GEI Consultants

Consulting Engineers and Scientists

Revised April 25, 2018
April 16, 2018,
Project 1609290

Via E-mail: NPDES.Generalpermits@epa.gov

Ms. Shelly Puleo
Environmental Protection Agency
RGP NOI Processing
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Dear Ms. Puleo:

Re: Notice of Intent
NPDES Remediation General Permit
Parcel Q1, Two Drydock Avenue
Boston, Massachusetts

On behalf of Skanska USA Commercial Development, Inc., GEI Consultants, Inc. has prepared this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), Massachusetts General Permit (MAG910000). This NOI was prepared in accordance with the general requirements of the NPDES RGP under Federal Register, Vol. 82, No. 12, dated January 19, 2017, and related guidance documentation provided by the U.S. Environmental Protection Agency (EPA). The completed NOI form is provided in Appendix A.

A copy of this NOI is being sent to the MassDEP Bureau of Water Resources along with a check in the amount of $500 payable to the Commonwealth of Massachusetts for the required compliance fee. A copy of the check and fee transmittal form are in Appendix B. Once EPA issues an RGP authorization for this project, and before the start of work, we will apply for a Boston Water and Sewer Commission (BWSC) Dewatering Discharge Permit.

Site Information

This NOI has been prepared for the discharge of dewatering effluent during construction of a proposed 13-story commercial office building located at Two Drydock Avenue at the intersection of Harbor Street in Boston, Massachusetts (the Property; Figs. 1 and 2). The Property is part of the Boston Marine Industrial Park and was previously part of the U.S. Naval Reserve Base. The site currently consists of two paved parking lots and a grassed landscaped area with trees on the west side. The project site is not a Massachusetts Department of Environmental Protection (MassDEP) disposal site.

Some construction dewatering will be necessary to keep excavations dry. The intent of the project is to recharge groundwater on site. However, if this is not possible, it will be discharged

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000 fax: 781.721.4073

to the BWSC storm water drainage system which discharges to the Reserved Channel of the Boston Inner Harbor via an outfall beneath the EDIC Pier #10 ("EDIC Outfall"; Fig. 3), in accordance with the RGP permit.

Receiving Water Information

Receiving water quality data, collected by GEI on March 15, 2018 on behalf of Skanska, was used to support this NOI. A sample from the Reserve Channel, the receiving water, was collected approximately 100 feet south of the EDIC Outfall, toward the center of the channel (Fig. 3). The sample was submitted to ESS Laboratory, Inc. (ESS) of Cranston, Rhode Island for analysis of metals, hardness, ammonia, and salinity. The results are summarized in Table 1 and the associated laboratory data report is in Appendix C. Receiving water temperature was obtained in the field and is noted on the effluent limitations input calculation page in Appendix A.

Since the receiving water is a saltwater body, and based on confirmation from MassDEP (Appendix A), the dilution factor for the Reserved Channel is 1. The effluent limits were generated using the NPDES RGP NOI Dilution Factor Calculation spreadsheet. As requested by EPA, a copy of the spreadsheet will be submitted via email to EPA for their review with this NOI. In addition, copies of the "EnterData" and "Saltwater Results" tabs from the spreadsheet are provided in Appendix A. The resulting calculated effluent limits are in Table 1.

Source Water Information

We evaluated the proposed influent by collecting two groundwater samples from the Property. The groundwater samples were collected from monitoring wells MW102 and MW103 on March 15, 2018 (Fig. 2) and submitted to ESS for analysis of the parameters required under the NPDES RGP. In addition, the pH and temperature of the proposed influent was measured in the field to evaluate existing conditions. The results are in Table 2 and the associated laboratory data report for this sample are provided in Appendix C.

The analytical results indicated the presence of benzene, toluene, ethylbenzene, and xylenes (BTEX), ammonia, chloride, polycyclic aromatic hydrocarbons (PAHs; acenaphthene and fluorene), cadmium, copper, iron, lead, nickel, silver, and zinc. The measured pH of the groundwater at the Property ranges from approximately 6.5 to 6.6 standard units (s.u.). The pH range detected is within the RGP effluent limit for Massachusetts waters (6.5 to 8.3 s.u.).

