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March 4, 2022
File No. 01.0171094.32

United States Environmental Protection Agency – Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Attention: Ms. Shauna Little

Re: Submittal of Notice of Intent (NOI)
Remediation General Permit (RGP)
100 Commercial Street
Malden, Massachusetts
RTN: 3-362

Dear Ms. Little:

GZA GeoEnvironmental, Inc. (GZA), on behalf of Boston Gas Company, is submitting the attached Notice of Intent (NOI; Appendix A) for a Remediation General Permit (RGP) for 100 Commercial Street (the Site) in Malden Massachusetts. The NOI and RGP are required for dewatering activities because the project site is a Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) disposal site with documented impacts to groundwater.

BACKGROUND

The 7-acre Site is located at 100 Commercial Street in a commercial area of Malden, Massachusetts. Dewatering activities are being conducted as part of an MCP Release Abatement Measure (RAM). The objective of the RAM is to provide procedures for the management of soil and groundwater which will be disturbed during the renovation of the property. The renovation project will include remodeling of the existing main building and fleet garage, landscape and urban edge enhancements, utility and stormwater upgrades and parking lot reconstruction.

This Property is a portion of the former Malden manufactured gas plant (MGP) which includes several surrounding and nearby parcels and which is identified as Release Tracking Number (RTN) 3-362 by the Massachusetts Department of Environmental Protection (MassDEP). The 100 Commercial Street facility is currently used by National Grid for general gas service operations including a natural gas regulating station. A Locus Plan is included as Figure 1.

The former MGP facilities were operated by predecessors to National Grid from the late 1880s to the early 1970s. Assessment and remediation have been ongoing since 1988. A partial Class C Response Action Outcome (RAO – now known as a Temporary Solution) was submitted for the Site by Haley & Aldrich, Inc. (H&A) in February 2004. The Class C RAO was submitted for portions of the disposal Site which had not been previously closed with a Waiver Completion Statement or a Permanent Solution RAO, including the 100 Commercial Street Property. Work under the main Site RTN 3-362 continues as Post-Temporary Solution and RAM activities, with status reports submitted semi-annually. Phase IV remedial activities are also underway at the Property in accordance with a Phase IV Remedy Implementation Plan (RIP) submitted in July 2021.



NOTICE OF INTENT

GZA is submitting this NOI to request authorization for the discharge of treated water generated from dewatering and decontamination activities from the Site to the existing on-site stormwater drainage system. The treated groundwater will be discharged to a storm drain located on the property which discharges to the Malden River (MA71-05) via the West End Brook culvert.

A Best Management Practices Plan (BMPP) meeting the requirements of the RGP has been prepared and will be posted at the Site and implemented during the time-period that temporary dewatering is occurring at the Site.

This NOI application includes the following items:

- Laboratory analytical results of the influent source and receiving water are included as Appendix B;
- Calculation sheets for establishing effluent limitations and a dilution factor are included as Appendix C;
- A review of Areas of Critical Environmental Concern (ACEC) indicate that the proposed discharge does not go to an ACEC. A review of Federally Listed Endangered and Threatened Species in Massachusetts indicates that a Northern Long-eared Bat habitat is located state-wide but is not likely to be present at the Site. A review of the U.S. Fish and Wildlife's online Information for Planning and Consultation (IPaC) service indicates that federally-listed species were not likely to be present within the action area of site activities (see Appendix D);
- A review of the Massachusetts Geographic Information System (MassGIS) MassDEP Priority Resources Map of Malden shows that there are no ACECs and no habitats for Species of Special Concern or Threatened or Endangered Species within 500 feet of the subject site. Therefore, permit eligibility meets "Criterion A";
- A review of the electronic Massachusetts Cultural Resource Information System database, made available through the Massachusetts Historical Commission, indicates that there are no properties listed or eligible for listing on the National Registry of Historic Places under the National Historic Preservation Act. Therefore, there will be no impact to such properties associated with this discharge. The documentation of this review can be found in Appendix E.
- The Malden River (Segment MA71-05, Class B) which is classified as a Category 5 water subject to a Total Maximum Daily Load (TMDL) which is included in Appendix F.

Please do not hesitate to contact the undersigned at (781) 278-3700 if you have any questions or require further information.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.

William Davis
Project Manager

Geoffrey Schwartz, P.E.
Consultant/Reviewer

Charles A. Lindberg, LSP
Principal



Attachments Figure 1 - Site Locus Map
 Figure 2 – Discharge Outfall Location/Site Plan
 Figure 3 – Groundwater Treatment System Process Flow Diagram
 Figure 4 – Site Scoring Map Showing 500 Foot & ½ Mile Radii
 Figure 5 – Map Indicating Portion of the Project Covered Under RGP
 Appendix A - Notice of Intent Form
 Appendix B – Influent and Receiving Water Laboratory Analytical Report
 Appendix C – Calculation Sheets for Effluent Limitations and Dilution Factor
 Appendix D – ACEC and Federally Listed Endangered and Threatened Species in Massachusetts Evaluation
 Appendix E – MACRIS Search Results
 Appendix F – TMDL Information for the Malden River (MA71-05)



FIGURES



APPENDIX A - NOTICE OF INTENT FORM



APPENDIX B – INFLUENT AND RECEIVING WATER LABORATORY ANALYTICAL REPORT



APPENDIX C – CALCULATION SHEETS FOR EFFLUENT LIMITATIONS AND DILUTION FACTOR



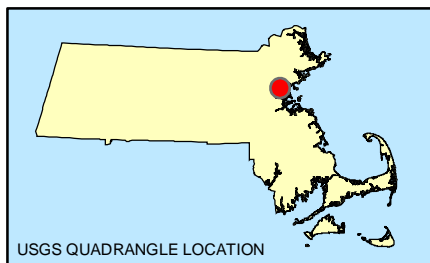
APPENDIX D – ACEC AND FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS EVALUATION



APPENDIX E – MACRIS SEARCH RESULTS

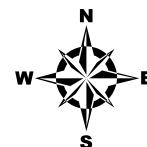


FIGURE 1
Site Locus Map



SOURCE : THIS MAP CONTAINS THE ESRI ARCGIS ONLINE USA TOPOGRAPHIC MAP SERVICE, PUBLISHED JUNE 19, 2019 BY ESRI ARCGIS SERVICES AND UPDATED AS NEEDED. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.

Data Supplied by :



PROJ. MGR.: GBS
DESIGNED BY: WAD
REVIEWED BY: CAL
OPERATOR: EMD

DATE: 02-07-2022

SITE LOCUS PLAN

NOTICE OF INTENT REMEDIATION GENERAL PERMIT
100 COMMERCIAL STREET, MALDEN, MASSACHUSETTS

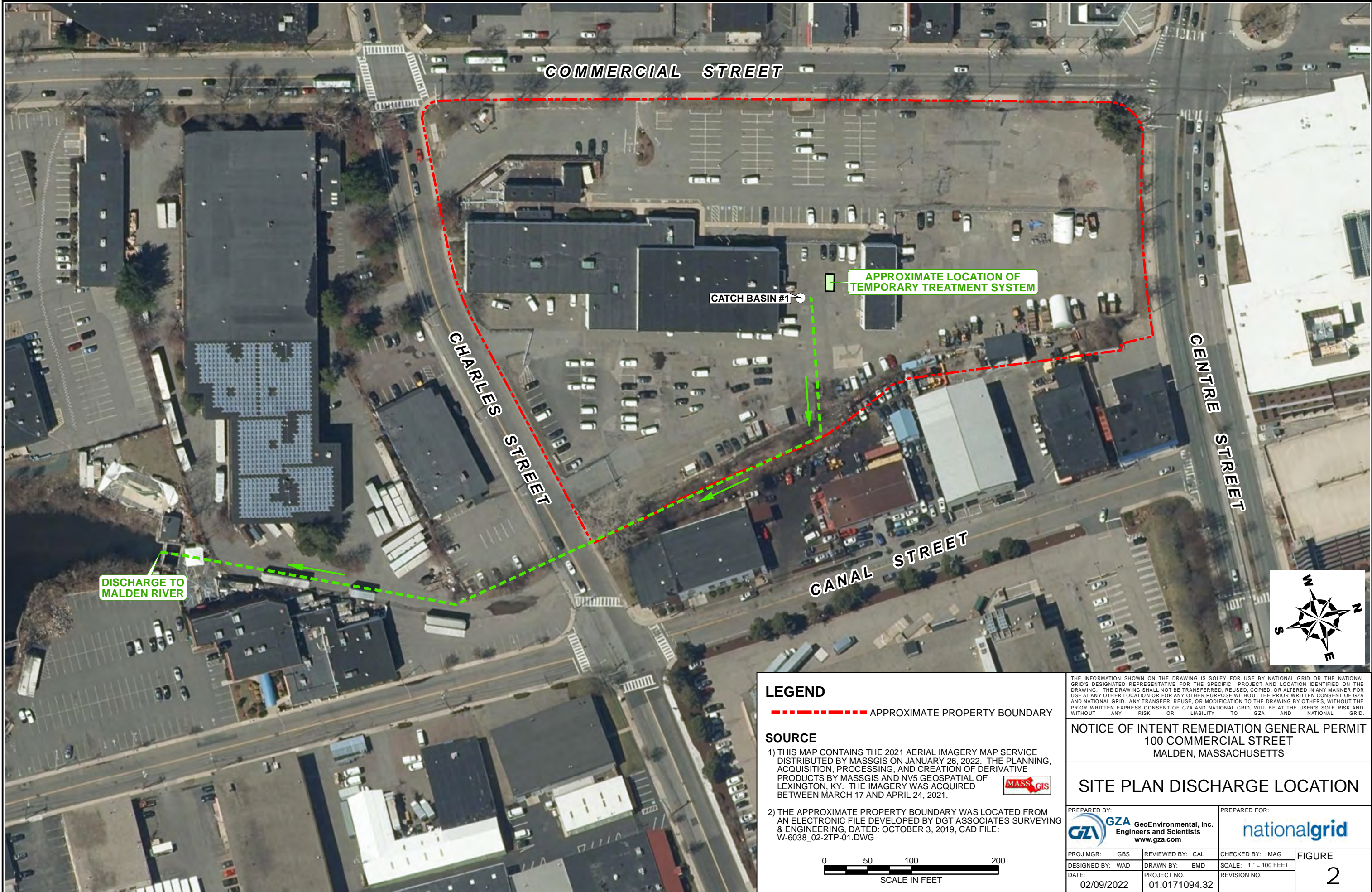
JOB NO.
01.0171094.32

FIGURE NO.
1



FIGURE 2
Site Discharge Location Plan

J:\170,000-179,999\171094\171094-32_GBS\FIGURES\GIS\171094-32_NOIRGP_SitePlanDischargeLocation_FIG2.mxd, 2/9/2022, 10:58:00 AM, elaine.donohue



LEGEND

----- APPROXIMATE PROPERTY BOUNDARY

SOURCE

1) THIS MAP CONTAINS THE 2021 AERIAL IMAGERY MAP SERVICE DISTRIBUTED BY MASSGIS ON JANUARY 26, 2022. THE PLANNING, ACQUISITION, PROCESSING, AND CREATION OF DERIVATIVE PRODUCTS BY MASSGIS AND NV5 GEOSPATIAL OF LEXINGTON, KY. THE IMAGERY WAS ACQUIRED BETWEEN MARCH 17 AND APRIL 24, 2021.

2) THE APPROXIMATE PROPERTY BOUNDARY WAS LOCATED FROM AN ELECTRONIC FILE DEVELOPED BY DGT ASSOCIATES SURVEYING & ENGINEERING, DATED: OCTOBER 3, 2019, CAD FILE: W-6038_02-2TP-01.DWG

0 50 100 200

SCALE IN FEET

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

NOTICE OF INTENT REMEDIATION GENERAL PERMIT

100 COMMERCIAL STREET
MALDEN, MASSACHUSETTS

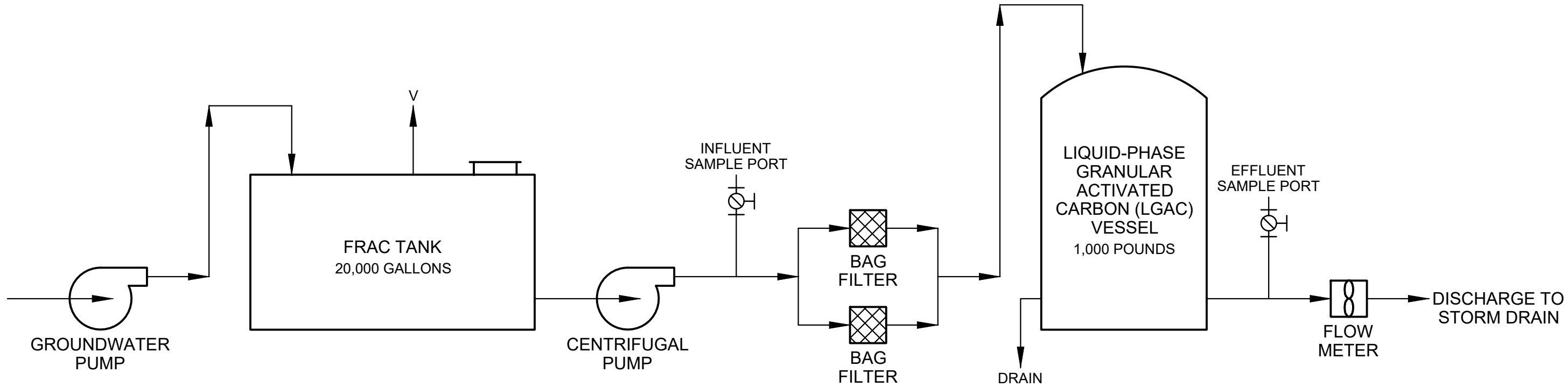
SITE PLAN DISCHARGE LOCATION

PREPARED BY:	PREPARED FOR:		
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	nationalgrid		
PROJ MGR: GBS	REVIEWED BY: CAL	CHECKED BY: MAG	FIGURE 2
DESIGNED BY: WAD	DRAWN BY: EMD	SCALE: 1" = 100 FEET	
DATE: 02/09/2022	PROJECT NO. 01.0171094.32	REVISION NO.	



FIGURE 3
Groundwater Treatment System
Process Flow Diagram

GZA-U:\170,000-179,999\171094\171094-32.GBS\FIGURES\CAD\171094-32_ProcessFlowDiagram.dwg [FIG-3] February 07, 2022 - 8:46pm elaine.donohue



THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

NOTICE OF INTENT REMEDIATION GENERAL PERMIT
100 COMMERCIAL STREET
MALDEN, MASSACHUSETTS

PROCESS FLOW DIAGRAM



PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: 	
PROJ MGR: GBS	REVIEWED BY: CAL	CHECKED BY: MAG	FIGURE 3
DESIGNED BY: WAD	DRAWN BY: EMD	SCALE: N.T.S.	
DATE: 02-07-2022	PROJECT NO. 01.0171094.32	REVISION NO.	



