrene	ND		ug/l	0.100	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.100	--	1
Pyrene	ND		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		25-87
Phenol-d6	34		16-65
Nitrobenzene-d5	78		42-122
2-Fluorobiphenyl	79		46-121
2,4,6-Tribromophenol	69		45-128
4-Terphenyl-d14	78		47-138

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350
Lab Number: L2040729
Report Date: 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 10/01/20 11:15
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 09/30/20 02:55

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1416157-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.20	--
Butyl benzyl phthalate	ND		ug/l	5.00	--
Di-n-butylphthalate	ND		ug/l	5.00	--
Di-n-octylphthalate	ND		ug/l	5.00	--
Diethyl phthalate	ND		ug/l	5.00	--
Dimethyl phthalate	ND		ug/l	5.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	103		42-122
2-Fluorobiphenyl	77		46-121
4-Terphenyl-d14	79		47-138

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 10/01/20 12:30
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 09/30/20 02:59

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1416158-1					
Acenaphthene	ND		ug/l	0.100	--
Fluoranthene	ND		ug/l	0.100	--
Naphthalene	ND		ug/l	0.100	--
Benzo(a)anthracene	ND		ug/l	0.100	--
Benzo(a)pyrene	ND		ug/l	0.100	--
Benzo(b)fluoranthene	ND		ug/l	0.100	--
Benzo(k)fluoranthene	ND		ug/l	0.100	--
Chrysene	ND		ug/l	0.100	--
Acenaphthylene	ND		ug/l	0.100	--
Anthracene	ND		ug/l	0.100	--
Benzo(ghi)perylene	ND		ug/l	0.100	--
Fluorene	ND		ug/l	0.100	--
Phenanthrene	ND		ug/l	0.100	--
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.100	--
Pyrene	ND		ug/l	0.100	--
Pentachlorophenol	ND		ug/l	1.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		25-87
Phenol-d6	32		16-65
Nitrobenzene-d5	78		42-122
2-Fluorobiphenyl	74		46-121
2,4,6-Tribromophenol	63		45-128
4-Terphenyl-d14	75		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1416157-2								
Bis(2-ethylhexyl)phthalate	90		-		29-137	-		82
Butyl benzyl phthalate	89		-		1-140	-		60
Di-n-butylphthalate	79		-		8-120	-		47
Di-n-octylphthalate	94		-		19-132	-		69
Diethyl phthalate	79		-		1-120	-		100
Dimethyl phthalate	73		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	111				42-122
2-Fluorobiphenyl	77				46-121
4-Terphenyl-d14	77				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1416158-3								
Acenaphthene	74		-		60-132	-		30
Fluoranthene	80		-		43-121	-		30
Naphthalene	73		-		36-120	-		30
Benzo(a)anthracene	80		-		42-133	-		30
Benzo(a)pyrene	80		-		32-148	-		30
Benzo(b)fluoranthene	75		-		42-140	-		30
Benzo(k)fluoranthene	82		-		25-146	-		30
Chrysene	82		-		44-140	-		30
Acenaphthylene	83		-		54-126	-		30
Anthracene	83		-		43-120	-		30
Benzo(ghi)perylene	80		-		1-195	-		30
Fluorene	76		-		70-120	-		30
Phenanthrene	76		-		65-120	-		30
Dibenzo(a,h)anthracene	81		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	81		-		1-151	-		30
Pyrene	81		-		70-120	-		30
Pentachlorophenol	74		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1416158-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	50				25-87
Phenol-d6	38				16-65
Nitrobenzene-d5	82				42-122
2-Fluorobiphenyl	75				46-121
2,4,6-Tribromophenol	72				45-128
4-Terphenyl-d14	77				47-138

PCBS

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01
Client ID: WELL-E
Sample Location: ACTON, MA

Date Collected: 09/25/20 11:00
Date Received: 09/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 09/28/20 16:25
Analyst: AD

Extraction Method: EPA 608.3
Extraction Date: 09/27/20 22:18
Cleanup Method: EPA 3665A
Cleanup Date: 09/28/20
Cleanup Method: EPA 3660B
Cleanup Date: 09/28/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	A
Aroclor 1221	ND		ug/l	0.250	--	1	A
Aroclor 1232	ND		ug/l	0.250	--	1	A
Aroclor 1242	ND		ug/l	0.250	--	1	A
Aroclor 1248	ND		ug/l	0.250	--	1	A
Aroclor 1254	ND		ug/l	0.250	--	1	A
Aroclor 1260	ND		ug/l	0.200	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		37-123	B
Decachlorobiphenyl	81		38-114	B
2,4,5,6-Tetrachloro-m-xylene	76		37-123	A
Decachlorobiphenyl	81		38-114	A

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350
Lab Number: L2040729
Report Date: 10/06/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 09/28/20 15:10
Analyst: AD

Extraction Method: EPA 608.3
Extraction Date: 09/27/20 22:18
Cleanup Method: EPA 3665A
Cleanup Date: 09/28/20
Cleanup Method: EPA 3660B
Cleanup Date: 09/28/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1415202-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		37-123	B
Decachlorobiphenyl	74		38-114	B
2,4,5,6-Tetrachloro-m-xylene	79		37-123	A
Decachlorobiphenyl	61		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1415202-2									
Aroclor 1016	107		-		50-140	-		36	A
Aroclor 1260	87		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80				37-123	B
Decachlorobiphenyl	79				38-114	B
2,4,5,6-Tetrachloro-m-xylene	87				37-123	A
Decachlorobiphenyl	73				38-114	A

METALS

Project Name: CONANT WELLFIELD-ACTON
Lab Number: L2040729
Project Number: 9350
Report Date: 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01
Client ID: WELL-E
Sample Location: ACTON, MA
Date Collected: 09/25/20 11:00
Date Received: 09/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00101		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Chromium, Total	0.00204		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Copper, Total	0.00684		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Iron, Total	32.4		mg/l	0.050	--	1	10/01/20 04:00	10/01/20 22:02	EPA 3005A	19,200.7	BV
Lead, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/01/20 07:30	10/01/20 11:15	EPA 245.1	3,245.1	EW
Nickel, Total	ND		mg/l	0.00200	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Zinc, Total	0.05016		mg/l	0.01000	--	1	10/01/20 04:00	10/01/20 11:07	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	37.6		mg/l	0.660	NA	1	10/01/20 04:00	10/02/20 11:21	EPA 3005A	19,200.7	GD
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		10/01/20 11:07	NA	107,-	