Treatment System Information

During construction, the collected water will be treated to remove suspended solids using a sedimentation tank and bag filters. The proposed conceptual treatment system is shown in the process flow diagram in Appendix D. Additional treatment may include granulated activated carbon (GAC), iron removal (e.g. flocculation/coagulation and clarifying), and pH adjustment, if necessary.

Although final products for additional treatment will be determined by the operator or their designated contractor, example product information, including Safety Data Sheets (SDSs), associated hazards, and operation recommendations, and product information for GAC and iron removal system adjustment are in Appendix A. These systems will be mobilized as necessary to achieve effluent limits. If required, pH adjustment will likely consist of using a metered sulfuric acid (70-100%) system. Similarly, oxidizers such as ferric sulfate may be used to treat for iron. Product information is in Appendix A. Additives will be stored in 55-gallon drums with secondary containment systems. Procedures for proper handling and spill prevention are included

in the project-specific Best Management Practices Plan (BMPP). The addition of ferric sulfate for iron treatment and sulfuric acid to reduce pH levels are established practices for temporary construction dewatering, and are not expected to exceed applicable effluent limits, water quality standards, or alter conditions in the receiving water. Therefore, it is our opinion, that no additional testing is necessary for use of ferric sulfate or sulfuric acid or to demonstrate that use of these products will adversely affect the receiving water.

Discharge Information

We anticipate treated effluent discharge rates to be about 50 gallons per minute (gpm) or less, with occasional peak flows of approximately 100 gpm during significant precipitation events. The treated water will be discharged to one or two storm drains immediately south of the Property on Drydock Avenue. The storm drains are identified in Fig. 2 and on the plan in Appendix D as Potential Discharge Points 1 and 2. According to project documents and plans we reviewed from the BWSC on March 8, 2018, these storm drains are part of the BWSC storm water drainage system that discharge to the EDIC Outfall at the Reserved Channel of the Boston Inner Harbor, approximately 500 feet from the Property. An aerial photo annotated with information from the site utility plan and BWSC plan showing the discharge path and ultimate discharge outfall at the Reserved Channel is in Appendix D.

Endangered Species Act Eligibility

We reviewed the U.S. Fish and Wildlife Service (FWS) Information, Planning, and Conservation (IPAC) online database for the Property and receiving water ("project action area"). A copy of the database report is in Appendix E. Based on this report, there are no listed species or critical habitats are within the project action area.

Because the proposed effluent discharge is to nearshore marine waters in Massachusetts (i.e. Massachusetts Bay, inclusive of Boston Harbor), and there has been no previous consultation with National Marine Fisheries Services (NMFS) for this project, we reviewed EPA's determination made during their consultation with the NMFS, dated December 18, 2016. According to the determination, the endangered or protected species under jurisdiction of the NFMS that could potentially encounter RGP discharge in the project area are the shortnose sturgeon, atlantic sturgeon, four species of sea turtles, and two species of whales. According to the determination, the turtles and whales are transient species and highly unlikely to be present in the project action area (Reserved Channel) where the proposed discharge effluent is transient and short-lived. Because discharge is not to the Connecticut, Merrimack, or Taunton Rivers, where the sturgeon spawn, both species of sturgeon are expected to be present only in adult life stages in the project action area.

Based on our review, the project area meets FWS Criterion A (i.e. no listed species or critical habitats are within the project area) and NMFS Criterion (i.e. the project will have either no effect on or are not likely to adversely affect listed species or critical habitats under jurisdiction of the NMFS).

National Historic Preservation Requirements

We reviewed online records from the U.S. National Register of Historic Places database and the Massachusetts Cultural Resource Information System (MACRIS). Maps of the Property and surrounding areas obtained from both databases are included in Appendix F. Based on the review, the Property is not a listed as a National Historic Place.

The point where the discharge reaches the receiving water (i.e. EDIC Outfall in the Reserved Channel) is not listed as a National Historic Place. The inventory listing from the MACRIS database is included in Appendix F.

Coverage Under NPDES RGP

It is our opinion that the proposed discharge is eligible for coverage under the NPDES RGP based on the requirements of the NPDES RGP and our evaluation of the available site-specific information. The current intent of project dewatering activities is to recharge groundwater on site. However, if this is not possible, it will be discharged to the nearby storm water drainage system after treatment. On behalf of SCD Drydock Q1 LLC c/o Skanska USA Commercial Development, Inc., we are requesting coverage under the NPDES RGP for the discharge of treated construction dewatering effluent to the surface waters of the Reserved Channel of the Boston Inner Harbor via the BWSC storm water drainage system.