FIGURE 4
Site Scoring Map
500 Foot and ½ Mile Radii

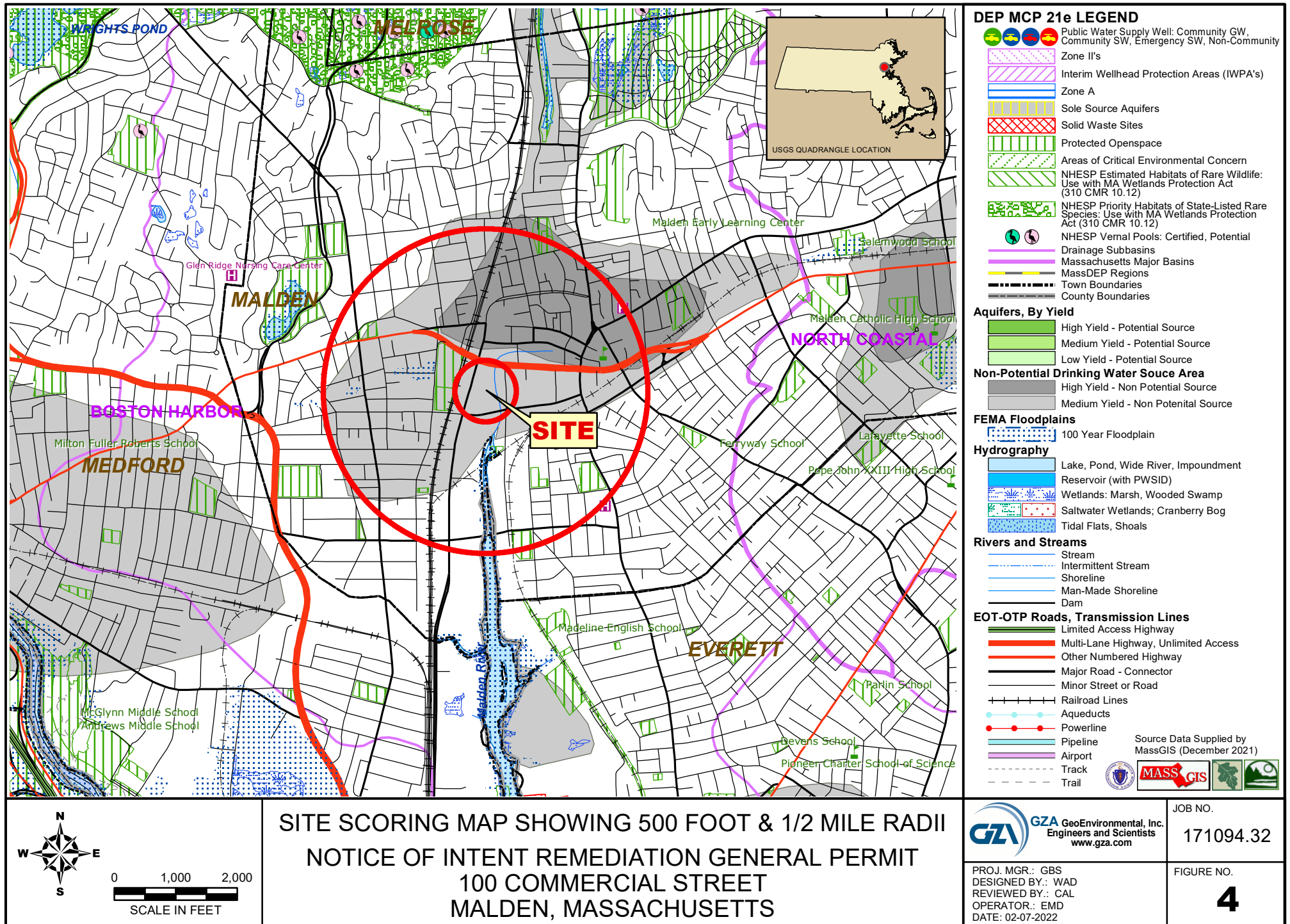
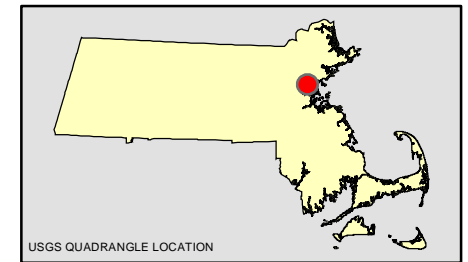
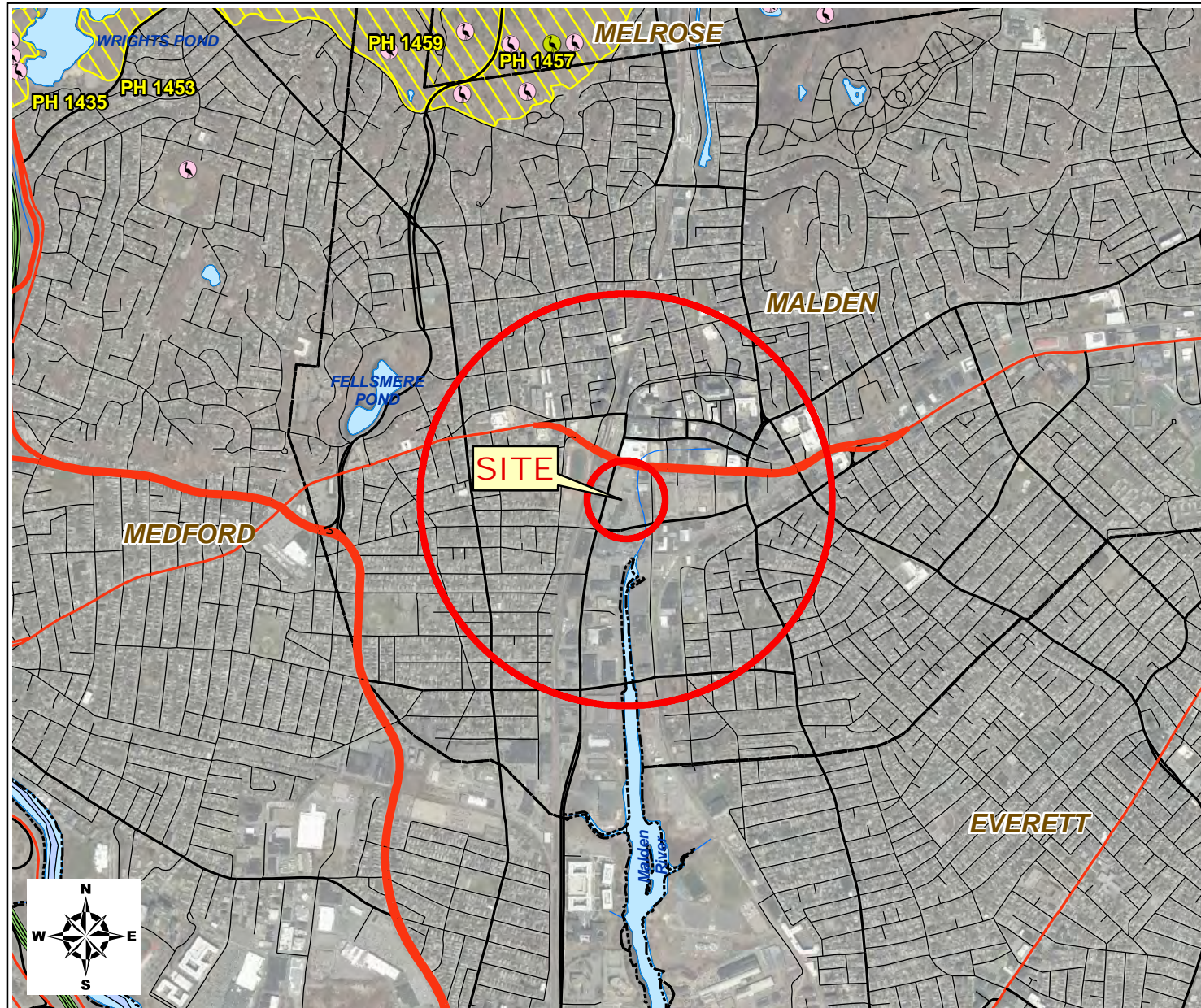




FIGURE 5
NHESP Priority Map



LEGEND

- NHESP Estimated Habitats of Rare Wildlife: Use with MA Wetlands Protection Act (310 CMR 10.14)
- NHESP Priority Habitats of State-Listed Rare Species: Use with MA Wetlands Protection Act (310 CMR 10.14)
- NHESP Vernal Pools: Certified, Potential

Hydrography

- Lake, Pond, Wide River, Impoundment
- Reservoir (with PWSID)
- Tidal Flats, Shoals

Rivers and Streams

- Stream
- Intermittent Stream
- Shoreline

MassDOT (formerly MHD-OTP) Roads

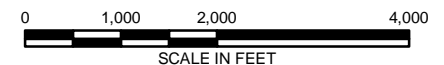
- Limited Access Highway
- Multi-Lane Highway, Unlimited Access
- Other Numbered Highway
- Major Road - Connector
- Minor Street or Road

SOURCE:

Priority and Estimated Habitats have been delineated by the Natural Heritage and Endangered Species Program of the Division of Fisheries and Wildlife. These layers are used for screening Projects and Activities that may impact state-listed rare species and their habitats. Priority and Estimated Habitat maps have been delineated based on the Best Scientific Evidence Available and according to the regulations of the Massachusetts Endangered Species Act (321 CMR 10.12) using documented records of rare species and various spatial layers.

The NHESP data was supplied by MassGIS in January 2022, the MassDOT Roads data was supplied by MassGIS in October 2020, and the Hydrography & Rivers and Streams data was supplied by MassGIS in October 2020.

The 2021 Aerial Imagery Map Service was distributed by MassGIS on January 26, 2022. The planning, acquisition, processing, and creation of derivative products by MassGIS and NV5 Geospatial of Lexington, KY. The imagery was acquired between March 17 and April 24, 2021.



PRIORITY HABITAT AND ESTIMATED HABITAT NATURAL HERITAGE & ENDANGERED SPECIES PROGRAM

NOTICE OF INTENT REMEDIATION GENERAL PERMIT 100 COMMERCIAL STREET - MALDEN, MASSACHUSETTS



GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

JOB NO.

01.0171094.32

PROJ. MGR.: GBS
DESIGNED BY.: WAD
REVIEWED BY.: CAL
OPERATOR.: EMD
DATE: 02-07-2022

FIGURE NO.

5



APPENDIX A

NOTICE OF INTENT FORM

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

A. General site information:

1. Name of site:	Site address: Street:		
2. Site owner Owner is (check one): <input type="checkbox"/> Federal <input type="checkbox"/> State/Tribal <input type="checkbox"/> Private <input type="checkbox"/> Other; if so, specify:	City:	State:	Zip:
	Contact Person:		
	Telephone:	Email:	
	Mailing address: Street:		
3. Site operator, if different than owner	City:	State:	Zip:
	Contact Person:		
	Telephone:	Email:	
	Mailing address: Street:		
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply): <input type="checkbox"/> RGP <input type="checkbox"/> DGP <input type="checkbox"/> CGP <input type="checkbox"/> MSGP <input type="checkbox"/> Individual NPDES permit <input type="checkbox"/> Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply): <input type="checkbox"/> MA Chapter 21e; list RTN(s): <input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit: <input type="checkbox"/> CERCLA <input type="checkbox"/> UIC Program <input type="checkbox"/> POTW Pretreatment <input type="checkbox"/> CWA Section 404		

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Receiving water is (check any that apply): <input type="checkbox"/> Outstanding Resource Water <input type="checkbox"/> Ocean Sanctuary <input type="checkbox"/> territorial sea <input type="checkbox"/> Wild and Scenic River		
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No Are sensitive receptors present near the site? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, specify:		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP.		
4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.		
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.		
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, indicate date confirmation received:		
7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No		

C. Source water information:

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

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

D. Discharge information

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

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)	
<input type="checkbox"/> I – Petroleum-Related Site Remediation <input type="checkbox"/> II – Non-Petroleum-Related Site Remediation <input type="checkbox"/> III – Contaminated Site Dewatering <input type="checkbox"/> IV – Dewatering of Pipelines and Tanks <input type="checkbox"/> V – Aquifer Pump Testing <input type="checkbox"/> VI – Well Development/Rehabilitation <input type="checkbox"/> VII – Collection Structure Dewatering/Remediation <input type="checkbox"/> VIII – Dredge-Related Dewatering	<p>a. If Activity Category I or II: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	
	<p>b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</p>	
	<table border="1"> <tr> <td data-bbox="970 799 1419 873"><input type="checkbox"/> G. Sites with Known Contamination</td><td data-bbox="1419 799 2003 873"><input type="checkbox"/> H. Sites with Unknown Contamination</td></tr> </table>	<input type="checkbox"/> G. Sites with Known Contamination
<input type="checkbox"/> G. Sites with Known Contamination	<input type="checkbox"/> H. Sites with Unknown Contamination	
<table border="1"> <tr> <td data-bbox="970 873 1419 1414"> <p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p> </td><td data-bbox="1419 873 2003 1414"> <p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p> </td></tr> </table>	<p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	<p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>
<p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	<p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>	

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (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									

[illegible]

E. Treatment system information

<p>1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)</p> <p><input type="checkbox"/> Adsorption/Absorption <input type="checkbox"/> Advanced Oxidation Processes <input type="checkbox"/> Air Stripping <input type="checkbox"/> Granulated Activated Carbon (“GAC”)/Liquid Phase Carbon Adsorption</p> <p><input type="checkbox"/> Ion Exchange <input type="checkbox"/> Precipitation/Coagulation/Flocculation <input type="checkbox"/> Separation/Filtration <input type="checkbox"/> Other; if so, specify:</p>	
<p>2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.</p> <p>Identify each major treatment component (check any that apply):</p> <p><input type="checkbox"/> Fractionation tanks <input type="checkbox"/> Equalization tank <input type="checkbox"/> Oil/water separator <input type="checkbox"/> Mechanical filter <input type="checkbox"/> Media filter</p> <p><input type="checkbox"/> Chemical feed tank <input type="checkbox"/> Air stripping unit <input type="checkbox"/> Bag filter <input type="checkbox"/> Other; if so, specify:</p> <p>Indicate if either of the following will occur (check any that apply):</p> <p><input type="checkbox"/> Chlorination <input type="checkbox"/> De-chlorination</p>	
<p>3. Provide the design flow capacity in gallons per minute (gpm) of the most limiting component.</p> <p>Indicate the most limiting component:</p> <p>Is use of a flow meter feasible? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No, if so, provide justification:</p>	
<p>Provide the proposed maximum effluent flow in gpm.</p>	
<p>Provide the average effluent flow in gpm.</p>	
<p>If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:</p>	
<p>4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	

F. Chemical and additive information

<p>1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)</p> <p><input type="checkbox"/> Algaecides/biocides <input type="checkbox"/> Antifoams <input type="checkbox"/> Coagulants <input type="checkbox"/> Corrosion/scale inhibitors <input type="checkbox"/> Disinfectants <input type="checkbox"/> Flocculants <input type="checkbox"/> Neutralizing agents <input type="checkbox"/> Oxidants <input type="checkbox"/> Oxygen <input type="checkbox"/> scavengers <input type="checkbox"/> pH conditioners <input type="checkbox"/> Bioremedial agents, including microbes <input type="checkbox"/> Chlorine or chemicals containing chlorine <input type="checkbox"/> Other; if so, specify:</p>
<p>2. Provide the following information for each chemical/additive, using attachments, if necessary:</p> <p>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)).</p>
<p>3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

G. Endangered Species Act eligibility determination

<p>1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:</p> <p><input type="checkbox"/> FWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area”.</p> <p><input type="checkbox"/> FWS Criterion B: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No; if no, is consultation underway? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> FWS Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) <input type="checkbox"/> the operator <input type="checkbox"/> EPA <input type="checkbox"/> Other; if so, specify:</p>

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

I. Supplemental information

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

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

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

J. Certification requirement

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

BMPP certification statement:

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 ☐

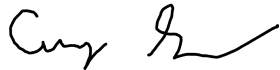
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.