Project Name: CONANT WELLFIELD-ACTON
Lab Number: L2040729
Project Number: 9350
Report Date: 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-02
Client ID: SURFACE WATER
Sample Location: ACTON, MA
Date Collected: 09/25/20 11:40
Date Received: 09/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00102		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Iron, Total	0.286		mg/l	0.050	--	1	10/01/20 04:00	10/01/20 22:06	EPA 3005A	19,200.7	BV
Lead, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/01/20 07:30	10/01/20 11:17	EPA 245.1	3,245.1	EW
Nickel, Total	ND		mg/l	0.00200	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/01/20 04:00	10/01/20 11:18	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	48.7		mg/l	0.660	NA	1	10/01/20 04:00	10/02/20 11:26	EPA 3005A	19,200.7	GD

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1416483-1										
Mercury, Total	ND		mg/l	0.00020	--	1	10/01/20 07:30	10/01/20 10:20	3,245.1	EW

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1416657-1										
Iron, Total	ND		mg/l	0.050	--	1	10/01/20 04:00	10/01/20 20:01	19,200.7	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1416657-1										
Hardness	ND		mg/l	0.660	NA	1	10/01/20 04:00	10/01/20 20:01	19,200.7	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1416659-1										
Antimony, Total	ND		mg/l	0.00400	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Lead, Total	ND	mg/l	0.00100	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Nickel, Total	ND	mg/l	0.00200	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Selenium, Total	ND	mg/l	0.00500	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Silver, Total	ND	mg/l	0.00040	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM
Zinc, Total	ND	mg/l	0.01000	--	1	10/01/20 04:00	10/01/20 10:05	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1416483-2								
Mercury, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1416657-2								
Iron, Total	102		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1416657-2								
Hardness	106		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1416659-2								
Antimony, Total	97		-		85-115	-		
Arsenic, Total	109		-		85-115	-		
Cadmium, Total	111		-		85-115	-		
Chromium, Total	98		-		85-115	-		
Copper, Total	98		-		85-115	-		
Lead, Total	104		-		85-115	-		
Nickel, Total	95		-		85-115	-		
Selenium, Total	109		-		85-115	-		
Silver, Total	104		-		85-115	-		
Zinc, Total	109		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416483-3 QC Sample: L2040505-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00547	109		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416483-5 QC Sample: L2040505-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.0054	109		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416657-3 QC Sample: L2041203-01 Client ID: MS Sample												
Iron, Total	4.38	1	5.34	96		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416657-3 QC Sample: L2041203-01 Client ID: MS Sample												
Hardness	273	66.2	334	92		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416657-7 QC Sample: L2041203-02 Client ID: MS Sample												
Iron, Total	ND	1	1.03	103		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416657-7 QC Sample: L2041203-02 Client ID: MS Sample												
Hardness	270	66.2	329	89		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416659-3 QC Sample: L2041203-01 Client ID: MS Sample									
Antimony, Total	ND	0.5	0.5588	112	-	-	70-130	-	20
Arsenic, Total	ND	0.12	0.1292	108	-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05720	112	-	-	70-130	-	20
Chromium, Total	ND	0.2	0.1996	100	-	-	70-130	-	20
Copper, Total	0.00158	0.25	0.2519	100	-	-	70-130	-	20
Lead, Total	ND	0.51	0.5427	106	-	-	70-130	-	20
Nickel, Total	0.00222	0.5	0.4863	97	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1374	114	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05205	104	-	-	70-130	-	20
Zinc, Total	0.01685	0.5	0.5462	106	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416659-5 QC Sample: L2041203-02 Client ID: MS Sample									
Antimony, Total	ND	0.5	0.5460	109	-	-	70-130	-	20
Arsenic, Total	ND	0.12	0.1302	108	-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05746	113	-	-	70-130	-	20
Chromium, Total	ND	0.2	0.2020	101	-	-	70-130	-	20
Copper, Total	ND	0.25	0.2452	98	-	-	70-130	-	20
Lead, Total	ND	0.51	0.5551	109	-	-	70-130	-	20
Nickel, Total	ND	0.5	0.4614	92	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1452	121	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05292	106	-	-	70-130	-	20
Zinc, Total	0.01092	0.5	0.5497	108	-	-	70-130	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416483-4 QC Sample: L2040505-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416483-6 QC Sample: L2040505-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416657-4 QC Sample: L2041203-01 Client ID: DUP Sample						
Iron, Total	4.38	4.41	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416657-8 QC Sample: L2041203-02 Client ID: DUP Sample						
Iron, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416659-4 QC Sample: L2041203-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.00158	0.00169	mg/l	7		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00222	0.00237	mg/l	7		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.01685	0.01637	mg/l	3		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1416659-6 QC Sample: L2041203-02 Client ID: DUP Sample					
Antimony, Total	ND	ND	mg/l	NC	20
Arsenic, Total	ND	ND	mg/l	NC	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	ND	ND	mg/l	NC	20
Copper, Total	ND	ND	mg/l	NC	20
Lead, Total	ND	ND	mg/l	NC	20
Nickel, Total	ND	ND	mg/l	NC	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.01092	0.01091	mg/l	0	20

INORGANICS
&
MISCELLANEOUS

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350
Lab Number: L2040729
Report Date: 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-01
Client ID: WELL-E
Sample Location: ACTON, MA
Sample Depth:
Matrix: Water
Date Collected: 09/25/20 11:00
Date Received: 09/25/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	55.		mg/l	10	NA	2	-	09/30/20 15:45	121,2540D	AC
Cyanide, Total	ND		mg/l	0.005	--	1	09/26/20 15:30	09/29/20 11:10	121,4500CN-CE	AG
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	09/26/20 08:10	121,4500CL-D	MA
Nitrogen, Ammonia	0.085		mg/l	0.075	--	1	09/29/20 13:25	09/29/20 19:48	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	10/01/20 09:11	10/01/20 12:42	74,1664A	DR
Phenolics, Total	ND		mg/l	0.030	--	1	09/28/20 05:00	09/28/20 09:20	4,420.1	MV
Chromium, Hexavalent	ND		mg/l	0.010	--	1	09/26/20 06:15	09/26/20 06:53	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	11.9		mg/l	0.500	--	1	-	09/28/20 18:07	44,300.0	SH