The enclosed NOI form and supporting documentation provides required information on the general site conditions, discharge, treatment system, receiving water, and consultation with federal services (Appendices A through F). For this project, SCD Drydock Q1 LLC c/o Skanska USA Commercial Development, Inc. is the owner and has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications. Skanska USA Building of Boston, Massachusetts, is the operator and will direct the personnel responsible for the implementation and day-to-day operations and activities that are necessary to ensure compliance with the NPDES RGP, including operation, inspection, monitoring, and reporting. The owner and operator are applying for coverage under the RGP as co-permittees.

Discharge of treated water is scheduled to begin in May 2018, although recharge to on-site recharge pits is planned if possible.

Please contact Heather Ballantyne at 781.721.4063 or hballantyne@geiconsultants.com if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.

Ryan S. Hoffman, P.G., LSP
Environmental Division Manager

Heather A. Ballantyne, P.G.
Project Manager

HAB:jam
Enclosures
c: Chris Wholey, Skanska USA Commercial Development
Suki Murphy, Skanska USA Building
Surface Water Discharge Program, MassDEP

Tables

Table 1. Chemical Testing Results - Groundwater
2 Drydock Avenue
South Boston, Massachusetts

				Sample Location:	MW102	MW103
				Sample Date:	3/15/2018	3/15/2018
				Screen Interval:	4.8-14.8	4.2-19.2
Analyte	**Method**	**Units**	**MCP RCGW-2**	**Site Specific Effluent Limits**		
Volatile Organic Compounds (VOCs)		ug/l				
Acetone	524.2		50,000	7.97	< 5.0	< 5.0
Benzene	524.2		1,000	5	50	< 0.5
1,4-Dioxane	8270D-SIM		6,000	200	< 0.250	< 0.250
Phenols	420.1		NS	1080	< 100	< 100
Total BTEX	524.2		NS	100	71.6	ND
Total Non-Halogenated VOCs[1]	524.2		NS	NS	71.6	ND
Total Halogenated VOCs[2]	524.2		NS	NS	ND	ND
Semivolatile Organic Compounds (SVOCs)	625 SIM	ug/l				
Total Phthalates			NS	190	3.14 B	3.03 B
Total Group I PAHs[3]			NS	1	ND	ND
Acenaphthene			10,000	NS	1.97	< 0.20
Fluorene			40	NS	0.26	< 0.20
Total Group II PAHs[4]			NS	100	2.23	ND
Fuel Parameters		ug/L				
Total Petroleum Hydrocarbons	1664A		5,000	5,000	< 5,000	< 5,000
Ethanol	ASTM D3695		NS	Report	< 10,000	< 10,000
Methyl-tert-butyl ether	524.2		5,000	70	< 0.5	< 0.5
tert-butyl alchohol	524.2		10,000	120	< 25.0	< 25.0
tert-amyl-methyl ether	524.2		Ns	90	< 1.0	< 1.0
Inorganic Compounds						
Ammonia as Nitrogen	350.1	mg/L	NS	Report	1.52	0.27
Chloride	300	mg/L	NS	Report	1,460	588
Total Residual Chloride	4500CL D	ug/l	NS	7.5	< 20.0	< 20.0
Total Suspended Solids	2540D	mg/l	NS	30	10	8
Antimony	200.7	ug/l	8,000	206	< 5.0	< 5.0
Arsenic	3113B	ug/l	900	104	< 10.0	< 10.0
Cadmium	3113B	ug/l	4	10.2	2.08	< 1.00
Chromium, Total	200.7	ug/l	300	NS	< 2.0	< 2.0
Chromium III	200.7	ug/l	600	323	< 10.0	< 10.0
Chromium VI	3500Cr B-2009	ug/l	300	323	< 10.0	< 10.0
Copper	200.7	ug/l	100,000	3.7	13.3	< 2.0
Iron	200.7	ug/l	NS	5,000	7,490	13,000
Lead	200.7	ug/l	10	8.5	11.9	4.7
Mercury	245.1	ug/l	20	0.739	< 0.200	< 0.200
Nickel	3113B	ug/l	200	8.3	89.2	< 5.0
Selenium	200.7	ug/l	100	235.8	< 20.0	< 20.0
Silver	200.7	ug/l	7	35.1	1.0	0.8
Zinc	200.7	ug/l	900	86	623	49.0
Cyanide	4500CNCD	mg/L	30	178	< 5.0	< 5.0
Pesticides						
1,2-Dibromomethane	504.1	ug/l	2	0	< 0.015	< 0.015
Polychlorinated Biphenlyls (PCBs)	608	ug/l				
Total PCBs			5	0.5	< 0.10	< 0.10
Other						
Hardness	200.7	ug/l	NS	NS	383,000	230,000
Temperature	Field	Deg C	NS	NS	10.43	7.7
pH	Field	S.U.	NS	6.5 to 8.3	6.61	6.5