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:

Print Name and Title:



APPENDIX B

LABORATORY ANALYTICAL REPORT



ANALYTICAL REPORT

Lab Number:	L2206591
Client:	GZA GeoEnvironmental, Inc. 249 Vanderbilt Ave Norwood, MA 02062
ATTN:	Bill Davis
Phone:	(781) 278-5769
Project Name:	MALDEN RGP
Project Number:	01.0171094.40
Report Date:	02/14/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2206591-01	B1010	WATER	100 COMMERCIAL STREET MALDEN	02/08/22 12:15	02/08/22
L2206591-02	B16	WATER	100 COMMERCIAL STREET MALDEN	02/08/22 10:45	02/08/22
L2206591-03	SW-1	WATER	100 COMMERCIAL STREET MALDEN	02/08/22 09:45	02/08/22

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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

The analyses performed were specified by the client.

Volatile Organics by Method 624

L2206591-01D: The sample has elevated detection limits due to the dilution required by the sample matrix.
Sample is cloudy, has particles and an odor.

L2206591-01D: Due to the matrix of the sample (foam generation during purging/analysis), the laboratory used Anti-Foam solution in the sample and associated QC.

Volatile Organics by SIM

L2206591-01D: The sample has elevated detection limits due to the dilution required by the sample matrix.
Sample is cloudy, has particles and an odor.

L2206591-01D: Due to the matrix of the sample (foam generation during purging/analysis), the laboratory used Anti-Foam solution in the sample and associated QC.

Total Metals

L2206591-01: The sample has elevated detection limits for all elements, with the exception of mercury and iron, due to the dilution required by matrix interferences encountered during analysis.

The WG1603027-3 MS recovery for iron (130%), performed on L2206591-01, does not apply because the sample concentration is greater than four times the spike amount added.

The WG1603028-5 MS recovery for selenium (53%), performed on L2206591-02, recovered outside the 70-130% acceptance criteria. The result for this analyte is considered suspect due to either the heterogeneous nature of the sample or matrix interference.

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Case Narrative (continued)

The WG1603028-6 Laboratory Duplicate RPDs for chromium (21%) and copper (69%), performed on L2206591-02, are outside the acceptance criteria. The elevated RPDs have been attributed to the non-homogeneous nature of the native sample.

Chlorine, Total Residual

The WG1602843-4 MS recovery, performed on L2206591-02, is outside the acceptance criteria for chlorine, total residual (0%); 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: 02/14/22

ORGANICS

VOLATILES

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-01

Date Collected: 02/08/22 12:15

Client ID: B1010

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 504.1

Analytical Method: 14,504.1

Extraction Date: 02/10/22 10:01

Analytical Date: 02/10/22 12:58

Analyst: GT

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

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-01 D
 Client ID: B1010
 Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 12:15
 Date Received: 02/08/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1

Analytical Date: 02/09/22 12:34

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	2.5
1,1-Dichloroethane	ND		ug/l	3.8	--	2.5
Carbon tetrachloride	ND		ug/l	2.5	--	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	--	2.5
Tetrachloroethene	ND		ug/l	2.5	--	2.5
1,2-Dichloroethane	ND		ug/l	3.8	--	2.5
1,1,1-Trichloroethane	ND		ug/l	5.0	--	2.5
Benzene	10		ug/l	2.5	--	2.5
Toluene	ND		ug/l	2.5	--	2.5
Ethylbenzene	2.8		ug/l	2.5	--	2.5
Vinyl chloride	ND		ug/l	2.5	--	2.5
1,1-Dichloroethene	ND		ug/l	2.5	--	2.5
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	2.5
Trichloroethene	ND		ug/l	2.5	--	2.5
1,2-Dichlorobenzene	ND		ug/l	12	--	2.5
1,3-Dichlorobenzene	ND		ug/l	12	--	2.5
1,4-Dichlorobenzene	ND		ug/l	12	--	2.5
p/m-Xylene	ND		ug/l	5.0	--	2.5
o-xylene	ND		ug/l	2.5	--	2.5
Xylenes, Total	ND		ug/l	2.5	--	2.5
Acetone	ND		ug/l	25	--	2.5
Methyl tert butyl ether	ND		ug/l	25	--	2.5
Tert-Butyl Alcohol	ND		ug/l	250	--	2.5
Tertiary-Amyl Methyl Ether	ND		ug/l	50	--	2.5

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-01 D

Date Collected: 02/08/22 12:15

Client ID: B1010

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

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	100		60-140
Fluorobenzene	94		60-140
4-Bromofluorobenzene	108		60-140

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-01 D

Date Collected: 02/08/22 12:15

Client ID: B1010

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1-SIM

Analytical Date: 02/09/22 12:34

Analyst: GT

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

1,4-Dioxane	ND		ug/l	12	--	2.5
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	98		60-140
4-Bromofluorobenzene	111		60-140

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-02

Date Collected: 02/08/22 10:45

Client ID: B16

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1

Analytical Date: 02/09/22 13:08

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	48		ug/l	1.0	--	1
Toluene	1.1		ug/l	1.0	--	1
Ethylbenzene	6.4		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	ND		ug/l	1.0	--	1
Trichloroethene	ND		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	6.7		ug/l	2.0	--	1
o-xylene	17		ug/l	1.0	--	1
Xylenes, Total	24		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	15		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-02
Client ID: B16
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 10:45
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	98		60-140
4-Bromofluorobenzene	108		60-140

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-02
Client ID: B16
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 10:45
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/09/22 13:08
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	5.0	--	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
Fluorobenzene			104		60-140	
4-Bromofluorobenzene			107		60-140	

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-02

Date Collected: 02/08/22 10:45

Client ID: B16

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 504.1

Analytical Method: 14,504.1

Extraction Date: 02/10/22 10:01

Analytical Date: 02/10/22 13:07

Analyst: GT

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

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
 Analytical Date: 02/09/22 10:18
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1603455-4					
1,4-Dioxane	ND		ug/l	5.0	--

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

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 02/09/22 10:18
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1603464-4					
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: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 02/09/22 10:18
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1603464-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		60-140
Fluorobenzene	94		60-140
4-Bromofluorobenzene	109		60-140

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 02/10/22 11:35
Analyst: GT

Extraction Method: EPA 504.1
Extraction Date: 02/10/22 10:01

Parameter	Result	Qualifier	Units	RL	MDL
Microextractables by GC - Westborough Lab for sample(s): 01-02 Batch: WG1603504-1					
1,2-Dibromoethane	ND		ug/l	0.010	-- A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1603455-3								
1,4-Dioxane	118		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	108				60-140
4-Bromofluorobenzene	102				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1603464-3								
Methylene chloride	100		-		60-140	-		28
1,1-Dichloroethane	100		-		50-150	-		49
Carbon tetrachloride	120		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	125		-		70-130	-		39
1,2-Dichloroethane	105		-		70-130	-		49
1,1,1-Trichloroethane	120		-		70-130	-		36
Benzene	110		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	115		-		60-140	-		63
Vinyl chloride	120		-		5-195	-		66
1,1-Dichloroethene	110		-		50-150	-		32
cis-1,2-Dichloroethene	100		-		60-140	-		30
Trichloroethene	110		-		65-135	-		48
1,2-Dichlorobenzene	125		-		65-135	-		57
1,3-Dichlorobenzene	120		-		70-130	-		43
1,4-Dichlorobenzene	125		-		65-135	-		57
p/m-Xylene	112		-		60-140	-		30
o-xylene	100		-		60-140	-		30
Acetone	84		-		40-160	-		30
Methyl tert butyl ether	85		-		60-140	-		30
Tert-Butyl Alcohol	81		-		60-140	-		30
Tertiary-Amyl Methyl Ether	80		-		60-140	-		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1603464-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	104				60-140
Fluorobenzene	100				60-140
4-Bromofluorobenzene	108				60-140

Lab Control Sample Analysis
Batch Quality Control**Project Name:** MALDEN RGP**Project Number:** 01.0171094.40**Lab Number:** L2206591**Report Date:** 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1603504-2									
1,2-Dibromoethane	116		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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): 01-02 QC Batch ID: WG1603504-3 QC Sample: L2205818-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.253	0.297	118		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.253	0.316	125	Q	-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.253	0.323	128	Q	-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-01
Client ID: B1010
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 12:15
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/14/22 13:46
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 16:49

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	74		42-122
2-Fluorobiphenyl	75		46-121
4-Terphenyl-d14	81		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-01
Client ID: B1010
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 12:15
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/12/22 13:52
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 16:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	19.3		ug/l	0.100	--	1
Fluoranthene	5.18		ug/l	0.100	--	1
Naphthalene	14.1		ug/l	0.100	--	1
Benzo(a)anthracene	4.07		ug/l	0.100	--	1
Benzo(a)pyrene	2.82		ug/l	0.100	--	1
Benzo(b)fluoranthene	2.52		ug/l	0.100	--	1
Benzo(k)fluoranthene	0.911		ug/l	0.100	--	1
Chrysene	1.73		ug/l	0.100	--	1
Acenaphthylene	3.13		ug/l	0.100	--	1
Anthracene	3.46		ug/l	0.100	--	1
Benzo(ghi)perylene	1.51		ug/l	0.100	--	1
Fluorene	10.0		ug/l	0.100	--	1
Phenanthrene	7.60		ug/l	0.100	--	1
Dibenzo(a,h)anthracene	0.312		ug/l	0.100	--	1
Indeno(1,2,3-cd)pyrene	1.72		ug/l	0.100	--	1
Pyrene	6.56		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		25-87
Phenol-d6	40		16-65
Nitrobenzene-d5	85		42-122
2-Fluorobiphenyl	77		46-121
2,4,6-Tribromophenol	88		45-128
4-Terphenyl-d14	70		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-02
Client ID: B16
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 10:45
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/14/22 14:09
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 16:49

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	82		42-122
2-Fluorobiphenyl	78		46-121
4-Terphenyl-d14	80		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-02
Client ID: B16
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 10:45
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/12/22 14:09
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 16:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	4.08		ug/l	0.100	--	1
Fluoranthene	0.766		ug/l	0.100	--	1
Naphthalene	6.84		ug/l	0.100	--	1
Benzo(a)anthracene	0.322		ug/l	0.100	--	1
Benzo(a)pyrene	0.255		ug/l	0.100	--	1
Benzo(b)fluoranthene	0.417		ug/l	0.100	--	1
Benzo(k)fluoranthene	0.119		ug/l	0.100	--	1
Chrysene	0.210		ug/l	0.100	--	1
Acenaphthylene	1.11		ug/l	0.100	--	1
Anthracene	1.52		ug/l	0.100	--	1
Benzo(ghi)perylene	0.354		ug/l	0.100	--	1
Fluorene	5.43		ug/l	0.100	--	1
Phenanthrene	5.54		ug/l	0.100	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--	1
Indeno(1,2,3-cd)pyrene	0.355		ug/l	0.100	--	1
Pyrene	0.574		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		25-87
Phenol-d6	37		16-65
Nitrobenzene-d5	86		42-122
2-Fluorobiphenyl	76		46-121
2,4,6-Tribromophenol	100		45-128
4-Terphenyl-d14	83		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/12/22 18:01
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1603996-1					
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	51		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	76		42-122
2-Fluorobiphenyl	64		46-121
2,4,6-Tribromophenol	80		45-128
4-Terphenyl-d14	66		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis Batch Quality Control

Analytical Method: 129,625.1
 Analytical Date: 02/12/22 00:20
 Analyst: ALS

Extraction Method: EPA 625.1
 Extraction Date: 02/11/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1603997-1					
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	52		42-122
2-Fluorobiphenyl	54		46-121
4-Terphenyl-d14	56		47-138

Lab Control Sample Analysis Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1603996-2								
Acenaphthene	74		-		60-132	-		30
Fluoranthene	80		-		43-121	-		30
Naphthalene	72		-		36-120	-		30
Benzo(a)anthracene	84		-		42-133	-		30
Benzo(a)pyrene	85		-		32-148	-		30
Benzo(b)fluoranthene	83		-		42-140	-		30
Benzo(k)fluoranthene	82		-		25-146	-		30
Chrysene	71		-		44-140	-		30
Acenaphthylene	81		-		54-126	-		30
Anthracene	76		-		43-120	-		30
Benzo(ghi)perylene	85		-		1-195	-		30
Fluorene	79		-		70-120	-		30
Phenanthrene	72		-		65-120	-		30
Dibenzo(a,h)anthracene	94		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	91		-		1-151	-		30
Pyrene	80		-		70-120	-		30
Pentachlorophenol	69		-		38-152	-		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1603996-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	58				25-87
Phenol-d6	40				16-65
Nitrobenzene-d5	79				42-122
2-Fluorobiphenyl	74				46-121
2,4,6-Tribromophenol	93				45-128
4-Terphenyl-d14	80				47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1603997-2								
Bis(2-ethylhexyl)phthalate	72		-		29-137	-		82
Butyl benzyl phthalate	67		-		1-140	-		60
Di-n-butylphthalate	65		-		8-120	-		47
Di-n-octylphthalate	71		-		19-132	-		69
Diethyl phthalate	62		-		1-120	-		100
Dimethyl phthalate	62		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	58				42-122
2-Fluorobiphenyl	59				46-121
4-Terphenyl-d14	59				47-138

PCBS

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-01
Client ID: B1010
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 12:15
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/11/22 11:18
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 02/10/22 16:38
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/22
Cleanup Method: EPA 3660B
Cleanup Date: 02/11/22

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	69		37-123	B
Decachlorobiphenyl	76		38-114	B
2,4,5,6-Tetrachloro-m-xylene	68		37-123	A
Decachlorobiphenyl	69		38-114	A