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350
Lab Number: L2040729
Report Date: 10/06/20

SAMPLE RESULTS

Lab ID: L2040729-02
Client ID: SURFACE WATER
Sample Location: ACTON, MA
Sample Depth:
Matrix: Water

Date Collected: 09/25/20 11:40
Date Received: 09/25/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.187		mg/l	0.075	--	1	09/29/20 13:25	09/29/20 19:49	121,4500NH3-BH	AT

Project Name: CONANT WELLFIELD-ACTON **Lab Number:** L2040729

Project Number: 9350 **Report Date:** 10/06/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1414862-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	09/26/20 06:15	09/26/20 06:52	1,7196A	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1414940-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	09/26/20 08:10	121,4500CL-D	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1415007-1										
Cyanide, Total	ND		mg/l	0.005	--	1	09/26/20 15:30	09/29/20 10:48	121,4500CN-CE	AG
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1415233-1										
Phenolics, Total	ND		mg/l	0.030	--	1	09/28/20 05:00	09/28/20 08:24	4,420.1	MV
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1415649-1										
Chloride	ND		mg/l	0.500	--	1	-	09/28/20 17:01	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1415767-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	09/29/20 13:25	09/29/20 19:26	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1416296-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/30/20 15:45	121,2540D	AC
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1416792-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	10/01/20 09:11	10/01/20 12:42	74,1664A	DR

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1414862-2								
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1414940-2								
Chlorine, Total Residual	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1415007-2								
Cyanide, Total	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1415233-2								
Phenolics, Total	110		-		70-130	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1415649-2								
Chloride	106		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1415767-2								
Nitrogen, Ammonia	92		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1416296-2								
Solids, Total Suspended	98		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1416792-2					
TPH	82	-	64-132	-	34

Matrix Spike Analysis
Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1414862-4 QC Sample: L2040729-01 Client ID: WELL-E												
Chromium, Hexavalent	ND	0.1	0.103	103		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1414940-4 QC Sample: L2040729-01 Client ID: WELL-E												
Chlorine, Total Residual	ND	0.25	0.20	80		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1415007-4 QC Sample: L2040305-02 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.170	**85**	Q	-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1415233-4 QC Sample: L2040582-02 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.47	116		-	-		70-130	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1415649-3 QC Sample: L2040729-01 Client ID: WELL-E												
Chloride	11.9	4	15.4	**88**	Q	-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1415767-4 QC Sample: L2040401-02 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	3.63	91		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1416792-4 QC Sample: L2040604-02 Client ID: MS Sample												
TPH	ND	19.4	17.0	88		-	-		64-132	-		34

Lab Duplicate Analysis

Batch Quality Control

Project Name: CONANT WELLFIELD-ACTON

Project Number: 9350

Lab Number: L2040729

Report Date: 10/06/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1414862-3 QC Sample: L2040729-01 Client ID: WELL-E						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1414940-3 QC Sample: L2040729-01 Client ID: WELL-E						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1415007-3 QC Sample: L2040305-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1415233-3 QC Sample: L2040582-02 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1415649-4 QC Sample: L2040729-01 Client ID: WELL-E						
Chloride	11.9	11.8	mg/l	1		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1415767-3 QC Sample: L2040401-02 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1416296-3 QC Sample: L2040510-02 Client ID: DUP Sample						
Solids, Total Suspended	ND	ND	mg/l	NC		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1416792-3 QC Sample: L2040604-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2040729-01A	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		624.1-RGP(7)
L2040729-01B	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		624.1-RGP(7)
L2040729-01C	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		624.1-RGP(7)
L2040729-01D	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		624.1-SIM-RGP(7)
L2040729-01E	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		624.1-SIM-RGP(7)
L2040729-01F	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		624.1-SIM-RGP(7)
L2040729-01G	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		504(14)
L2040729-01H	Vial Na2S2O3 preserved	A	NA		2.0	Y	Absent		504(14)
L2040729-01I	Vial unpreserved	A	NA		2.0	Y	Absent		SUB-ETHANOL(14)
L2040729-01J	Vial unpreserved	A	NA		2.0	Y	Absent		SUB-ETHANOL(14)
L2040729-01J1	Vial unpreserved	A	NA		2.0	Y	Absent		SUB-ETHANOL(14)
L2040729-01K	Plastic 250ml NaOH preserved	A	>12	>12	2.0	Y	Absent		TCN-4500(14)
L2040729-01L	Plastic 250ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),HG-U(28),AG-2008T(180),AS-2008T(180),SE-2008T(180),PB-2008T(180),CR-2008T(180),SB-2008T(180)
L2040729-01M	Plastic 500ml H2SO4 preserved	A	<2	<2	2.0	Y	Absent		NH3-4500(28)
L2040729-01N	Plastic 950ml unpreserved	A	7	7	2.0	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1)
L2040729-01O	Plastic 950ml unpreserved	A	7	7	2.0	Y	Absent		TSS-2540(7)
L2040729-01P	Amber 950ml H2SO4 preserved	A	<2	<2	2.0	Y	Absent		TPHENOL-420(28)
L2040729-01Q	Amber 1000ml Na2S2O3	A	7	7	2.0	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2040729-01R	Amber 1000ml Na2S2O3	A	7	7	2.0	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2040729-01S	Amber 1000ml Na2S2O3	A	7	7	2.0	Y	Absent		PCB-608.3(365)
L2040729-01T	Amber 1000ml Na2S2O3	A	7	7	2.0	Y	Absent		PCB-608.3(365)