General Notes:

1. For a complete list of analytes, see the laboratory data sheets.
2. "<" = Analyte not detected at a concentration above the laboratory reporting limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective April 25, 2014
4. RCGW-2 = Reportable Concentration for category GW-2 Groundwater
5. µg/l = micrograms per liter.
6. mg/l = milligram per liter
7. deg C = Degrees Celsius
8. S.U. = standard units
9. Dilution Factor of 1 used to establish effluent limits.
10. Effluent limits calculated using NPDES RGP NOI Dilution Factor Spreadsheet.
11. Temperature and pH were measured in the field.

Footnotes:

1. Total Non-Halogenated VOCs include benzene, ethylbenzene, toluene, and xylenes (BTEX), acetone, 1,4-dioxane, and phenols.
2. Total Halogenated VOCs include carbon tetrachloride, 1,2-dichlorobenzene, 1,3-dicholorobenzene, 1,4-dichlorobenzene, 1,1-dichlorethane, 1,2-dicholorethane, 1,2,-dichloroethene, ethylene dibromide, methylene chloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, tetrachloroethylene, cis-1,2 dichloroethylene, and vinyl chloride.
3. Group I PAHs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and ideno(1,2,3-cd)pyrene.
4. Group II PAHs include: acenaphthene, acenaphthylene, anthracene, bezon(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

Qualifying Notes:

B The reported result is attributed to sampling or laboratory contamination.
G The reported result is estimated due to duplicate precision outside of control limits.

Table 2. Chemical Testing Results - Receiving Water (Reserved Channel)
2 Drydock Avenue
South Boston, Massachusetts

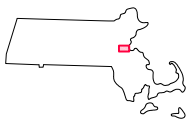
		Sample Location:	**GRAB**
		Sample Date:	**3/15/2018**
Analyte	**Method**	**Units**	
Total Metals		ug/l	
Antimony	200.7		< 25.0
Arsenic	200.7		< 25.0
Cadmium	200.7		< 1.00
Chromium (Total)	200.7		< 40.0
Copper	200.7		< 10.0
Iron	200.7		< 200
Lead	200.7		< 40.0
Mercury	245.1		< 0.200
Nickel	200.7		< 25.0
Selenium	200.7		< 100
Silver	200.7		< 10.0
Zinc	200.7		< 25.0
Other			
Hardness	200.7	ug/l	5,180,000
Ammonia as Nitrogen	350.1	ug/l	< 0.10
Salinity	2520B	ppt	20.8
pH	Field	S.U.	6.76

General Notes:

1. Only analytes detected in at least one sample are reported here. For a complete list of analytes, see the laboratory data sheets.
2. "<" = Analyte not detected at a concentration above the laboratory reporting limit.
3. µg/l = micrograms per liter.