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-02
Client ID: B16
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 10:45
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/11/22 11:36
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 02/10/22 16:38
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/22
Cleanup Method: EPA 3660B
Cleanup Date: 02/11/22

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	75		37-123	B
Decachlorobiphenyl	88		38-114	B
2,4,5,6-Tetrachloro-m-xylene	75		37-123	A
Decachlorobiphenyl	78		38-114	A

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Method Blank Analysis Batch Quality Control

Analytical Method: 127,608.3
 Analytical Date: 02/11/22 08:21
 Analyst: CW

Extraction Method: EPA 608.3
 Extraction Date: 02/10/22 16:10
 Cleanup Method: EPA 3665A
 Cleanup Date: 02/10/22
 Cleanup Method: EPA 3660B
 Cleanup Date: 02/11/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1603703-1						
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	77		37-123	B
Decachlorobiphenyl	88		38-114	B
2,4,5,6-Tetrachloro-m-xylene	74		37-123	A
Decachlorobiphenyl	81		38-114	A

Lab Control Sample Analysis Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1603703-2									
Aroclor 1016	72		-		50-140	-		36	A
Aroclor 1260	63		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64				37-123	B
Decachlorobiphenyl	57				38-114	B
2,4,5,6-Tetrachloro-m-xylene	63				37-123	A
Decachlorobiphenyl	52				38-114	A

METALS

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-01

Date Collected: 02/08/22 12:15

Client ID: B1010

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

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	0.08000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Arsenic, Total	ND		mg/l	0.02000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Cadmium, Total	ND		mg/l	0.00400	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Chromium, Total	ND		mg/l	0.02000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Copper, Total	ND		mg/l	0.02000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Iron, Total	23.5		mg/l	0.050	--	1	02/09/22 14:32	02/10/22 19:22	EPA 3005A	19,200.7	GD
Lead, Total	ND		mg/l	0.02000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/09/22 16:21	02/11/22 15:51	EPA 245.1	3,245.1	ZK
Nickel, Total	ND		mg/l	0.04000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.1000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Silver, Total	ND		mg/l	0.00800	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Zinc, Total	ND		mg/l	0.2000	--	20	02/09/22 14:32	02/10/22 10:55	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	939		mg/l	0.660	NA	1	02/09/22 14:32	02/10/22 19:22	EPA 3005A	19,200.7	GD

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.020	--	1		02/10/22 10:55	NA	107,-	
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Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**SAMPLE RESULTS**

Lab ID: L2206591-02

Date Collected: 02/08/22 10:45

Client ID: B16

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

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	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Arsenic, Total	0.09358		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Cadmium, Total	0.00114		mg/l	0.00020	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Chromium, Total	0.00916		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Copper, Total	0.04342		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Iron, Total	34.0		mg/l	0.050	--	1	02/09/22 14:32	02/10/22 20:35	EPA 3005A	19,200.7	GD
Lead, Total	0.03001		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/09/22 16:21	02/11/22 16:01	EPA 245.1	3,245.1	ZK
Nickel, Total	0.00535		mg/l	0.00200	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Silver, Total	ND		mg/l	0.00040	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Zinc, Total	0.1280		mg/l	0.01000	--	1	02/09/22 14:32	02/10/22 10:45	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	404		mg/l	0.660	NA	1	02/09/22 14:32	02/10/22 22:36	EPA 3005A	19,200.7	GD

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	--	1		02/10/22 10:45	NA	107,-	
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Project Name: MALDEN RGP

Lab Number: L2206591

Project Number: 01.0171094.40

Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-03

Date Collected: 02/08/22 09:45

Client ID: SW-1

Date Received: 02/08/22

Sample Location: 100 COMMERCIAL STREET MALDEN

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	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Arsenic, Total	0.00115		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Cadmium, Total	ND		mg/l	0.00020	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Chromium, Total	ND		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Copper, Total	0.00293		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Iron, Total	0.432		mg/l	0.050	--	1	02/09/22 14:32	02/11/22 00:18	EPA 3005A	19,200.7	GD
Lead, Total	0.00261		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/09/22 16:21	02/11/22 16:04	EPA 245.1	3,245.1	ZK
Nickel, Total	ND		mg/l	0.00200	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Silver, Total	ND		mg/l	0.00040	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Zinc, Total	0.02744		mg/l	0.01000	--	1	02/09/22 14:32	02/10/22 13:37	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	54.5		mg/l	0.660	NA	1	02/09/22 14:32	02/11/22 00:18	EPA 3005A	19,200.7	GD



Project Name: MALDEN RGP

Lab Number: L2206591

Project Number: 01.0171094.40

Report Date: 02/14/22

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): 01-03 Batch: WG1603027-1										
Iron, Total	ND		mg/l	0.050	--	1	02/09/22 14:32	02/10/22 19:04	19,200.7	GD

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): 01-03 Batch: WG1603027-1										
Hardness	ND		mg/l	0.660	NA	1	02/09/22 14:32	02/10/22 19:04	19,200.7	GD

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): 01-03 Batch: WG1603028-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Arsenic, Total	ND		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Cadmium, Total	ND		mg/l	0.00020	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Chromium, Total	ND		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Copper, Total	ND		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Lead, Total	ND		mg/l	0.00100	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Nickel, Total	ND		mg/l	0.00200	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Silver, Total	ND		mg/l	0.00040	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV
Zinc, Total	ND		mg/l	0.01000	--	1	02/09/22 14:32	02/10/22 09:59	3,200.8	SV

Prep Information

Digestion Method: EPA 3005A



Project Name: MALDEN RGP

Lab Number: L2206591

Project Number: 01.0171094.40

Report Date: 02/14/22

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): 01-03 Batch: WG1603030-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/09/22 16:21	02/11/22 15:43	3,245.1	ZK

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP

Project Number: 01.0171094.40

Lab Number: L2206591

Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1603027-2								
Iron, Total	104		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 Batch: WG1603027-2								
Hardness	108		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1603028-2								
Antimony, Total	89		-		85-115	-		
Arsenic, Total	99		-		85-115	-		
Cadmium, Total	96		-		85-115	-		
Chromium, Total	100		-		85-115	-		
Copper, Total	95		-		85-115	-		
Lead, Total	96		-		85-115	-		
Nickel, Total	93		-		85-115	-		
Selenium, Total	100		-		85-115	-		
Silver, Total	101		-		85-115	-		
Zinc, Total	95		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1603030-2								
Mercury, Total	102		-		85-115	-		

Matrix Spike Analysis **Batch Quality Control**

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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): 01-03 QC Batch ID: WG1603027-3 QC Sample: L2206591-01 Client ID: B1010												
Iron, Total	23.5	1	24.8	130	Q	-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-3 QC Sample: L2206591-01 Client ID: B1010												
Hardness	939	66.2	1020	122		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-7 QC Sample: L2206591-02 Client ID: B16												
Iron, Total	34.0	1	34.8	80		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-7 QC Sample: L2206591-02 Client ID: B16												
Hardness	404	66.2	470	100		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603028-3 QC Sample: L2206591-01 Client ID: B1010												
Antimony, Total	ND	0.5	0.4915	98		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1209	101		-	-		70-130	-		20
Cadmium, Total	ND	0.053	0.04756	90		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1754	88		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2341	94		-	-		70-130	-		20
Lead, Total	ND	0.53	0.5542	104		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4803	96		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1098	92		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04671	93		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.4838	97		-	-		70-130	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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): 01-03			QC Batch ID: WG1603028-5		QC Sample: L2206591-02		Client ID: B16		
Antimony, Total	ND	0.5	0.5000	100	-	-	70-130	-	20
Arsenic, Total	0.09358	0.12	0.2152	101	-	-	70-130	-	20
Cadmium, Total	0.00114	0.053	0.05258	97	-	-	70-130	-	20
Chromium, Total	0.00916	0.2	0.1865	89	-	-	70-130	-	20
Copper, Total	0.04342	0.25	0.2668	89	-	-	70-130	-	20
Lead, Total	0.03001	0.53	0.5391	96	-	-	70-130	-	20
Nickel, Total	0.00535	0.5	0.4533	90	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.06356	53	Q	-	70-130	-	20
Silver, Total	ND	0.05	0.05091	102	-	-	70-130	-	20
Zinc, Total	0.1280	0.5	0.6051	95	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-03			QC Batch ID: WG1603030-3		QC Sample: L2206591-01		Client ID: B1010		
Mercury, Total	ND	0.005	0.00500	100	-	-	70-130	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: MALDEN RGP

Project Number: 01.0171094.40

Lab Number: L2206591

Report Date: 02/14/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-4 QC Sample: L2206591-01 Client ID: B1010						
Iron, Total	23.5	23.5	mg/l	0		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-4 QC Sample: L2206591-01 Client ID: B1010						
Hardness	939	946	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-8 QC Sample: L2206591-02 Client ID: B16						
Iron, Total	34.0	32.8	mg/l	4		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603027-8 QC Sample: L2206591-02 Client ID: B16						
Hardness	404	404	mg/l	0		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603028-4 QC Sample: L2206591-01 Client ID: B1010						
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	ND	ND	mg/l	NC		20

Lab Duplicate Analysis *Batch Quality Control*

Project Name: MALDEN RGP

Project Number: 01.0171094.40

Lab Number: L2206591

Report Date: 02/14/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603028-6 QC Sample: L2206591-02 Client ID: B16					
Antimony, Total	ND	ND	mg/l	NC	20
Arsenic, Total	0.09358	0.08556	mg/l	9	20
Cadmium, Total	0.00114	0.00095	mg/l	18	20
Chromium, Total	0.00916	0.00738	mg/l	21	Q 20
Copper, Total	0.04342	0.02106	mg/l	69	Q 20
Lead, Total	0.03001	0.02557	mg/l	16	20
Nickel, Total	0.00535	0.00476	mg/l	12	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.1280	0.1185	mg/l	8	20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1603030-4 QC Sample: L2206591-01 Client ID: B1010					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS & MISCELLANEOUS

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-01
Client ID: B1010
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 12:15
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	88.		mg/l	20	NA	4	-	02/11/22 16:00	121,2540D	MD
Cyanide, Total	0.089		mg/l	0.005	--	1	02/09/22 06:00	02/09/22 11:26	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/08/22 22:45	121,4500CL-D	AS
Nitrogen, Ammonia	5.30		mg/l	0.075	--	1	02/09/22 03:01	02/09/22 20:12	121,4500NH3-BH	AT
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	02/10/22 08:42	121,4500NO3-F	MR
Total Nitrogen	6.4		mg/l	0.30	--	1	-	02/14/22 13:03	107,-	JO
Nitrogen, Total Kjeldahl	6.45		mg/l	0.300	--	1	02/09/22 01:56	02/09/22 21:35	121,4500NH3-H	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/09/22 13:45	02/09/22 15:00	140,1664B	NP
Phenolics, Total	ND		mg/l	0.030	--	1	02/11/22 07:04	02/11/22 10:24	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/09/22 08:10	02/09/22 08:30	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	7440		mg/l	250	--	500	-	02/09/22 22:18	44,300.0	AT



Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-02
Client ID: B16
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 10:45
Date Received: 02/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	140		mg/l	12	NA	2.5	-	02/11/22 16:00	121,2540D	MD
Cyanide, Total	0.763		mg/l	0.010	--	2	02/09/22 06:00	02/09/22 11:43	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/08/22 22:45	121,4500CL-D	AS
Nitrogen, Ammonia	7.08		mg/l	0.075	--	1	02/11/22 13:00	02/11/22 18:56	121,4500NH3-BH	AT
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	02/10/22 08:43	121,4500NO3-F	MR
Total Nitrogen	7.7		mg/l	0.30	--	1	-	02/14/22 13:03	107,-	JO
Nitrogen, Total Kjeldahl	7.69		mg/l	0.300	--	1	02/12/22 01:44	02/14/22 11:53	121,4500NH3-H	JO
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/09/22 13:45	02/09/22 15:00	140,1664B	NP
Phenolics, Total	ND		mg/l	0.030	--	1	02/11/22 07:04	02/11/22 10:02	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/09/22 08:10	02/09/22 08:30	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	939.		mg/l	50.0	--	100	-	02/09/22 21:54	44,300.0	AT



Project Name: MALDEN RGP

Project Number: 01.0171094.40

Lab Number: L2206591

Report Date: 02/14/22

SAMPLE RESULTS

Lab ID: L2206591-03

Client ID: SW-1

Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/08/22 09:45

Date Received: 02/08/22

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
SALINITY	ND		SU	2.0	--	1	-	02/11/22 20:26	121,2520B	AS
Nitrogen, Ammonia	0.313		mg/l	0.075	--	1	02/09/22 03:01	02/09/22 20:15	121,4500NH3-BH	AT
Nitrogen, Nitrate/Nitrite	0.84		mg/l	0.10	--	1	-	02/10/22 08:44	121,4500NO3-F	MR
Total Nitrogen	1.7		mg/l	0.30	--	1	-	02/14/22 13:03	107,-	JO
Nitrogen, Total Kjeldahl	0.825		mg/l	0.300	--	1	02/09/22 01:56	02/09/22 21:37	121,4500NH3-H	AT



Project Name: MALDEN RGP

Lab Number: L2206591

Project Number: 01.0171094.40

Report Date: 02/14/22

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): 01-02 Batch: WG1602843-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/08/22 22:45	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG1602855-1										
Nitrogen, Total Kjeldahl	ND		mg/l	0.300	--	1	02/09/22 01:56	02/09/22 21:22	121,4500NH3-H	AT
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG1602857-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/09/22 03:01	02/09/22 19:57	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1602865-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/09/22 06:00	02/09/22 11:01	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1602989-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/09/22 08:10	02/09/22 08:29	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1603050-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/09/22 13:45	02/09/22 15:00	140,1664B	NP
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1603296-1										
Chloride	ND		mg/l	0.500	--	1	-	02/09/22 19:54	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1603343-1										
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	02/10/22 08:16	121,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1603861-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/11/22 07:04	02/11/22 09:58	4,420.1	KP
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1604025-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/11/22 13:00	02/11/22 18:42	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1604145-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/11/22 16:00	121,2540D	MD
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1604245-1										
Nitrogen, Total Kjeldahl	ND		mg/l	0.300	--	1	02/12/22 01:44	02/14/22 11:50	121,4500NH3-H	JO



Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1602843-2								
Chlorine, Total Residual	108		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03 Batch: WG1602855-2								
Nitrogen, Total Kjeldahl	90		-		78-122	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03 Batch: WG1602857-2								
Nitrogen, Ammonia	104		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1602865-2								
Cyanide, Total	94		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1602989-2								
Chromium, Hexavalent	106		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1603050-2								
TPH	65		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1603296-2								
Chloride	100		-		90-110	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1603343-2					
Nitrogen, Nitrate/Nitrite	96	-	90-110	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1603861-2					
Phenolics, Total	108	-	70-130	-	
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1604025-2					
Nitrogen, Ammonia	106	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1604145-2					
Solids, Total Suspended	90	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG1604217-1					
SALINITY	99	-		-	
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1604245-2					
Nitrogen, Total Kjeldahl	93	-	78-122	-	