*Values in parentheses indicate holding time in days

Project Name: CONANT WELLFIELD-ACTON
Project Number: 9350

Lab Number: L2040729
Report Date: 10/06/20

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2040729-01U	Amber 1000ml Na2S2O3	A	7	7	2.0	Y	Absent		PCB-608.3(365)
L2040729-01V	Amber 1000ml Na2S2O3	A	7	7	2.0	Y	Absent		PCB-608.3(365)
L2040729-01W	Amber 1000ml HCl preserved	A	NA		2.0	Y	Absent		TPH-1664(28)
L2040729-01X	Amber 1000ml HCl preserved	A	NA		2.0	Y	Absent		TPH-1664(28)
L2040729-02A	Plastic 500ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),AS-2008T(180),HG-U(28),AG-2008T(180),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2040729-02B	Plastic 500ml H2SO4 preserved	A	<2	<2	2.0	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	CONANT WELLFIELD-ACTON	**Lab Number:**	L2040729
Project Number:	9350	**Report Date:**	10/06/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	CONANT WELLFIELD-ACTON	**Lab Number:**	L2040729
Project Number:	9350	**Report Date:**	10/06/20

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Report Format: Data Usability Report

Project Name:	CONANT WELLFIELD-ACTON	**Lab Number:**	L2040729
Project Number:	9350	**Report Date:**	10/06/20

Data Qualifiers

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	CONANT WELLFIELD-ACTON	**Lab Number:**	L2040729
Project Number:	9350	**Report Date:**	10/06/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.

128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 9/25/20

ALPHA Job #: L2040729

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: Corant Wellfield - Acton
Project Location: Acton, MA
Project #: 9350
Project Manager: Rob Reynolds
ALPHA Quote #:

Report Information - Data Deliverables

☒ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: Acton Water District
Address: 693 Massachusetts Ave
PO Box 953 Acton 01720
Phone: 978-263-9107
Email: rcreynolds@geoinc.com

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

*Metals - Antimony, arsenic, cadmium, chromium III (trivalent) chromium VI, copper, lead, mercury, nickel, selenium, silver, zinc, and iron

ANALYSIS

VOC: ☐ 8260 ☒ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH (625)
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☒ PCB ☐ PEST (608)
TPH: ☐ Quant Only ☐ Fingerprint
Ethylene Dibromide (Siloxanes)
Chloride
Total phenols (420)
Hardness (130)
TCN (4500)
NH3 (4500)

SAMPLE INFO
Filtration: ☐ Field ☐ Lab to do
Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	Ethylene Dibromide	Chloride	Total phenols	Hardness	TCN	NH3	Sample Comments	TOTAL # BOTTLES
40729-01	Well E	9/25/20	11:00	GW	ARF	X	X	X				X	X	X	X	X	X	X	X		25
-02	Surface Water	1	11:40	1	1			X								X		X			2

Container Type	V	A	P	[illegible]			A	A	V	P	A	P	P	P							
Preservative	B	H	C	[illegible]			H	B	A	A	D	C	E	D							

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/25/20 16:33	William McGrath	9/25/20 1635

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Serial_No:10062017:06

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 9/25/20

ALPHA Job #: L2040729

Client Information

Client: Acton Water District
Address: 693 Mass Ave, Acton MA 01720
Phone: PO Box 953
Email: rcreynolds@geoinc.com

Project Information

Project Name: Conant Wellfield-Acton
Project Location: Acton, MA
Project #: 9350
Project Manager: Rob Reynolds
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program Criteria

Additional Project Information:

** All analyses to achieve minimum Levels (MLs) listed on attached RGP NOI Test Methods requirements resource.
*** Analyses to include All analytes on attached list

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 ☐ PP13; METALS: ☐ RCRA5 ☐ RCRA8; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Total residual chlorine (4500); [crossed out] (WA 9/25/20)

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Total residual chlorine	[crossed out]	Sample Comments	TOTAL # BOTTLES
40729-01	Well-E	9/25/20	11:00	GW	ARP	X			25
-02	Surface water	⊥	11:40	⊥	⊥		[crossed out]		2

	Total residual chlorine	[crossed out]
Container Type	P	P
Preservative	A	C

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/25/20 16:33	William Moe [signature]	9/25/20 1633

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

FORM NO: 01-01 (rev. 12-Mar-2012)

***

MAG910000
NHG910000

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia								Report mg/L	---
Chloride								Report µg/l	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids								30 mg/L	---
Antimony								206 µg/L	
Arsenic								104 µg/L	
Cadmium								10.2 µg/L	
Chromium III								323 µg/L	
Chromium VI								323 µg/L	
Copper								242 µg/L	
Iron								5,000 µg/L	
Lead								160 µg/L	
Mercury								0.739 µg/L	
Nickel								1,450 µg/L	
Selenium								235.8 µg/L	
Silver								35.1 µg/L	
Zinc								420 µg/L	
Cyanide								178 mg/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	

***

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									

***

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs								100 µg/L	---
Naphthalene								20 µg/L	---
E. Halogenated SVOCs									
Total PCBs								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	
tert-Butyl Alcohol								120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether								90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									

Additional Resource for Selecting Sufficiently Sensitive Test Methods for RGP Notice of Intent (NOI) Sampling Requirements[1]

Table 1: Parameters, Required Minimum Levels (MLs), and Common Test Methods[2]

Parameter	Requirements	
	ML Must Be ≤	Commonly Used Test Method(s) from 40 C.F.R. Part 136 that Generally Achieves the ML Noted
A. Inorganics		
Ammonia	0.1 mg/L	SM 4500 B and D; 350.1
Chloride	230 mg/L	SM 4110 B; 300.0
Total Residual Chlorine	50 µg/L	SM 4500-Cl G and E
Total Suspended Solids	30 mg/L	SM 2540 D
Antimony	206 µg/L	200.8 and 200.9
Arsenic	FW= 10 µg/L SW= 36 µg/L	200.8 and 200.9 in FW 200.7, 200.8 and 200.9 in SW
Cadmium	FW= 0.25 µg/L SW= 8.8 µg/L in MA SW= 9.3 µg/L in NH	200.8 in FW 200.8 and 200.9 in SW
Chromium III	FW= 74 µg/L SW= 100 µg/L	200.7, 200.8 and 200.9
Chromium VI	FW= 11 µg/L SW= 50 µg/L	218.6
Copper	FW= 9 µg/L SW= 3.1 µg/L	200.8 and 200.9
Iron	FW = 1,000 µg/L	200.7 and 200.8
Lead	FW= 2.5 µg/L SW= 8.1 µg/L	200.8 and 200.9
Mercury	FW= 0.77 µg/L SW= 0.739 µg/L	245.1, 245.7 and 1631E
Nickel	FW= 52 µg/L SW= 8.2 µg/L	200.8 and 200.9
Selenium	FW= 5.0 µg/L SW= 71 µg/L	200.8 and 200.9 in FW 200.7, 200.8 and 200.9 in SW
Silver	FW= 3.2 µg/L SW= 1.9 µg/L	200.8
Zinc	FW= 120 µg/L SW= 81 µg/L	200.7 and 200.8
Cyanide	FW = 5.2 µg/L SW = 5.0 µg/L	SM 4500-CN
B. Non-Halogenated Volatile Organic Compounds		
Total BTEX[3]	100 µg/L (sum of individual MLs)	624 and 1624B
Benzene	5.0 µg/L	624 and 1624B
1,4 Dioxane	50 µg/L	SIM
Acetone	7.97 mg/L	524.2
Phenol	300 µg/L	420.1 and 420.4