Figures

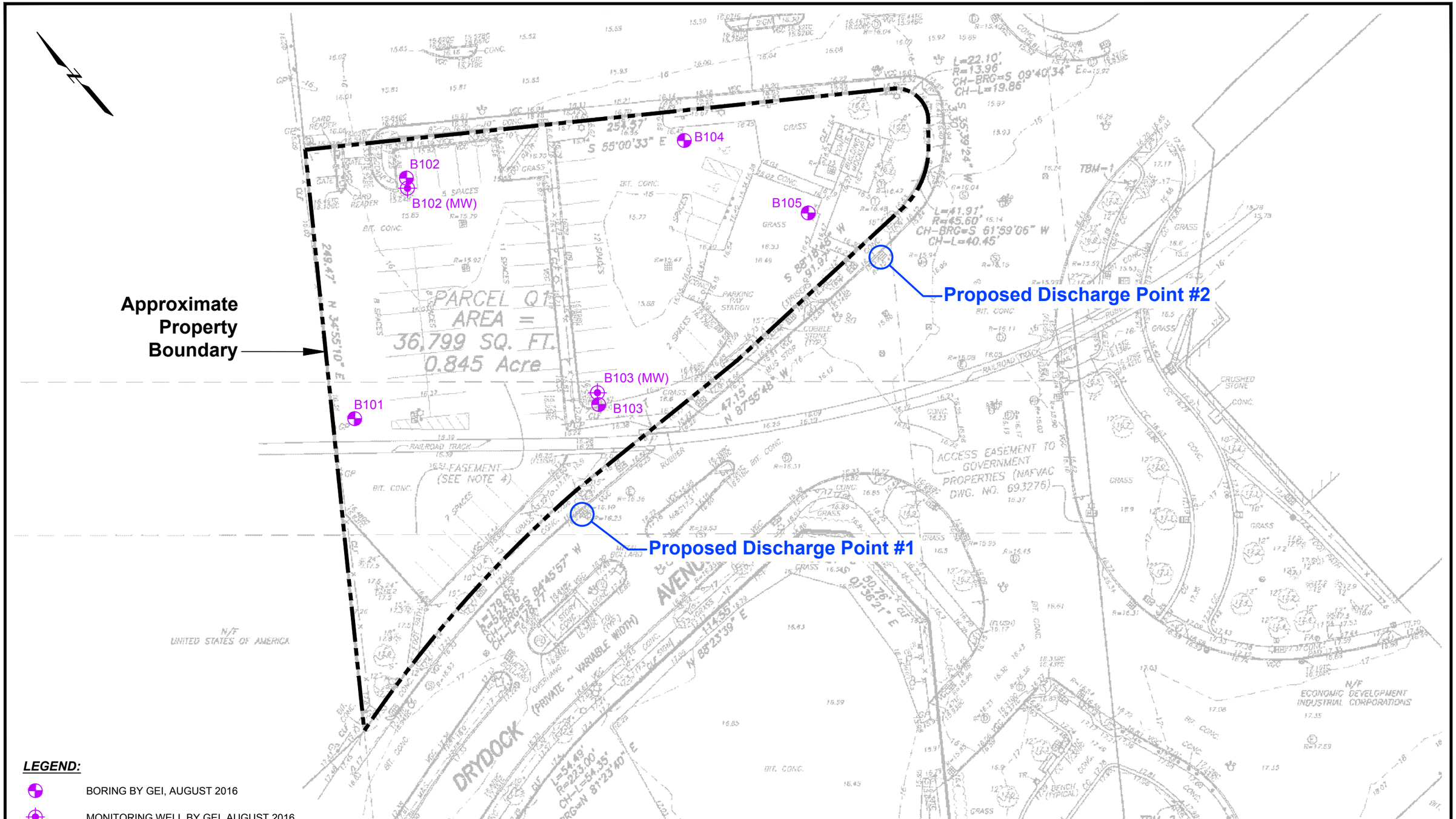
This Image provided by MassGIS is from U.S.G.S.
Topographic 7.5 X 15 Minute Series
Boston South, MA Quadrangle, 1987.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.



MASSACHUSETTS
QUADRANGLE LOCATION

NPDES RGP Notice of Intent 2 Drydock Avenue Boston, Massachusetts	GEI Consultants	PROPERTY LOCATION MAP
Skanska USA Commercial Development, Inc. Boston, Massachusetts	Project 1609290	April 2018 Fig. 1

B:\Working\SKANSKA COMMERCIAL DEVELOPMENT\1609290 - Parcel Q1 Geotechnical & Environmental\00_CAD\Figures\npdes\1609290-01



LEGEND:

BORING BY GEI, AUGUST 2016

MONITORING WELL BY GEI, AUGUST 2016

NOTES:

1. BASE PLAN FROM FIGURE TITLED *"TOPOGRAPHIC PLAN OF LAND PARCELS A AND Q-1 OWNED BY THE ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION, SUMMER STREET/ DRYDOCK AVENUE) BOSTON, MASS.,"* PREPARED BY FELDMAN LAND SURVEYORS AND DATED JULY 11, 2014.