Matrix Spike Analysis **Batch Quality Control**

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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): 01-02				QC Batch ID: WG1602843-4			QC Sample: L2206591-02			Client ID: B16		
Chlorine, Total Residual	ND	0.25	ND	0	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03				QC Batch ID: WG1602855-4			QC Sample: L2206313-01			Client ID: MS Sample		
Nitrogen, Total Kjeldahl	0.549	8	ND	0	Q	-	-		77-111	-		24
General Chemistry - Westborough Lab Associated sample(s): 01,03				QC Batch ID: WG1602857-4			QC Sample: L2206591-01			Client ID: B1010		
Nitrogen, Ammonia	5.30	4	9.19	97		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02				QC Batch ID: WG1602865-4			QC Sample: L2205075-01			Client ID: MS Sample		
Cyanide, Total	0.005	0.2	0.204	99		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01-02				QC Batch ID: WG1602989-4			QC Sample: L2206591-02			Client ID: B16		
Chromium, Hexavalent	ND	0.1	0.085	85		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02				QC Batch ID: WG1603050-4			QC Sample: L2200025-66			Client ID: MS Sample		
TPH	ND	18.9	15.9	84		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02				QC Batch ID: WG1603296-3			QC Sample: L2206370-04			Client ID: MS Sample		
Chloride	ND	4	4.29	107		-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-03				QC Batch ID: WG1603343-4			QC Sample: L2206740-01			Client ID: MS Sample		
Nitrogen, Nitrate/Nitrite	ND	4	3.6	90		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02				QC Batch ID: WG1603861-4			QC Sample: L2206591-01			Client ID: B1010		
Phenolics, Total	ND	0.4	0.42	104		-	-		70-130	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1604025-4 QC Sample: L2200025-91 Client ID: MS Sample									
Nitrogen, Ammonia	0.245	4	3.75	88	-	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1604245-4 QC Sample: L2206692-01 Client ID: MS Sample									
Nitrogen, Total Kjeldahl	3.03	8	11.1	101	-	-	77-111	-	24

Lab Duplicate Analysis *Batch Quality Control*

Project Name: MALDEN RGP

Project Number: 01.0171094.40

Lab Number: L2206591

Report Date: 02/14/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1602843-3 QC Sample: L2206591-01 Client ID: B1010						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG1602855-3 QC Sample: L2206313-01 Client ID: DUP Sample						
Nitrogen, Total Kjeldahl	0.549	ND	mg/l	NC		24
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG1602857-3 QC Sample: L2206591-01 Client ID: B1010						
Nitrogen, Ammonia	5.30	5.62	mg/l	6		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1602865-3 QC Sample: L2205076-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1602989-3 QC Sample: L2206591-01 Client ID: B1010						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1603050-3 QC Sample: L2200025-65 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1603296-4 QC Sample: L2206370-04 Client ID: DUP Sample						
Chloride	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1603343-3 QC Sample: L2206740-01 Client ID: DUP Sample						
Nitrogen, Nitrate/Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1603861-3 QC Sample: L2206591-01 Client ID: B1010						
Phenolics, Total	ND	ND	mg/l	NC		20

Lab Duplicate Analysis *Batch Quality Control*

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1604025-3 QC Sample: L2200025-91 Client ID: DUP Sample					
Nitrogen, Ammonia	0.245	0.230	mg/l	6	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1604145-3 QC Sample: L2206591-02 Client ID: B16					
Solids, Total Suspended	140	150	mg/l	7	29
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG1604217-2 QC Sample: L2206591-03 Client ID: SW-1					
SALINITY	ND	ND	SU	NC	
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1604245-3 QC Sample: L2206692-01 Client ID: DUP Sample					
Nitrogen, Total Kjeldahl	3.03	3.38	mg/l	11	24

Project Name: MALDEN RGP**Lab Number:** L2206591**Project Number:** 01.0171094.40**Report Date:** 02/14/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2206591-01A	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-01B	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-01C	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-01D	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-01E	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-01F	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-01G	Vial unpreserved	B	NA		2.8	Y	Absent		SUB-ETHANOL(14)
L2206591-01H	Vial unpreserved	B	NA		2.8	Y	Absent		SUB-ETHANOL(14)
L2206591-01I	Vial unpreserved	B	NA		2.8	Y	Absent		SUB-ETHANOL(14)
L2206591-01J	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		504(14)
L2206591-01K	Vial Na2S2O3 preserved	B	NA		2.8	Y	Absent		504(14)
L2206591-01L	Plastic 250ml HNO3 preserved	B	<2	<2	2.8	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDU(180),FE-UI(180),SE-2008T(180),HG-U(28),AS-2008T(180),AG-2008T(180),PB-2008T(180),CR-2008T(180),SB-2008T(180)
L2206591-01M	Plastic 250ml NaOH preserved	B	>12	>12	2.8	Y	Absent		TCN-4500(14)
L2206591-01N	Plastic 500ml H2SO4 preserved	B	<2	<2	2.8	Y	Absent		TKN-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L2206591-01O	Plastic 950ml unpreserved	B	7	7	2.8	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L2206591-01P	Plastic 950ml unpreserved	B	7	7	2.8	Y	Absent		TSS-2540(7)
L2206591-01Q	Amber 950ml H2SO4 preserved	B	<2	<2	2.8	Y	Absent		TPHENOL-420(28)
L2206591-01R	Amber 1000ml Na2S2O3	B	7	7	2.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2206591-01S	Amber 1000ml Na2S2O3	B	7	7	2.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2206591-01T	Amber 1000ml Na2S2O3	B	7	7	2.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Serial_No: 02142216:25
Lab Number: L2206591
Report Date: 02/14/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2206591-01U	Amber 1000ml Na2S2O3	B	7	7	2.8	Y	Absent		PCB-608.3(365)
L2206591-01V	Amber 1000ml Na2S2O3	B	7	7	2.8	Y	Absent		PCB-608.3(365)
L2206591-01W	Amber 1000ml Na2S2O3	B	7	7	2.8	Y	Absent		PCB-608.3(365)
L2206591-01X	Amber 1000ml HCl preserved	B	NA		2.8	Y	Absent		TPH-1664(28)
L2206591-01Y	Amber 1000ml HCl preserved	B	NA		2.8	Y	Absent		TPH-1664(28)
L2206591-02A	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-02B	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-02C	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-02D	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-02E	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-02F	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2206591-02G	Vial unpreserved	A	NA		2.5	Y	Absent		SUB-ETHANOL(14)
L2206591-02H	Vial unpreserved	A	NA		2.5	Y	Absent		SUB-ETHANOL(14)
L2206591-02I	Vial unpreserved	A	NA		2.5	Y	Absent		SUB-ETHANOL(14)
L2206591-02J	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		504(14)
L2206591-02K	Vial Na2S2O3 preserved	A	NA		2.5	Y	Absent		504(14)
L2206591-02L	Plastic 250ml HNO3 preserved	A	<2	<2	2.5	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),FE-UI(180),CU-2008T(180),HG-U(28),AG-2008T(180),SE-2008T(180),AS-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2206591-02M	Plastic 250ml NaOH preserved	A	>12	>12	2.5	Y	Absent		TCN-4500(14)
L2206591-02N	Plastic 500ml H2SO4 preserved	A	<2	<2	2.5	Y	Absent		TKN-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L2206591-02O	Plastic 950ml unpreserved	A	7	7	2.5	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L2206591-02P	Plastic 950ml unpreserved	A	7	7	2.5	Y	Absent		TSS-2540(7)
L2206591-02Q	Amber 950ml H2SO4 preserved	A	<2	<2	2.5	Y	Absent		TPHENOL-420(28)
L2206591-02R	Amber 1000ml Na2S2O3	A	7	7	2.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2206591-02S	Amber 1000ml Na2S2O3	A	7	7	2.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2206591-02T	Amber 1000ml Na2S2O3	A	7	7	2.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2206591-02U	Amber 1000ml Na2S2O3	A	7	7	2.5	Y	Absent		PCB-608.3(365)

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Serial_No:02142216:25
Lab Number: L2206591
Report Date: 02/14/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2206591-02V	Amber 1000ml Na2S2O3	A	7	7	2.5	Y	Absent		PCB-608.3(365)
L2206591-02W	Amber 1000ml Na2S2O3	A	7	7	2.5	Y	Absent		PCB-608.3(365)
L2206591-02X	Amber 1000ml HCl preserved	A	NA		2.5	Y	Absent		TPH-1664(28)
L2206591-02Y	Amber 1000ml HCl preserved	A	NA		2.5	Y	Absent		TPH-1664(28)
L2206591-03A	Amber 120ml unpreserved	A	7	7	2.5	Y	Absent		SALINITY(28)
L2206591-03B	Plastic 250ml HNO3 preserved	A	<2	<2	2.5	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),HG-U(28),SE-2008T(180),AG-2008T(180),AS-2008T(180),PB-2008T(180),CR-2008T(180),SB-2008T(180)
L2206591-03C	Plastic 500ml H2SO4 preserved	A	<2	<2	2.5	Y	Absent		TKN-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: 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

Report Format: Data Usability Report



Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

Data Qualifiers

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.
- 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.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: MALDEN RGP
Project Number: 01.0171094.40

Lab Number: L2206591
Report Date: 02/14/22

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.
- 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.
- 140 Method 1664, Revision B: 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-10-001, February 2010.

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.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

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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 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; 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.

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, SM4500CI-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, SM9222D.****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, EPA 537.1.****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 2 OF 2

Westborough, MA Mansfield, MA
 TEL: 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Client Information

Client: GZA
 Address: 249 Vanderbilt Ave.
 Norwood Ma, 02062
 Phone: 781-983-1357

Fax:
 Email: william.davis@gza.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Malden RGP

Project Location: 100 commercial street Malden

Project #: 171094

Project Manager:

ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)

Due Date: 4-day Time:

Other Project Specific Requirements/Comments/Detection Limits:

See attached RGP list, surface water at outfall in Malden River, HexCr hold time Metals (Antimony, Arsenic, Cadmium, Chromium III and VI, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc and Iron) by EPA Method 7000, 6010, 6020, 7470 or 7196A

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS												SAMPLE HANDLING Filtration <input type="checkbox"/> Done <input type="checkbox"/> Not Needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	TOTAL # BOTTLES
		Date	Time			Ammonia and Nitrogen by SM-4500	Total Hardness by 3005A												
06591-03	SW-1	2/8/22	9:45	SW	JAI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		3
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PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT
MA MCP or CT RCP?**

FORM NO: 01-01(1)
(rev. 5-JAN-12)

Container Type

Preservative



Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

		Subcontract Chain of Custody		Alpha Job Number L2206591	
		Tek Lab, Inc. 5445 Horsehoe Lake Road Collinsville, IL 62234-7425			
Client Information		Project Information		Regulatory Requirements/Report Limits	
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 716.427.5228 Email: jbyrnes@alphalab.com		Project Location: MA Project Manager: Jennifer Byrnes Turnaround & Deliverables Information Due Date: 02/11/22 (RUSH) Deliverables:		State/Federal Program: Regulatory Criteria:	
Project Specific Requirements and/or Report Requirements					
Reference following Alpha Job Number on final report/deliverables: L2206591				Report to include Method Blank, LCS/LCSD:	
Additional Comments: Send all results/reports to subreports@alphalab.com NPDES: Rush by 02/14 at the latest					
Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	B1010 B16	02-08-22 12:15 02-08-22 10:45	WATER WATER	Ethanol by EPA 1671 Revision A Ethanol by EPA 1671 Revision A	
Form No: AL_subcoc		Relinquished By:	Date/Time:	Received By:	Date/Time:
			2/9/22		

February 10, 2022

Jennifer Byrnes
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (716) 427-5228
FAX:

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: L2206591

WorkOrder: 22020567

Dear Jennifer Byrnes:

TEKLAB, INC received 2 samples on 2/10/2022 9:45:00 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
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Report Contents

<http://www.teklabinc.com/>**Client:** Alpha Analytical**Work Order:** 22020567**Client Project:** L2206591**Report Date:** 10-Feb-22**This reporting package includes the following:**

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	9
Receiving Check List	10
Chain of Custody	Appended

Definitions

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020567

Client Project: L2206591

Report Date: 10-Feb-22

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

NC Data is not acceptable for compliance purposes

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)

Definitions

<http://www.teklabinc.com/>**Client:** Alpha Analytical**Work Order:** 22020567**Client Project:** L2206591**Report Date:** 10-Feb-22

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	

Case Narrative

<http://www.teklabinc.com/>**Client:** Alpha Analytical**Work Order:** 22020567**Client Project:** L2206591**Report Date:** 10-Feb-22**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

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425

Phone (618) 344-1004

Fax (618) 344-1005

Email EHurley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415

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Accreditations

<http://www.teklabinc.com/>

Client: Alpha Analytical
Client Project: L2206591

Work Order: 22020567
Report Date: 10-Feb-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Laboratory Results

<http://www.teklabinc.com/>

Client: Alpha Analytical
Client Project: L2206591
Lab ID: 22020567-001
Matrix: AQUEOUS

Work Order: 22020567
Report Date: 10-Feb-22
Client Sample ID: B1010
Collection Date: 02/08/2022 12:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		ND	mg/L	1	02/10/2022 12:40	R306928

Laboratory Results

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020567

Client Project: L2206591

Report Date: 10-Feb-22

Lab ID: 22020567-002

Client Sample ID: B16

Matrix: AQUEOUS

Collection Date: 02/08/2022 10:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		ND	mg/L	1	02/10/2022 13:17	R306928

Quality Control Results

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020567

Client Project: L2206591

Report Date: 10-Feb-22

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

Batch R306928 SampType: MBLK Units mg/L

SampID: MBLK-021022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		ND						02/10/2022

Batch R306928 SampType: LCS Units mg/L

SampID: LCS-021022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		300	250.0	0	119.0	70	132	02/10/2022

Batch R306928 SampType: MS Units mg/L

SampID: 22020243-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		310	250.0	0	125.9	70	132	02/10/2022

Batch R306928 SampType: MSD Units mg/L

RPD Limit: 30

SampID: 22020243-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		320	250.0	0	126.3	314.7	0.36	02/10/2022

Receiving Check List

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020567

Client Project: L2206591

Report Date: 10-Feb-22

Carrier: UPS

Received By: PWR

Completed by:

Reviewed by:

On:

On:

10-Feb-22

10-Feb-22

Mary E. Kemp

Elizabeth A. Hurley

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.



ANALYTICAL REPORT

Lab Number:	L2206740
Client:	GZA GeoEnvironmental, Inc. 249 Vanderbilt Ave Norwood, MA 02062
ATTN:	Bill Davis
Phone:	(781) 278-5769
Project Name:	MALDEN RGP
Project Number:	01.0171094.32
Report Date:	02/15/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2206740-01	B501	WATER	100 COMMERCIAL STREET MALDEN	02/09/22 10:20	02/09/22

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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

The analyses performed were specified by the client.