Parameter	Requirements	
	ML Must Be ≤	Commonly Used Test Method(s) from 40 C.F.R. Part 136 that Generally Achieves the ML Noted
C. Halogenated Volatile Organic Compounds		
Carbon Tetrachloride	1.6 µg/L in MA 4.4 µg/L in NH	624
1,2 Dichlorobenzene	600 µg/L	624
1,3 Dichlorobenzene	320 µg/L	624
1,4 Dichlorobenzene	5.0 µg/L	624
Total Dichlorobenzene[4]	Not required in MA 763 µg/L in NH (sum of individual MLs)	624
1,1 Dichloroethane	70 µg/L	624
1,2 Dichloroethane	5.0 µg/L	624
1,1 Dichloroethylene	3.2 µg/L	624
Ethylene Dibromide	0.05 µg/L	SIM
Methylene Chloride	4.6 µg/L	624
1,1,1 Trichloroethane	200 µg/L	624
1,1,2 Trichloroethane	5.0 µg/L	624
Trichloroethylene	5.0 µg/L	624
Tetrachloroethylene	3.3 µg/L in MA 5.0 µg/L in NH	624
cis-1,2 Dichloroethylene	70 µg/L	624
Vinyl Chloride	2.0 µg/L	624
D. Non-Halogenated Semi-Volatile Organic Compounds		
Total Phthalates[5]	190 µg/L in MA FW = 3.0 µg/L in NH SW = 3.4 µg/L in NH	625 and 1625B in MA 625 in NH
Diethylhexyl Phthalate	2.2 µg/L in MA 5.9 µg/L in NH	625 in MA 625 and 1625B in NH
Total Group I Polycyclic Aromatic Hydrocarbons[6]	1.0 µg/L (sum of individual MLs)	SIM
Benzo(a)anthracene	0.1 µg/L	SIM
Benzo(a)pyrene	0.1 µg/L	SIM
Benzo(b)fluoranthene	0.1 µg/L	SIM
Benzo(k)fluoranthene	0.1 µg/L	SIM
Chrysene	0.1 µg/L	SIM
Dibenzo(a,h)anthracene	0.1 µg/L	SIM
Indeno(1,2,3-cd)pyrene	0.1 µg/L	SIM
Total Group II Polycyclic Aromatic Hydrocarbons[7]	100 µg/L (sum of individual MLs)	625
Naphthalene	20 µg/L	625

Parameter	Requirements	
	ML Must Be ≤	Commonly Used Test Method(s) from 40 C.F.R. Part 136 that Generally Achieves the ML Noted
E. Halogenated Semi-Volatile Organic Compounds		
Total Polychlorinated Biphenyls[8]	0.5 µg/L	608
Pentachlorophenol[9]	1.0 µg/L	625
F. Fuels Parameters		
Total Petroleum Hydrocarbons	5.0 mg/L	1664A and B
Ethanol	0.4 mg/L	1666/1671/D3695
Methyl-tert-Butyl Ether	20 µg/L in MA 70 µg/L in NH	SIM
tert-Butyl Alcohol	120 µg/L in MA 40 µg/L in NH	1666
tert-Amyl Methyl Ether	90 µg/L in MA 140 µg/L in NH	624

Table 1 Footnotes:

[1] The minimum levels specified in this table will satisfy the sufficiently sensitive test method requirements for the purposes of sample analysis used to prepare a Notice of Intent (NOI) for coverage under the Remediation General Permit. Where less sensitive minimum levels (MLs) may be used upon authorization to discharge, these MLs will be noted in the written authorization to discharge for an individual site.

[2] The following abbreviations are used in Table 1, above:
- [a] mg/L = milligrams per liter
- [b] µg/L = micrograms per liter
- [c] FW = freshwater
- [d] SW = saltwater
- [e] SM = standard method
- [d] SIM = selected ion monitoring

[3] Total BTEX is the sum of: benzene (CAS No. 71432); toluene (CAS No. 108883); ethylbenzene (CAS No. 100-41-4); and (m,p,o) xylenes (CAS Nos. 108-88-3, 106-42-3, 95-47-6, and 1330-20-7).

[4] Total dichlorobenzene is the sum of: 1,2 dichlorobenzene (CAS No. 95-50-1); 1,3 dichlorobenzene (CAS No. 541-73-1); and 1,4 dichlorobenzene (CAS No. 106-46-7).

[5] Total Phthalates is the sum of: diethylhexyl phthalate (CAS No. 117-81-7); butyl benzyl phthalate (CAS No. 85-68-7); di-n-butyl phthalate (CAS No. 84-74-2); diethyl phthalate (CAS No. 84-66-2); dimethyl phthalate (CAS No. 131-11-3); di-n-octyl phthalate (CAS No. 117-84-0). For the diethylhexyl phthalate in NH, EPA anticipates that the applicable ML will be revised to 2.2 µg/L, once incorporated into the RGP for sites in New Hampshire.