0 40 80

Approximate Scale, Feet

NPDES RGP Notice of Intent
2 Drydock Avenue
Boston, Massachusetts

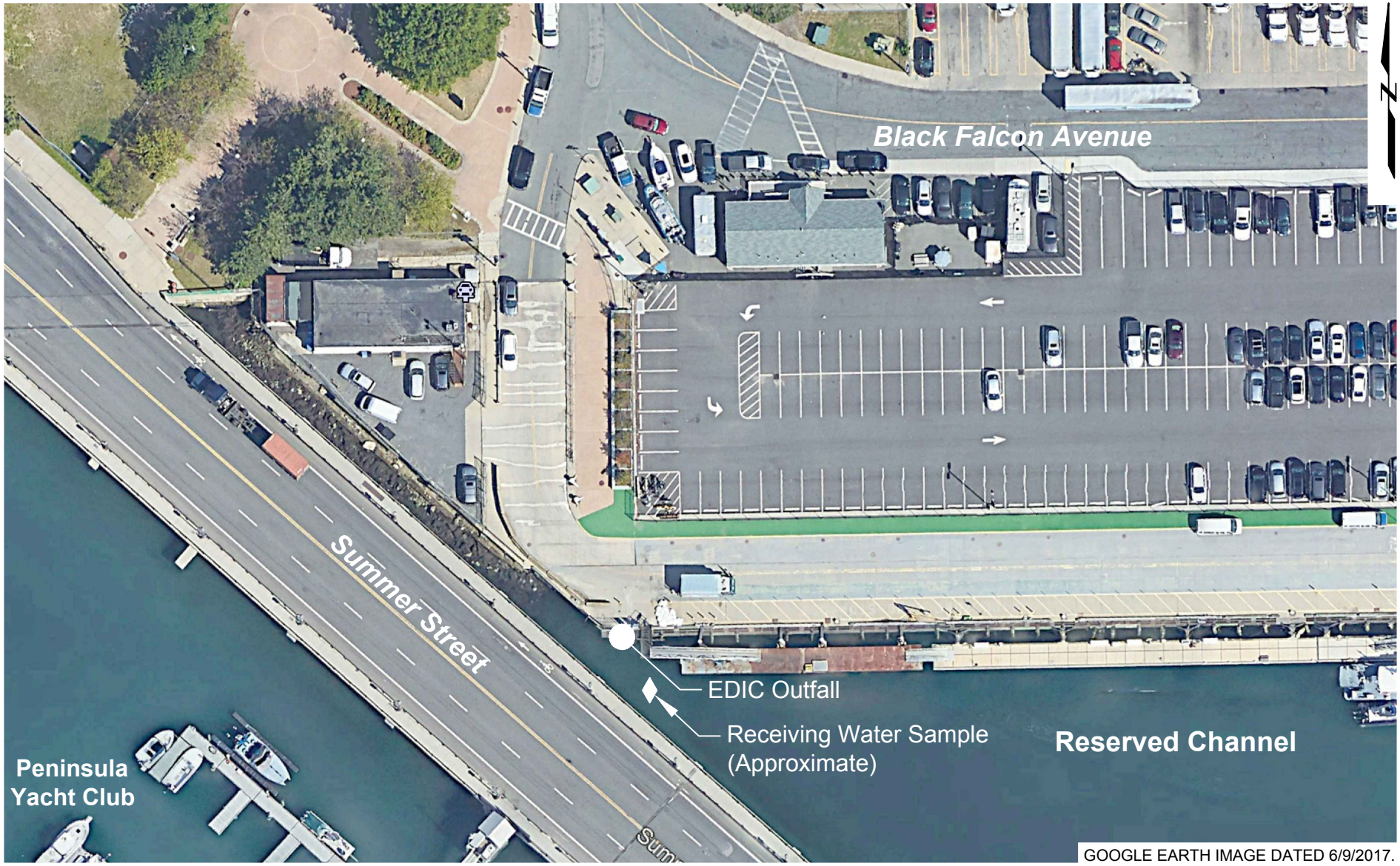
Skanska USA Commercial Development, Inc.
Boston, Massachusetts

GEI Consultants

BORING LOCATION PLAN

Project 1609290 | April 2018 | Fig. 2

\\geiconsulta B:\Working\SKANSKA COMMERCIAL DEVELOPMENT\1609290 - Parcel Q1 Geotechnical & Environmental\00_CAD\Figures\npdes\1609290-02.dwg - 3/29/2018