Volatile Organics by SIM

The WG1604767-3 LCS recovery, associated with L2206740-01, is above the acceptance criteria for 1,4-dioxane (156%); however, the associated sample is non-detect to the RL for this target analyte. The results of the original analysis are reported.

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: 02/15/22

ORGANICS

VOLATILES

Project Name: MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22**SAMPLE RESULTS**

Lab ID: L2206740-01

Date Collected: 02/09/22 10:20

Client ID: B501

Date Received: 02/09/22

Sample Location: 100 COMMERCIAL STREET MALDEN

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1

Analytical Date: 02/11/22 11:15

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	9.6		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	6.8		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	ND		ug/l	1.0	--	1
Trichloroethene	ND		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: MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22**SAMPLE RESULTS**

Lab ID: L2206740-01

Date Collected: 02/09/22 10:20

Client ID: B501

Date Received: 02/09/22

Sample Location: 100 COMMERCIAL STREET MALDEN

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	100		60-140
Fluorobenzene	100		60-140
4-Bromofluorobenzene	99		60-140

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

SAMPLE RESULTS

Lab ID: L2206740-01
Client ID: B501
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/09/22 10:20
Date Received: 02/09/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/11/22 11:15
Analyst: GT

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

1,4-Dioxane	ND		ug/l	5.0	--	1
-------------	----	--	------	-----	----	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	106		60-140
4-Bromofluorobenzene	103		60-140

Project Name: MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22**SAMPLE RESULTS**

Lab ID: L2206740-01

Date Collected: 02/09/22 10:20

Client ID: B501

Date Received: 02/09/22

Sample Location: 100 COMMERCIAL STREET MALDEN

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 504.1

Analytical Method: 14,504.1

Extraction Date: 02/10/22 10:01

Analytical Date: 02/10/22 13:15

Analyst: GT

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

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 02/10/22 11:35
Analyst: GT

Extraction Method: EPA 504.1
Extraction Date: 02/10/22 10:01

Parameter	Result	Qualifier	Units	RL	MDL
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1603504-1					
1,2-Dibromoethane	ND		ug/l	0.010	-- A

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 02/11/22 10:06
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1603638-10					
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: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 02/11/22 10:06
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1603638-10					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	98		60-140
4-Bromofluorobenzene	100		60-140

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
 Analytical Date: 02/11/22 10:06
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1604767-4					
1,4-Dioxane	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	106		60-140
4-Bromofluorobenzene	106		60-140

Lab Control Sample Analysis **Batch Quality Control**

Project Name: MALDEN RGP

Project Number: 01.0171094.32

Lab Number: L2206740

Report Date: 02/15/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG1603504-2									
1,2-Dibromoethane	116		-		80-120	-			A

Lab Control Sample Analysis Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603638-9								
Methylene chloride	95		-		60-140	-		28
1,1-Dichloroethane	95		-		50-150	-		49
Carbon tetrachloride	100		-		70-130	-		41
1,1,2-Trichloroethane	90		-		70-130	-		45
Tetrachloroethene	100		-		70-130	-		39
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	100		-		70-130	-		36
Benzene	100		-		65-135	-		61
Toluene	100		-		70-130	-		41
Ethylbenzene	90		-		60-140	-		63
Vinyl chloride	115		-		5-195	-		66
1,1-Dichloroethene	100		-		50-150	-		32
cis-1,2-Dichloroethene	95		-		60-140	-		30
Trichloroethene	95		-		65-135	-		48
1,2-Dichlorobenzene	100		-		65-135	-		57
1,3-Dichlorobenzene	95		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
p/m-Xylene	88		-		60-140	-		30
o-xylene	80		-		60-140	-		30
Acetone	102		-		40-160	-		30
Methyl tert butyl ether	100		-		60-140	-		30
Tert-Butyl Alcohol	120		-		60-140	-		30
Tertiary-Amyl Methyl Ether	90		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603638-9								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	101				60-140
Fluorobenzene	101				60-140
4-Bromofluorobenzene	100				60-140

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22

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: WG1604767-3								
1,4-Dioxane	156	Q	-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	109				60-140
4-Bromofluorobenzene	104				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603504-3 QC Sample: L2205818-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.253	0.297	118		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.253	0.316	125	Q	-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.253	0.323	128	Q	-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

SAMPLE RESULTS

Lab ID: L2206740-01
Client ID: B501
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/09/22 10:20
Date Received: 02/09/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/14/22 17:12
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 16:49

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	75		42-122
2-Fluorobiphenyl	74		46-121
4-Terphenyl-d14	77		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

SAMPLE RESULTS

Lab ID: L2206740-01
Client ID: B501
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/09/22 10:20
Date Received: 02/09/22
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/12/22 14:25
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 16:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	8.00		ug/l	0.100	--	1
Fluoranthene	0.728		ug/l	0.100	--	1
Naphthalene	11.2		ug/l	0.100	--	1
Benzo(a)anthracene	0.202		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	0.488		ug/l	0.100	--	1
Anthracene	0.910		ug/l	0.100	--	1
Benzo(ghi)perylene	ND		ug/l	0.100	--	1
Fluorene	2.39		ug/l	0.100	--	1
Phenanthrene	0.692		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	0.471		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		25-87
Phenol-d6	34		16-65
Nitrobenzene-d5	76		42-122
2-Fluorobiphenyl	67		46-121
2,4,6-Tribromophenol	91		45-128
4-Terphenyl-d14	77		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/12/22 18:01
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/11/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1603996-1					
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	51		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	76		42-122
2-Fluorobiphenyl	64		46-121
2,4,6-Tribromophenol	80		45-128
4-Terphenyl-d14	66		47-138

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
 Analytical Date: 02/12/22 00:20
 Analyst: ALS

Extraction Method: EPA 625.1
 Extraction Date: 02/11/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1603997-1					
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	52		42-122
2-Fluorobiphenyl	54		46-121
4-Terphenyl-d14	56		47-138

Lab Control Sample Analysis Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603996-2								
Acenaphthene	74		-		60-132	-		30
Fluoranthene	80		-		43-121	-		30
Naphthalene	72		-		36-120	-		30
Benzo(a)anthracene	84		-		42-133	-		30
Benzo(a)pyrene	85		-		32-148	-		30
Benzo(b)fluoranthene	83		-		42-140	-		30
Benzo(k)fluoranthene	82		-		25-146	-		30
Chrysene	71		-		44-140	-		30
Acenaphthylene	81		-		54-126	-		30
Anthracene	76		-		43-120	-		30
Benzo(ghi)perylene	85		-		1-195	-		30
Fluorene	79		-		70-120	-		30
Phenanthrene	72		-		65-120	-		30
Dibenzo(a,h)anthracene	94		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	91		-		1-151	-		30
Pyrene	80		-		70-120	-		30
Pentachlorophenol	69		-		38-152	-		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1603996-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	58				25-87
Phenol-d6	40				16-65
Nitrobenzene-d5	79				42-122
2-Fluorobiphenyl	74				46-121
2,4,6-Tribromophenol	93				45-128
4-Terphenyl-d14	80				47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603997-2								
Bis(2-ethylhexyl)phthalate	72		-		29-137	-		82
Butyl benzyl phthalate	67		-		1-140	-		60
Di-n-butylphthalate	65		-		8-120	-		47
Di-n-octylphthalate	71		-		19-132	-		69
Diethyl phthalate	62		-		1-120	-		100
Dimethyl phthalate	62		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	58				42-122
2-Fluorobiphenyl	59				46-121
4-Terphenyl-d14	59				47-138

PCBS

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

SAMPLE RESULTS

Lab ID: L2206740-01
Client ID: B501
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/09/22 10:20
Date Received: 02/09/22
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/11/22 11:46
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 02/10/22 16:38
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/22
Cleanup Method: EPA 3660B
Cleanup Date: 02/11/22

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	73		37-123	B
Decachlorobiphenyl	79		38-114	B
2,4,5,6-Tetrachloro-m-xylene	71		37-123	A
Decachlorobiphenyl	72		38-114	A

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Method Blank Analysis Batch Quality Control

Analytical Method: 127,608.3
 Analytical Date: 02/11/22 08:21
 Analyst: CW

Extraction Method: EPA 608.3
 Extraction Date: 02/10/22 16:10
 Cleanup Method: EPA 3665A
 Cleanup Date: 02/10/22
 Cleanup Method: EPA 3660B
 Cleanup Date: 02/11/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1603703-1						
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	77		37-123	B
Decachlorobiphenyl	88		38-114	B
2,4,5,6-Tetrachloro-m-xylene	74		37-123	A
Decachlorobiphenyl	81		38-114	A

Lab Control Sample Analysis Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603703-2									
Aroclor 1016	72		-		50-140	-		36	A
Aroclor 1260	63		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64				37-123	B
Decachlorobiphenyl	57				38-114	B
2,4,5,6-Tetrachloro-m-xylene	63				37-123	A
Decachlorobiphenyl	52				38-114	A

METALS

Project Name: MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22**SAMPLE RESULTS**

Lab ID: L2206740-01

Date Collected: 02/09/22 10:20

Client ID: B501

Date Received: 02/09/22

Sample Location: 100 COMMERCIAL STREET MALDEN

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	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Arsenic, Total	0.01068		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Cadmium, Total	0.00046		mg/l	0.00020	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Chromium, Total	0.00142		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Copper, Total	ND		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Iron, Total	15.0		mg/l	0.050	--	1	02/10/22 13:52	02/11/22 12:25	EPA 3005A	19,200.7	GD
Lead, Total	ND		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/10/22 15:59	02/15/22 06:01	EPA 245.1	3,245.1	AC
Nickel, Total	0.00323		mg/l	0.00200	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Silver, Total	ND		mg/l	0.00040	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Zinc, Total	0.03133		mg/l	0.01000	--	1	02/10/22 13:52	02/10/22 22:04	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	307		mg/l	0.660	NA	1	02/10/22 13:52	02/11/22 12:25	EPA 3005A	19,200.7	GD

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	--	1	02/10/22 22:04	NA	107,-
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Project Name: MALDEN RGP

Lab Number: L2206740

Project Number: 01.0171094.32

Report Date: 02/15/22

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 Batch: WG1603627-1										
Iron, Total	ND		mg/l	0.050	--	1	02/10/22 13:52	02/11/22 12:02	19,200.7	GD

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 Batch: WG1603627-1										
Hardness	ND		mg/l	0.660	NA	1	02/10/22 13:52	02/11/22 12:02	19,200.7	GD

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 Batch: WG1603628-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Arsenic, Total	ND		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Cadmium, Total	ND		mg/l	0.00020	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Chromium, Total	ND		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Copper, Total	ND		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Lead, Total	ND		mg/l	0.00100	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Nickel, Total	ND		mg/l	0.00200	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Selenium, Total	ND		mg/l	0.00500	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Silver, Total	ND		mg/l	0.00040	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP
Zinc, Total	ND		mg/l	0.01000	--	1	02/10/22 13:52	02/10/22 21:43	3,200.8	WP

Prep Information

Digestion Method: EPA 3005A



Project Name: MALDEN RGP

Lab Number: L2206740

Project Number: 01.0171094.32

Report Date: 02/15/22

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 Batch: WG1603629-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/10/22 15:59	02/15/22 05:37	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1603627-2								
Iron, Total	99		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1603627-2								
Hardness	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1603628-2								
Antimony, Total	90		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	98		-		85-115	-		
Chromium, Total	104		-		85-115	-		
Copper, Total	104		-		85-115	-		
Lead, Total	98		-		85-115	-		
Nickel, Total	98		-		85-115	-		
Selenium, Total	102		-		85-115	-		
Silver, Total	106		-		85-115	-		
Zinc, Total	100		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1603629-2								
Mercury, Total	102		-		85-115	-		

Matrix Spike Analysis **Batch Quality Control**

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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 QC Batch ID: WG1603627-3 QC Sample: L2206740-01 Client ID: B501												
Iron, Total	15.0	1	15.8	80		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603627-3 QC Sample: L2206740-01 Client ID: B501												
Hardness	307	66.2	367	91		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603628-3 QC Sample: L2206740-01 Client ID: B501												
Antimony, Total	ND	0.5	0.5194	104		-	-		70-130	-		20
Arsenic, Total	0.01068	0.12	0.1359	104		-	-		70-130	-		20
Cadmium, Total	0.00046	0.053	0.05180	97		-	-		70-130	-		20
Chromium, Total	0.00142	0.2	0.2034	101		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2549	102		-	-		70-130	-		20
Lead, Total	ND	0.53	0.5293	100		-	-		70-130	-		20
Nickel, Total	0.00323	0.5	0.4918	98		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1148	96		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05203	104		-	-		70-130	-		20
Zinc, Total	0.03133	0.5	0.5152	97		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603629-3 QC Sample: L2206864-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00505	101		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: MALDEN RGP

Project Number: 01.0171094.32

Lab Number: L2206740

Report Date: 02/15/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603627-4 QC Sample: L2206740-01 Client ID: B501						
Iron, Total	15.0	15.2	mg/l	1		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603627-4 QC Sample: L2206740-01 Client ID: B501						
Hardness	307	313	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603628-4 QC Sample: L2206740-01 Client ID: B501						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.01068	0.01071	mg/l	0		20
Cadmium, Total	0.00046	0.00049	mg/l	6		20
Chromium, Total	0.00142	0.00156	mg/l	9		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00323	0.00313	mg/l	3		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.03133	0.03212	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1603629-4 QC Sample: L2206864-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS & MISCELLANEOUS

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

SAMPLE RESULTS

Lab ID: L2206740-01
Client ID: B501
Sample Location: 100 COMMERCIAL STREET MALDEN

Date Collected: 02/09/22 10:20
Date Received: 02/09/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	33.		mg/l	10	NA	2	-	02/11/22 17:00	121,2540D	MD
Cyanide, Total	0.069		mg/l	0.005	--	1	02/11/22 06:15	02/11/22 12:37	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/09/22 21:42	121,4500CL-D	AS
Nitrogen, Ammonia	2.00		mg/l	0.075	--	1	02/10/22 03:30	02/10/22 20:39	121,4500NH3-BH	AT
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	02/10/22 08:45	121,4500NO3-F	MR
Total Nitrogen	2.3		mg/l	0.30	--	1	-	02/14/22 13:03	107,-	JO
Nitrogen, Total Kjeldahl	2.29		mg/l	0.300	--	1	02/10/22 12:25	02/10/22 22:15	121,4500NH3-H	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/10/22 19:45	02/10/22 20:45	140,1664B	TL
Phenolics, Total	ND		mg/l	0.030	--	1	02/11/22 07:04	02/11/22 10:03	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/10/22 07:20	02/10/22 07:36	1,7196A	KA
Anions by Ion Chromatography - Westborough Lab										
Chloride	990.		mg/l	12.5	--	25	-	02/14/22 16:39	44,300.0	SH