[6] Total Group I PAHs is the sum of: benzo(a)anthracene (CAS No. 56-55-3); benzo(a)pyrene (CAS No. 50-32-8); benzo(b)fluoranthene (CAS No. 205-99-2); benzo(k)fluoranthene (CAS No. 207-08-9; chrysene (CAS No. 218-01); dibenzo(a,h)anthracene (CAS No. 53-70-3); indeno(1,2,3-cd)pyrene (CAS No. 193-39-5).

[7] Total Group II PAHs is the sum of: acenaphthene (CAS No. 83-32-9); acenaphthylene (CAS No. 208-96-8); anthracene (CAS No. 120-12-7); benzo(g,h,i)perylene (CAS No. 191-24-2); fluoranthene (CAS No. 206-44-0); fluorene (CAS No. 86-73-7); naphthalene (CAS No. 91-20-3); phenanthrene (CAS No. 85-01-8); pyrene (CAS No. 129-00-0).

[8] Total PCBs is the sum of the following aroclors: PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, and PCB-1260.

[8] The ML for analysis of pentachlorophenol must be as close to 1.0 µg/L as possible, not to exceed ≤ 5.0 µg/L.

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horsehoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L2040729

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 508.439.5170 Email: nlewis@alphalab.com	Project Location: MA Project Manager: Nathalie Lewis **Turnaround & Deliverables Information** Due Date: Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2040729

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	WELL-E	09-25-20 11:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		9/29/20		
Form No: AL_subcoc				

October 06, 2020

Nathalie Lewis
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (508) 439-5170
FAX:

RE: L2040729 **WorkOrder:** 20091893

Dear Nathalie Lewis:

TEKLAB, INC received 1 sample on 9/30/2020 10:02:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling II

Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20091893
Client Project: L2040729
Report Date: 06-Oct-2020

This reporting package includes the following:

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 20091893

Client Project: L2040729 **Report Date:** 06-Oct-2020

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit	E -	Value above quantitation range
H -	Holding times exceeded	I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits	M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit	R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits	T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level		

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2040729

Work Order: 20091893
Report Date: 06-Oct-2020

Cooler Receipt Temp: 2.4 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20091893
Client Project: L2040729
Report Date: 06-Oct-2020

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2021	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2021	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2021	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2021	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2021	Collinsville
Arkansas	ADEQ	88-0966		3/14/2021	Collinsville
Illinois	IDPH	17584		5/31/2021	Collinsville
Kentucky	UST	0073		1/31/2021	Collinsville
Missouri	MDNR	00930		5/31/2021	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20091893
Client Project: L2040729
Report Date: 06-Oct-2020
Lab ID: 20091893-001
Client Sample ID: WELL-E
Matrix: AQUEOUS
Collection Date: 09/25/2020 11:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS									
Ethanol	*	7.1	20		**ND**	mg/L	1	10/05/2020 16:18	R282389

CCV and LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2040729

Work Order: 20091893
Report Date: 06-Oct-2020

EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORG

Batch R282389 **SampType:** MBLK Units **mg/L**
SampID: MBLK-100520

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**ND**						10/05/2020

Batch R282389 **SampType:** LCS Units **mg/L**
SampID: LCS-100520

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20	S	**130**	100.0	0	133.4	70	132	10/05/2020

Batch R282389 **SampType:** MS Units **mg/L**
SampID: 20100106-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**130**	100.0	0	131.0	70	132	10/05/2020

Batch R282389 **SampType:** MSD Units **mg/L** RPD Limit **30**
SampID: 20100106-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20	S	**130**	100.0	0	133.2	131.0	1.64	10/05/2020

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2040729

Work Order: 20091893
Report Date: 06-Oct-2020

Carrier: UPS

Received By: KMT

Completed by: Amanda R. Ham
On: 30-Sep-2020

Reviewed by: Elizabeth A. Hurley
On: 30-Sep-2020

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **2.4**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

20091893

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horsehoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L2040729

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 508.439.5170
Email: nlewis@alphalab.com

Project Information

Project Location: MA
Project Manager: Nathalie Lewis

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2040729

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
20091893-001	WELL-E	09-25-20 11:00	WATER	Ethanol by EPA 1671 Revision A	

2.4° CLTGS
ice
OHS M 9/30/20

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		9/29/20	UPS	9/30/20 1002
Form No: AL_subcoc				

9/30/20

ATTACHMENT F

MADEP CORRESPONDENCE

From: Ruan, Xiaodan (DEP)
To: Robert C. Reynolds
Cc: Vakalopoulos, Catherine (DEP)
Subject: RE: Acton RGP
Date: Monday, October 26, 2020 4:14:40 PM

Thanks, Rob, for confirming.

From: Robert C. Reynolds <rcreynolds@geoinc.com>
Sent: Monday, October 26, 2020 4:09 PM
To: Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Cc: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@mass.gov>
Subject: RE: Acton RGP

Hi Xiaodan-
The site is a *current* MCP site (RTN 2-21031) and yes, the effluent outfall is to Nashoba Brook through aboveground piping.

Thanks,
Rob

From: Ruan, Xiaodan (DEP) <xiaodan.ruan@state.ma.us>
Sent: Monday, October 26, 2020 2:59 PM
To: Robert C. Reynolds <rcreynolds@geoinc.com>
Cc: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@state.ma.us>
Subject: RE: Acton RGP

Hi Robert,

I can confirm that the dilution factor of 2.07 for the updated maximum flow rate 350 gpm is correct. I have attached a complete StreamStats report.

I have a couple of questions to confirm:

1. Is the site for the project a *current* MCP site?
2. The effluent outfall is on the Nashoba Brook through aboveground piping.

Please let me know if you have any questions.

Thanks,
Xiaodan

From: Robert C. Reynolds <rcreynolds@geoinc.com>
Sent: Sunday, October 25, 2020 1:36 PM
To: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@mass.gov>; Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Subject: FW: Acton RGP

Hi Catherine and Xiaodan,
We previously requested a review of the 7Q10 and dilution calculations for an RGP NOI that we are preparing for our client that is associated with an upcoming pumping test. We received confirmation from you back in June that we had the calculations correct but the design flow of the pumping test has been changed from 0.432 MGD to 0.504 MGD.

Based upon Stream Stats, the 7Q10 (Qs) is 0.832 ft3/day or 0.538 MGPD
The maximum proposed flow (Qd) is now expected to be 350 gpm or 0.504 MGPD

Therefore, the dilution factor [DF = (QS + QD)/QD] is calculated to be (0.538 + 0.504)/0.504 = 2.07

Attached is the supporting information.

Could you confirm at your earliest convenience.

If you have any questions or require any additional information, please do not hesitate to contact me.

Best,
Rob

From: Ruan, Xiaodan (DEP) <xiaodan.ruan@state.ma.us>
Sent: Tuesday, June 23, 2020 2:36 PM
To: Robert C. Reynolds <rcreynolds@geoinc.com>
Cc: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@state.ma.us>

Subject: Re: Acton RGP

Hi Robert

I can confirm that the 7Q10 of 0.538 MGD and the dilution factor of 2.24 using a design flow of 0.432 MGD for the proposed discharge are correct.

Here is some additional information to use in the NOI:

This segment is not an Outstanding Resource Water, and there is no TMDL listed for this segment. For impairments, please go to Massachusetts 2016 303(d) List of Impaired Waters, and search for "MA82B-14".

As this is a current MCP site, you do not need to apply with MassDEP.

Please let me know if you have any questions.

Thanks,
Xiaodan

From: Vakalopoulos, Catherine (DEP)
Sent: Monday, June 22, 2020 2:16 PM
To: Ruan, Xiaodan (DEP)
Cc: rcreynolds@geoinc.com
Subject: Fw: Acton RGP

Hi Xiaodan,

Do you have time to check this? Please let me know.

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: Robert C. Reynolds <rcreynolds@geoinc.com>
Sent: Friday, June 19, 2020 7:56 AM
To: Vakalopoulos, Catherine (DEP)
Subject: Acton RGP

Hi Catherine,
We anticipate filing an NOI for an RGP to discharge water during a pump test for proposed drinking water wells at a site with an RTN in Acton, MA this summer so wanted to see if you could review the 7Q10 and dilution calculation information. The discharge is to Nashoba Brook (Segment MA82B-14). Attached is the Stream Stat Report (PDF and Excel) and an Aerial Photograph indicating the estimated area where the discharge will occur to Nashoba Brook.

Based upon Stream Stats, the 7Q10 (Qs) is 0.832 ft3/day or 0.538 MGPD
The maximum proposed flow (Qd) is expected to be 300 gpm or 0.432 MGPD

Therefore, the dilution factor [DF = (QS + QD)/QD] is calculated to be (0.538 + 0.432)/0.432 = 2.24

If you have any questions or require any additional information, please do not hesitate to contact me.

Best regards,

Logo

ROBERT C. REYNOLDS
Senior Project Engineer
O. 978.679.1600 | C. 781.726.2698
One Monarch Drive, Suite 201, Littleton, MA 01460

GeoInsight, Inc.
Environmental Strategy and Engineering
Environmental | GeoTechnical + Civil Engineering | Water Supply | EHS Compliance
Manchester, NH | Middletown, CT | Littleton, MA | York, ME
Blog | Facebook | LinkedIn | Twitter

Get The Latest: *GeoInsight News*

ATTACHMENT G

USEPA APPENDIX V DILUTION FACTOR AND WQBEL SPREADSHEET

DILUTION FACTOR AND WQBEL SPREADSHEET
549 MAIN STREET AND 8 POST OFFICE SQUARE BEHIND
ACTON, MASSACHUSETTS

Enter number values in green boxes below		**Notes:**
Enter values in the units specified		
↓		Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approved
0.538	Q_R = Enter upstream flow in **MGD**	Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry
0.504	Q_P = Enter discharge flow in **MGD**	Discharge flow is equal to the design flow or 1 MGD, whichever is less
0	Downstream 7Q10	Only if approved by State as the entry for Q_R; leave 0 if no entry
Enter a dilution factor, if other than zero		Saltwater (estuarine and marine): only if approved by the State
↓		Leave 0 if no entry
2.07		
Enter values in the units specified		
↓		
37.6	C_d = Enter influent hardness in **mg/L** $CaCO_3$	Freshwater only
48.7	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$	
Enter **receiving water** concentrations in the units specified		pH, temperature, and ammonia required for all discharges
↓		Hardness required for freshwater
7.5	pH in **Standard Units**	Salinity required for saltwater (estuarine and marine)
18.7	Temperature in **°C**	Metals required for all discharges if present and if dilution factor is > 1
0.187	Ammonia in **mg/L**	Enter 0 if non-detect or testing not required
200	Hardness in **mg/L** $CaCO_3$	
0	Salinity in **ppt**	
0	Antimony in **µg/L**	
1.02	Arsenic in **µg/L**	
0	Cadmium in **µg/L**	
0	Chromium III in **µg/L**	
0	Chromium VI in **µg/L**	
0	Copper in **µg/L**	
286	Iron in **µg/L**	
0	Lead in **µg/L**	
0	Mercury in **µg/L**	
0	Nickel in **µg/L**	
0	Selenium in **µg/L**	
0	Silver in **µg/L**	
0	Zinc in **µg/L**	

DILUTION FACTOR AND WQBEL SPREADSHEET
549 MAIN STREET AND 8 POST OFFICE SQUARE BEHIND
ACTON, MASSACHUSETTS

Enter **influent** concentrations in the units specified		if >1 sample, enter maximum
↓		if >10 samples, may enter 95th percentile
0	TRC in **µg/L**	Enter 0 if non-detect or testing not required
85	Ammonia in **mg/L**	
0	Antimony in **µg/L**	
1.01	Arsenic in **µg/L**	
0	Cadmium in **µg/L**	
0	Chromium III in **µg/L**	
0	Chromium VI in **µg/L**	
6.84	Copper in **µg/L**	
32400	Iron in **µg/L**	
0	Lead in **µg/L**	
0	Mercury in **µg/L**	
0	Nickel in **µg/L**	
0	Selenium in **µg/L**	
0	Silver in **µg/L**	
0	Zinc in **µg/L**	
0	Cyanide in **µg/L**	
0	Phenol in **µg/L**	
0	Carbon Tetrachloride in **µg/L**	
0	Tetrachloroethylene in **µg/L**	
0	Total Phthalates in **µg/L**	
0	Diethylhexylphthalate in **µg/L**	
0	Benzo(a)anthracene in **µg/L**	
0	Benzo(a)pyrene in **µg/L**	
0	Benzo(b)fluoranthene in **µg/L**	
0	Benzo(k)fluoranthene in **µg/L**	
0	Chrysene in **µg/L**	
0	Dibenzo(a,h)anthracene in **µg/L**	
0	Indeno(1,2,3-cd)pyrene in **µg/L**	
0	Methyl-tert butyl ether in **µg/L**	