Project Name: MALDEN RGP

Lab Number: L2206740

Project Number: 01.0171094.32

Report Date: 02/15/22

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: WG1603285-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/09/22 21:42	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603320-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/10/22 03:30	02/10/22 20:07	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603343-1										
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	--	1	-	02/10/22 08:16	121,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603421-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/10/22 07:20	02/10/22 07:32	1,7196A	KA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603530-1										
Nitrogen, Total Kjeldahl	ND		mg/l	0.300	--	1	02/10/22 12:25	02/10/22 22:07	121,4500NH3-H	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603666-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/10/22 19:45	02/10/22 20:45	140,1664B	TL
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603805-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/11/22 06:15	02/11/22 12:13	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1603861-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/11/22 07:04	02/11/22 09:58	4,420.1	KP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1604147-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/11/22 17:00	121,2540D	MD
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1604870-1										
Chloride	ND		mg/l	0.500	--	1	-	02/14/22 15:55	44,300.0	SH

Lab Control Sample Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603285-2								
Chlorine, Total Residual	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603320-2								
Nitrogen, Ammonia	97		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603343-2								
Nitrogen, Nitrate/Nitrite	96		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603421-2								
Chromium, Hexavalent	106		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603530-2								
Nitrogen, Total Kjeldahl	101		-		78-122	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603666-2								
TPH	72		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603805-2								
Cyanide, Total	103		-		90-110	-		

Lab Control Sample Analysis**Batch Quality Control****Project Name:** MALDEN RGP**Project Number:** 01.0171094.32**Lab Number:** L2206740**Report Date:** 02/15/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1603861-2					
Phenolics, Total	108	-	70-130	-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1604147-2					
Solids, Total Suspended	94	-	80-120	-	
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1604870-2					
Chloride	103	-	90-110	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
Report Date: 02/15/22

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: WG1603285-4 QC Sample: L2206814-03 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.25	ND	0	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603320-4 QC Sample: L2206759-01 Client ID: MS Sample												
Nitrogen, Ammonia	0.178	4	3.66	87		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603343-4 QC Sample: L2206740-01 Client ID: B501												
Nitrogen, Nitrate/Nitrite	ND	4	3.6	90		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603421-4 QC Sample: L2206740-01 Client ID: B501												
Chromium, Hexavalent	ND	0.1	0.101	101		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603530-4 QC Sample: L2206671-02 Client ID: MS Sample												
Nitrogen, Total Kjeldahl	1.28	8	6.82	69	Q	-	-		77-111	-		24
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603666-4 QC Sample: L2200025-85 Client ID: MS Sample												
TPH	ND	19.2	16.4	85		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603805-4 QC Sample: L2206911-01 Client ID: MS Sample												
Cyanide, Total	0.008	0.2	0.210	100		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1603861-4 QC Sample: L2206591-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.42	104		-	-		70-130	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1604870-3 QC Sample: L2207415-05 Client ID: MS Sample												
Chloride	20.9	4	24.1	81	Q	-	-		90-110	-		18

Lab Duplicate Analysis

Batch Quality Control

Project Name: MALDEN RGP

Project Number: 01.0171094.32

Lab Number: L2206740

Report Date: 02/15/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603285-3	QC Sample: L2206814-01	Client ID: DUP Sample		
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603320-3	QC Sample: L2206759-01	Client ID: DUP Sample		
Nitrogen, Ammonia	0.178	0.245	mg/l	32	Q	20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603343-3	QC Sample: L2206740-01	Client ID: B501		
Nitrogen, Nitrate/Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603421-3	QC Sample: L2206740-01	Client ID: B501		
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603530-3	QC Sample: L2206671-02	Client ID: DUP Sample		
Nitrogen, Total Kjeldahl	1.28	1.72	mg/l	29	Q	24
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603666-3	QC Sample: L2206740-01	Client ID: B501		
TPH, SGT-HEM	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603805-3	QC Sample: L2206003-01	Client ID: DUP Sample		
Cyanide, Total	0.010	0.009	mg/l	6		30
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1603861-3	QC Sample: L2206591-01	Client ID: DUP Sample		
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG1604147-3	QC Sample: L2206740-01	Client ID: B501		
Solids, Total Suspended	33	34	mg/l	3		29

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2206740
Report Date: 02/15/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1604870-4 QC Sample: L2207415-05 Client ID: DUP Sample					
Chloride	20.9	21.6	mg/l	3	18

Project Name: MALDEN RGP**Lab Number:** L2206740**Project Number:** 01.0171094.32**Report Date:** 02/15/22**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(*)
L2206740-01A	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		624.1-SIM-RGP(7)
L2206740-01B	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		624.1-SIM-RGP(7)
L2206740-01C	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		624.1-SIM-RGP(7)
L2206740-01D	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		624.1-RGP(7)
L2206740-01E	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		624.1-RGP(7)
L2206740-01F	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		624.1-RGP(7)
L2206740-01G	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		504(14)
L2206740-01H	Vial Na2S2O3 preserved	A	NA		3.3	Y	Absent		504(14)
L2206740-01I	Vial unpreserved	A	NA		3.3	Y	Absent		SUB-ETHANOL(14)
L2206740-01J	Vial unpreserved	A	NA		3.3	Y	Absent		SUB-ETHANOL(14)
L2206740-01K	Vial unpreserved	A	NA		3.3	Y	Absent		SUB-ETHANOL(14)
L2206740-01L	Plastic 250ml HNO3 preserved	A	<2	<2	3.3	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),SE-2008T(180),HG-U(28),AG-2008T(180),AS-2008T(180),CR-2008T(180),SB-2008T(180),PB-2008T(180)
L2206740-01M	Plastic 250ml NaOH preserved	A	>12	>12	3.3	Y	Absent		TCN-4500(14)
L2206740-01N	Plastic 500ml H2SO4 preserved	A	<2	<2	3.3	Y	Absent		TKN-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L2206740-01O	Plastic 950ml unpreserved	A	7	7	3.3	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1)
L2206740-01P	Plastic 950ml unpreserved	A	7	7	3.3	Y	Absent		TSS-2540(7)
L2206740-01Q	Amber 950ml H2SO4 preserved	A	<2	<2	3.3	Y	Absent		TPHENOL-420(28)
L2206740-01R	Amber 1000ml Na2S2O3	A	7	7	3.3	Y	Absent		PCB-608.3(365)
L2206740-01S	Amber 1000ml Na2S2O3	A	7	7	3.3	Y	Absent		PCB-608.3(365)
L2206740-01T	Amber 1000ml Na2S2O3	A	7	7	3.3	Y	Absent		625.1-RGP(7)
L2206740-01U	Amber 1000ml Na2S2O3	A	7	7	3.3	Y	Absent		625.1-RGP(7)

Project Name: MALDEN RGP
Project Number: 01.0171094.32

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Report Date: 02/15/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2206740-01V	Amber 1000ml Na2S2O3	A	7	7	3.3	Y	Absent		625.1-SIM-RGP(7)
L2206740-01W	Amber 1000ml Na2S2O3	A	7	7	3.3	Y	Absent		625.1-SIM-RGP(7)
L2206740-01X	Amber 1000ml HCl preserved	A	NA		3.3	Y	Absent		TPH-1664(28)
L2206740-01Y	Amber 1000ml HCl preserved	A	NA		3.3	Y	Absent		TPH-1664(28)

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
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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: MALDEN RGP
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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. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: 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

Report Format: Data Usability Report



Project Name: MALDEN RGP
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Data Qualifiers

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.
- 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.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: MALDEN RGP
Project Number: 01.0171094.32

Lab Number: L2206740
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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.
- 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.
- 140 Method 1664, Revision B: 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-10-001, February 2010.

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.



Alpha Analytical, Inc.

ID No.:17873

Facility: **Company-wide**

Revision 19

Department: **Quality Assurance**

Published Date: 4/2/2021 1:14:23 PM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

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 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; 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.

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, SM4500CI-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, SM9222D.****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, EPA 537.1.****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 1

Westborough, MA Mansfield, MA
 TEL: 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Client Information

Client: GZA
 Address: 249 Vanderbilt Ave.
 Norwood Ma. 02062
 Phone: 781-983-1357

Fax:
 Email: william.davis@gza.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Malden RGP

Project Location: 100 commercial street Malden

Project #: 01.0171094 **32**

Project Manager:

ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)

Due Date: 4-day Time:

Other Project Specific Requirements/Comments/Detection Limits:

See attached RGP list, surface water at outfall in Malden River, HexCr hold time Metals (Antimony, Arsenic, Cadmium, Chromium III and VI, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc and Iron) by EPA Method 7000, 6010, 6020, 7470 or 7196A

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS												SAMPLE HANDLING	TOTAL # BOTTLES
		Date	Time			TSS by Method 2540D	HexCr 3, TRC-4500, Cl-D	TPH by EPA method 1664A	Cyanide by EPA Method 335.4	VOCs by EPA method 624.1	EDB by EPA Method 504.1	Total Phenols by EPA Method 420.1	SVOCs by EPA Method 625.1	PAHs, PCP, BEHP by EPA 8270-SIM	PCBs by EPA Method 608	Chloride by EPA Method 300	Hardness by 3005A & Metals - see list		
06740-01	B501	2/9/22	10:20	GW	JAI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Filtration <input type="checkbox"/> Done <input type="checkbox"/> Not Needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	25
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
 MA MCP or CT RCP?

FORM NO: 01-01(1)
 (rev. 9-JAN-12)

Container Type

Preservative


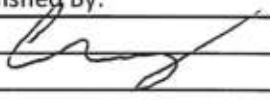
Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

		Subcontract Chain of Custody Tek Lab, Inc. 5445 Horsehoe Lake Road Collinsville, IL 62234-7425		Alpha Job Number L2206740	
Client Information		Project Information		Regulatory Requirements/Report Limits	
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 716.427.5228 Email: jbyrnes@alphalab.com		Project Location: MA Project Manager: Jennifer Byrnes Turnaround & Deliverables Information Due Date: 02/14/22 (RUSH) Deliverables:		State/Federal Program: Regulatory Criteria:	
Project Specific Requirements and/or Report Requirements					
Reference following Alpha Job Number on final report/deliverables: L2206740				Report to include Method Blank, LCS/LCSD:	
Additional Comments: Send all results/reports to subreports@alphalab.com NPDES- Rush					
Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	B501	02-09-22 10:20	WATER	Ethanol by EPA 1671 Revision A	
Form No: AL_subcoc		Relinquished By:	Date/Time:	Received By:	Date/Time:
			2/10/22		

February 14, 2022

Jennifer Byrnes
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (716) 427-5228
FAX:

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: L2206740

WorkOrder: 22020652

Dear Jennifer Byrnes:

TEKLAB, INC received 1 sample on 2/11/2022 9:15:00 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
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Report Contents

<http://www.teklabinc.com/>**Client:** Alpha Analytical**Work Order:** 22020652**Client Project:** L2206740**Report Date:** 14-Feb-22**This reporting package includes the following:**

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	8
Receiving Check List	9
Chain of Custody	Appended

Definitions

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020652

Client Project: L2206740

Report Date: 14-Feb-22

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

NC Data is not acceptable for compliance purposes

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)

Definitions

<http://www.teklabinc.com/>**Client:** Alpha Analytical**Work Order:** 22020652**Client Project:** L2206740**Report Date:** 14-Feb-22

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	

Case Narrative

<http://www.teklabinc.com/>**Client:** Alpha Analytical**Work Order:** 22020652**Client Project:** L2206740**Report Date:** 14-Feb-22**Cooler Receipt Temp:** 2.8 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425

Phone (618) 344-1004

Fax (618) 344-1005

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

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415

Phone (217) 698-1004

Fax (217) 698-1005

Email KKlostermann@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515

Phone (630) 324-6855

Fax

Email arenner@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214

Phone (913) 541-1998

Fax (913) 541-1998

Email jhriley@teklabinc.com

Accreditations

<http://www.teklabinc.com/>

Client: Alpha Analytical
Client Project: L2206740

Work Order: 22020652
Report Date: 14-Feb-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Laboratory Results

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020652

Client Project: L2206740

Report Date: 14-Feb-22

Lab ID: 22020652-001

Client Sample ID: B501

Matrix: AQUEOUS

Collection Date: 02/09/2022 10:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		ND	mg/L	1	02/11/2022 15:53	R307009

Quality Control Results

<http://www.teklabinc.com/>

Client: Alpha Analytical

Work Order: 22020652

Client Project: L2206740

Report Date: 14-Feb-22

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

Batch R307009 SampType: MBLK Units mg/L

SampID: MBLK-021122

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		ND						02/11/2022

Batch R307009 SampType: LCS Units mg/L

SampID: LCS-021122

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		310	250.0	0	122.2	70	132	02/11/2022

Batch R307009 SampType: MS Units mg/L

SampID: 22020653-002AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		320	250.0	0	129.5	70	132	02/11/2022

Batch R307009 SampType: MSD Units mg/L

RPD Limit: 30

SampID: 22020653-002AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		320	250.0	0	127.5	323.8	1.53	02/11/2022

Receiving Check List

<http://www.teklabinc.com/>

Client: Alpha Analytical
Client Project: L2206740

Work Order: 22020652
Report Date: 14-Feb-22

Carrier: UPS

Received By: PWR

Completed by:

Reviewed by:

On:

On:

11-Feb-22

Mary E. Kemp

11-Feb-22

Elizabeth A. Hurley

Pages to follow: Chain of custody

1

Extra pages included

0

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Temp °C **2.8**

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.



APPENDIX C
CALCULATION SHEETS FOR EFFLUENT LIMITATIONS AND DILUTION
FACTOR

DILUTION FACTOR CALCULATIONS
NOTICE OF INTENT FOR THE REMEDIATION GENERAL PERMIT
100 Commercial Street, Malden, Massachusetts

$$DF = \frac{Q_d + Q_s}{Q_d}$$

Where,

DF = Dilution Factor

Q_d = Maximum Flow Rate of the Discharge in million gallons per day (MGD)

Q_s = Receiving Water 7Q10 Flow (MGD) where,

7Q10 = Minimum Flow (MGD) for 7 Consecutive Days with a Recurrence Interval of 10 Years.

$Q_d = 50 \text{ gpm} = 0.072 \text{ MGD}$

$Q_s = 0.436 \text{ cfs} = 0.28179 \text{ MGD}$ (7Q10 approved by MassDEP in email dated 2/9/2022)

$$\therefore DF = \frac{Q_d + Q_s}{Q_d} = \frac{0.072 + 0.28179}{0.072} = 4.913$$

Enter number values in green boxes below

Enter values in the units specified



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

Enter a dilution factor, if other than zero



4.913

Enter values in the units specified



939	C_d = Enter influent hardness in mg/L CaCO_3
54.5	C_s = Enter receiving water hardness in mg/L CaCO_3

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



8.15	pH in Standard Units
5.2	Temperature in °C
0.313	Ammonia in mg/L
54.5	Hardness in mg/L CaCO_3
0	Salinity in ppt
0	Antimony in µg/L
1.15	Arsenic in µg/L
0	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
2.93	Copper in µg/L
432	Iron in µg/L
2.61	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
27.44	Zinc in µg/L

Enter **influent** concentrations in the units specified

↓

0	TRC in µg/L
7.08	Ammonia in mg/L
0	Antimony in µg/L
93.58	Arsenic in µg/L
1.14	Cadmium in µg/L
9.16	Chromium III in µg/L
0	Chromium VI in µg/L
43.42	Copper in µg/L
34000	Iron in µg/L
30.01	Lead in µg/L
0	Mercury in µg/L
5.35	Nickel in µg/L
0	Selenium in µg/L
0	Silver in µg/L
128	Zinc in µg/L
763	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
4.07	Benzo(a)anthracene in µg/L
2.82	Benzo(a)pyrene in µg/L
2.52	Benzo(b)fluoranthene in µg/L
0.911	Benzo(k)fluoranthene in µg/L
1.73	Chrysene in µg/L
0.312	Dibenzo(a,h)anthracene in µg/L
1.72	Indeno(1,2,3-cd)pyrene in µg/L
15	Methyl-tert butyl ether in µg/L

Dilution Factor

1.0

A. Inorganics

TBEL applies if bolded

WQBEL applies if bolded

Ammonia	Report	mg/L	---	
Chloride	Report	µg/L	---	
Total Residual Chlorine	0.2	mg/L	11	µg/L
Total Suspended Solids	30	mg/L	---	
Antimony	206	µg/L	640	µg/L
Arsenic	104	µg/L	10	µg/L
Cadmium	10.2	µg/L	1.4224	µg/L
Chromium III	323	µg/L	539.5	µg/L
Chromium VI	323	µg/L	11.4	µg/L
Copper	242	µg/L	63.2	µg/L
Iron	5000	µg/L	1000	µg/L
Lead	160	µg/L	55.06	µg/L
Mercury	0.739	µg/L	0.91	µg/L
Nickel	1450	µg/L	346.9	µg/L
Selenium	235.8	µg/L	5.0	µg/L
Silver	35.1	µg/L	178.2	µg/L
Zinc	420	µg/L	799.2	µg/L
Cyanide	178	mg/L	5.2	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	300	µg/L

C. Halogenated VOCs

Carbon Tetrachloride	4.4	µg/L	1.6	µg/L
1,2 Dichlorobenzene	600	µg/L	---	
1,3 Dichlorobenzene	320	µg/L	---	
1,4 Dichlorobenzene	5.0	µg/L	---	
Total dichlorobenzene	---	µg/L	---	
1,1 Dichloroethane	70	µg/L	---	
1,2 Dichloroethane	5.0	µg/L	---	
1,1 Dichloroethylene	3.2	µg/L	---	
Ethylene Dibromide	0.05	µg/L	---	
Methylene Chloride	4.6	µg/L	---	
1,1,1 Trichloroethane	200	µg/L	---	
1,1,2 Trichloroethane	5.0	µg/L	---	
Trichloroethylene	5.0	µg/L	---	
Tetrachloroethylene	5.0	µg/L	3.3	µg/L
cis-1,2 Dichloroethylene	70	µg/L	---	

Vinyl Chloride	2.0	µg/L	---
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D. Non-Halogenated SVOCs

Total Phthalates	190	µg/L	---	µg/L
Diethylhexyl phthalate	101	µg/L	2.2	µg/L
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---	
Benzo(a)anthracene	1.0	µg/L	0.0038	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0038	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0038	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0038	µg/L
Chrysene	1.0	µg/L	0.0038	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0038	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0038	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	100	µg/L	---	
Naphthalene	20	µg/L	---	

E. Halogenated SVOCs

Total Polychlorinated Biphenyls	0.000064	µg/L	---
Pentachlorophenol	1.0	µg/L	---

F. Fuels Parameters

Total Petroleum Hydrocarbons	5.0	mg/L	---	
Ethanol	Report	mg/L	---	
Methyl-tert-Butyl Ether	70	µg/L	20	µg/L
tert-Butyl Alcohol	120	µg/L	---	
tert-Amyl Methyl Ether	90	µg/L	---	



APPENDIX D
ACEC AND FEDERALLY LISTED ENDANGERED AND THREATENED
SPECIES IN MASSACHUSETTS EVALUATION



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:
Project Code: 2022-0005993
Project Name: 100 Commercial Street - Malden MA

February 10, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location 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>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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 Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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

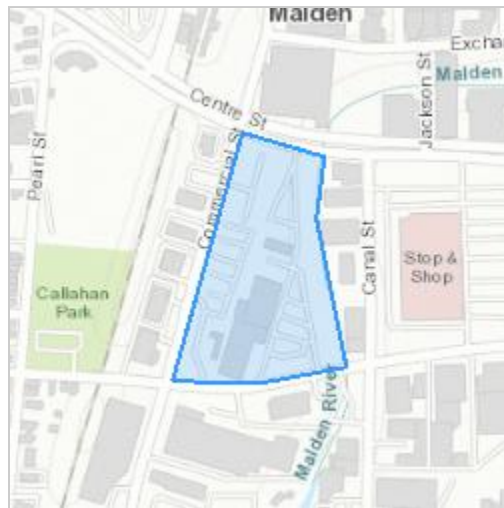
Concord, NH 03301-5094

(603) 223-2541

Project Summary

Project Code: 2022-0005993
Event Code: None
Project Name: 100 Commercial Street - Malden MA
Project Type: Commercial Development
Project Description: Remediation project
Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.42410395,-71.07357049831825,14z>



Counties: Middlesex County, Massachusetts

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 Fisheries¹, 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.

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

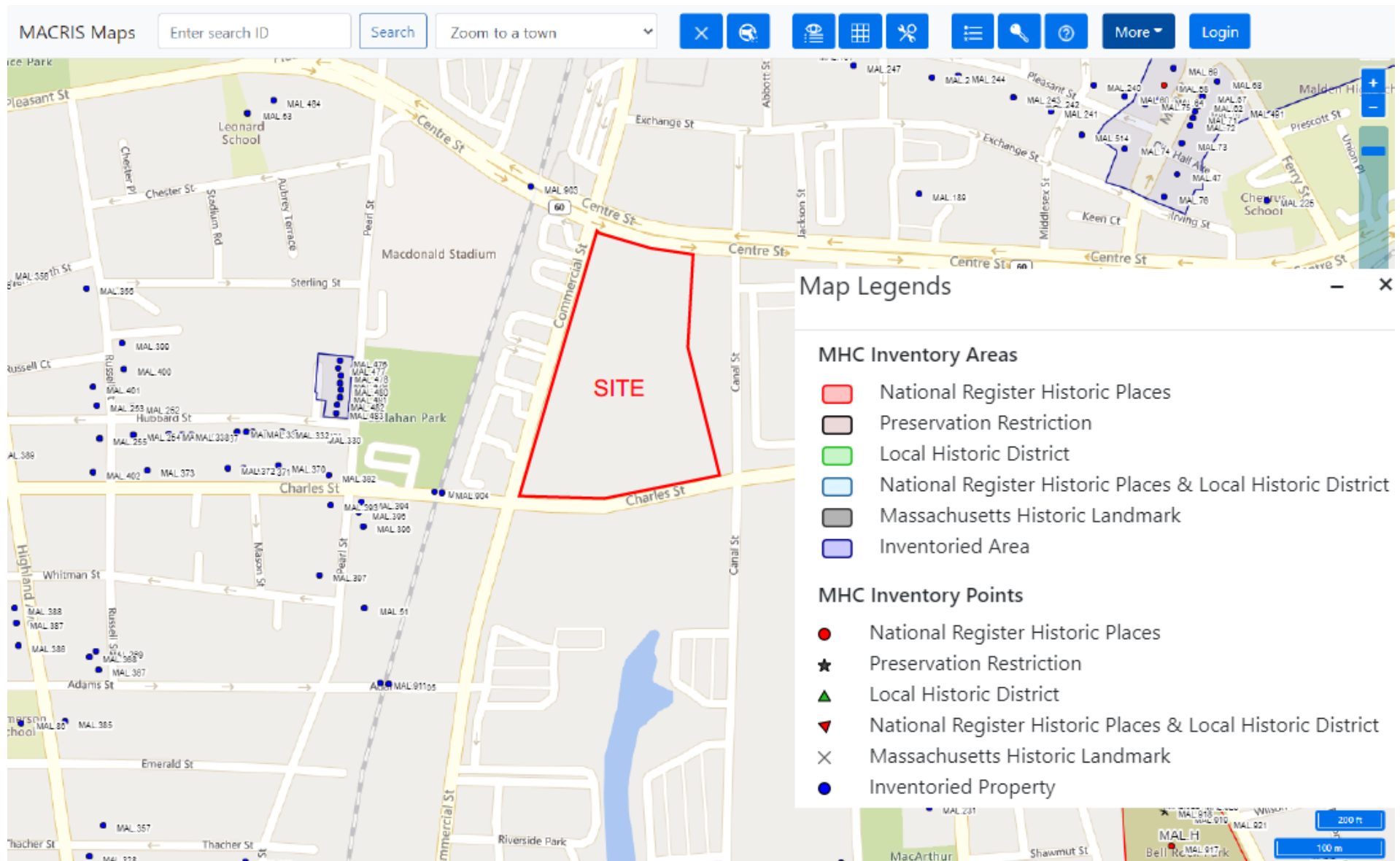
Critical habitats

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



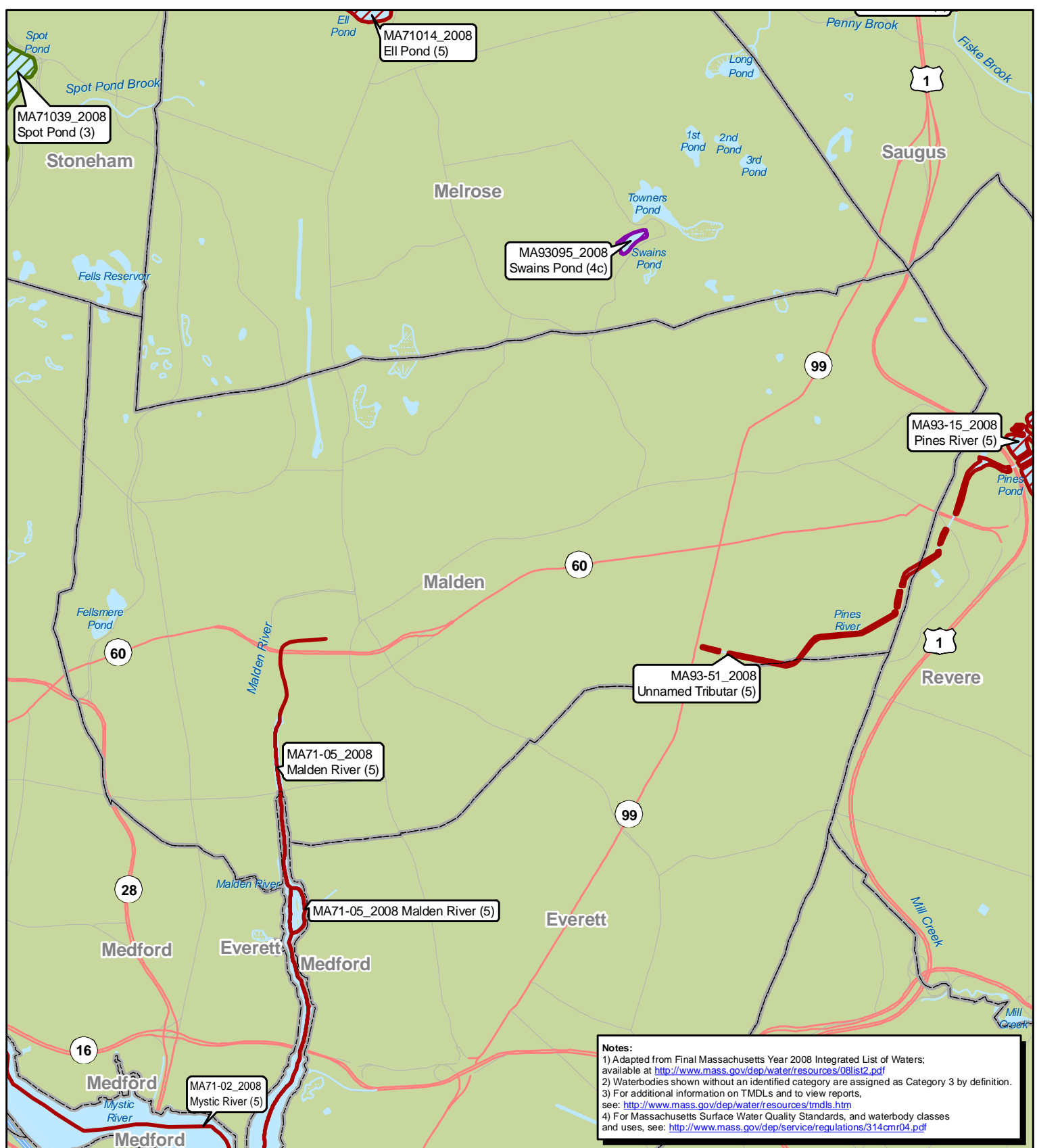
APPENDIX E

MACRIS SEARCH RESULTS





APPENDIX F
TMDL INFORMATION
MALDEN RIVER – MA71-05



Waterbody Assessment and TMDL Status Malden, MA



0 0.5
Miles



Map produced by EPA Region I GIS Center
Map Tracker ID 6678, February 25, 2010
Data Sources: TeleAtlas, Census Bureau,
USGS, MassDEP

See companion table for a listing of pollutants,
non-pollutants, and TMDLs for each waterbody

Category 5 waters listed alphabetically by major watershed
The 303(d) List – "Waters requiring a TMDL"

Water Body	Segment ID	Description	Size	Units	Impairment	EPA TMDL No.
Malden River	MA71-05	Headwaters south of Exchange Street, Malden to confluence with Mystic River, Everett/Medford.	2.30	Miles	(Debris*)	
					(Trash*)	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	
					Escherichia Coli (E. Coli)	
					Fecal Coliform	
					Flocculant Masses	
					Odor	
					Oil And Grease	
					PCBs In Fish Tissue	
					pH, High	
					Phosphorus, Total	
					Scum/Foam	
Mill Brook	MA71-07	Headwaters south of Massachusetts Avenue, Lexington to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	3.90	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	
Mill Creek	MA71-08	From Route 1, Chelsea/Revere to confluence with Chelsea River, Chelsea/Revere.	0.02	Square Miles	Cause Unknown (Contaminants in Fish and/or Shellfish)	
					Fecal Coliform	
					PCBs In Fish Tissue	
Munroe Brook	MA71-15	Headwaters, north of Solomon Pierce Road, Lexington to the mouth at inlet Arlington Reservoir, Lexington (includes culverted portion).	1.80	Miles	Escherichia Coli (E. Coli)	