DILUTION FACTOR AND WQBEL SPREADSHEET
549 MAIN STREET AND 8 POST OFFICE SQUARE BEHIND
ACTON, MASSACHUSETTS

Dilution Factor	2.1					
	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
A. Inorganics						
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	0.2	mg/L	**23**	µg/L	50	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	1323	µg/L		
Arsenic	**104**	µg/L	20	µg/L		
Cadmium	**10.2**	µg/L	0.1456	µg/L		
Chromium III	**323**	µg/L	89.8	µg/L		
Chromium VI	**323**	µg/L	23.6	µg/L		
Copper	**242**	µg/L	9.4	µg/L		
Iron	5000	µg/L	**1762**	µg/L		
Lead	**160**	µg/L	2.27	µg/L		
Mercury	**0.739**	µg/L	1.87	µg/L		
Nickel	**1450**	µg/L	53.2	µg/L		
Selenium	**235.8**	µg/L	10.3	µg/L		
Silver	**35.1**	µg/L	1.9	µg/L		
Zinc	**420**	µg/L	122.0	µg/L		
Cyanide	**178**	mg/L	10.8	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	620	µg/L		

DILUTION FACTOR AND WQBEL SPREADSHEET
549 MAIN STREET AND 8 POST OFFICE SQUARE BEHIND
ACTON, MASSACHUSETTS

C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	3.3	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	6.8	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	4.5	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.0079	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0079	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0079	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0079	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0079	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0079	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0079	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	41	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

ATTACHMENT H

MADEP BWSC PHASE I SITE ASSESSMENT MAP

MassDEP - Bureau of Waste Site Cleanup

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

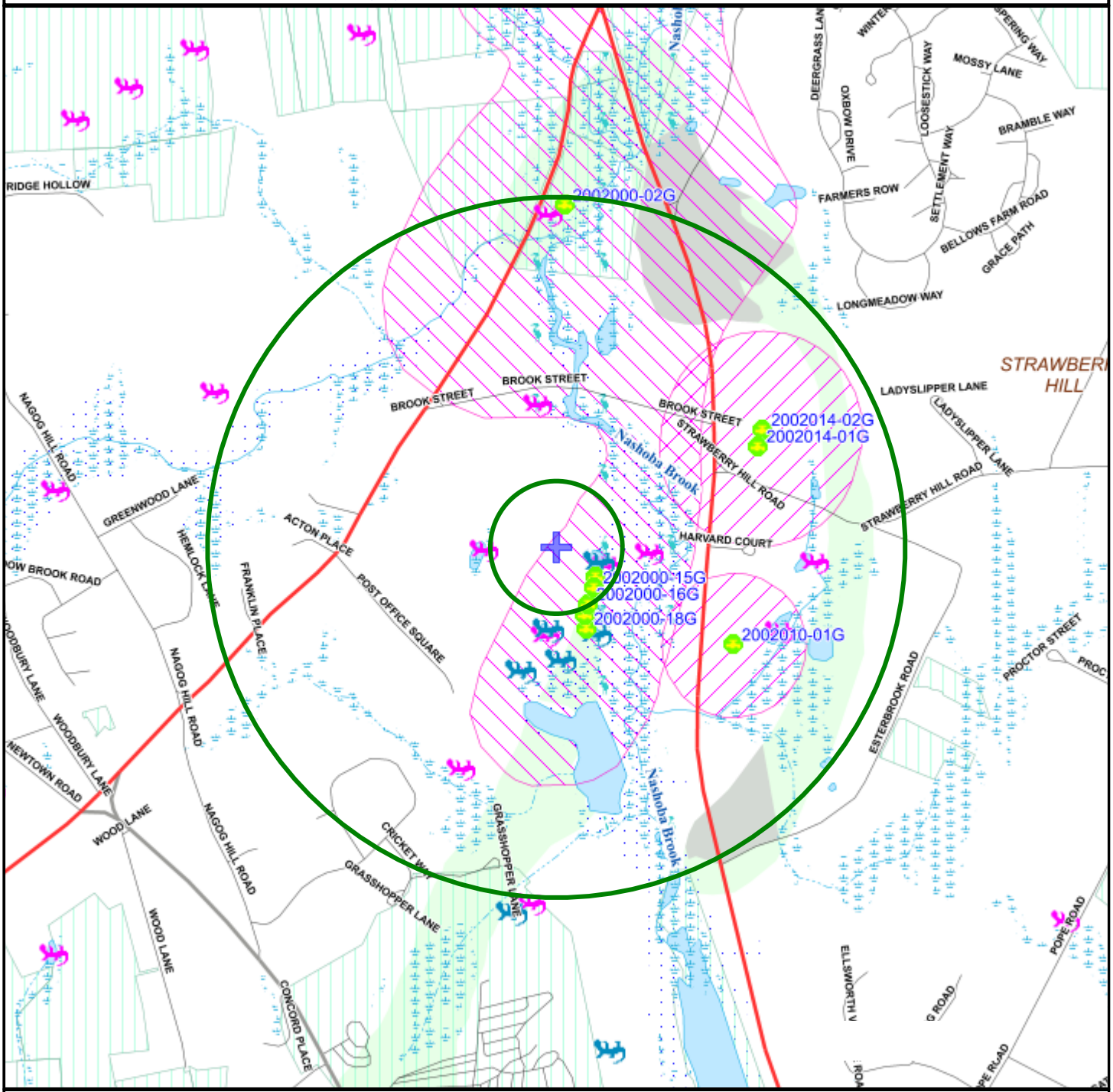
Site Information:

ACTON, MA

NAD83 UTM Meters:
4707099mN , 301063mE (Zone: 19)
September 13, 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: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

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.