0 60 120

Approximate Scale, Feet

NPDES RGP Notice of Intent
2 Drydock Avenue
Boston, Massachusetts

Skanska USA Commercial Development, Inc.
Boston, Massachusetts

GEI Consultants

RECEIVING WATER
SAMPLE LOCATION

Project 1609290 | April 2018 | Fig. 3

\\geiconsulta B:\Working\SKANSKA COMMERCIAL DEVELOPMENT\1609290 - Parcel Q1 Geotechnical & Environmental\00_CAD\Figures\npdes\1609290-03.dwg - 3/29/2018

Appendix A

Remediation General Permit
Notice of Intent

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Parcel Q1, 2 Drydock Avenue</td><td colspan="3">Site address: 2 Drydock Avenue
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02210</td></tr>
<tr><td rowspan="4">2. Site owner
SCD Drydock Q1 LLC c/o Skanska USA Commercial Development, Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Chris Wholey</td></tr>
<tr><td colspan="2">Telephone: 617-574-1345</td><td>Email: chris.wholey@skanska.com</td></tr>
<tr><td colspan="3">Mailing address: 101 Seaport Boulevard, Suite 200
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02210</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Skanska USA Building</td><td colspan="3">Contact Person: Suki Murphy</td></tr>
<tr><td colspan="2">Telephone: 617-574-1400</td><td>Email: Suki.Murphy@skanska.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 101 Seaport Boulevard, Suite 200</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02210</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
MAR10017F

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ■ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
☐ MA Chapter 21e; list RTN(s):

☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:

☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Reserved Channel (Boston Harbor)	MA70-02	SB(CSO)

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

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

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

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Impaired water body- see attached Table 1 for impairment pollutants and completed TMDLs

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.	NA (saltwater)
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	1

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

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

C. Source water information:

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

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

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

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): EDIC Pier Outfall	Outfall location(s): (Latitude, Longitude) 42.343595 degrees N 71.036858 degrees W
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ■ No, if so, explain, with an estimated timeframe for obtaining permission: When issues, the RGP Authorization will be submitted to Boston Water and Sewer Commission for Dewatering Discharge Permit Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): May 2018- December 2018 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	2	350.1	0.10	1,520	895	Report mg/L	---
Chloride		✓	2	300.0	250	1,460,000	1,024,000	Report µg/l	---
Total Residual Chlorine	✓		2	4500CL D	20.0	< 20.0	0	0.2 mg/L	7.5 ug/L
Total Suspended Solids		✓	2	2540D	5,000	10,000	9,000	30 mg/L	---
Antimony	✓		2	200.7	5.0	< 5.0	0	206 µg/L	
Arsenic	✓		2	3113B	10.0	< 10.0	0	104 µg/L	
Cadmium		✓	2	3113B	1.00	2.08	1.29	10.2 µg/L	
Chromium III	✓		2	200.7	10.0	< 10.0	0	323 µg/L	
Chromium VI	✓		2	3500Cr	10.0	< 10.0	0	323 µg/L	
Copper		✓	2	200.7	2.0	13.3	7.15	242 µg/L	3.7 ug/L
Iron		✓	2	200.7	10.0	13,000	10,245	5,000 µg/L	
Lead		✓	2	200.7	2.0	11.9	8.3	160 µg/L	8.5 ug/L
Mercury	✓		2	245.1	0.200	<0.200	0	0.739 µg/L	
Nickel		✓	2	3113N	5.0	89.2	45.9	1,450 µg/L	
Selenium	✓		2	200.7	20.0	< 20.0	0	235.8 µg/L	
Silver	✓		2	200.7	0.5	1.0	0.9	35.1 µg/L	
Zinc		✓	2	200.7	5.0	623	336	420 µg/L	86 ug/L
Cyanide	✓		2	200.7	5.0	< 5.0	0	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX		✓	2	524.2	0.5	71.6	35.9	100 µg/L	---
Benzene		✓	2	524.2	0.5	50	25.1	5.0 µg/L	---
1,4 Dioxane	✓		2	8270D-SI	0.250	< 0.250	< 0.250	200 µg/L	---
Acetone	✓		2	524.2	5.0	0	0	7.97 mg/L	---
Phenol	✓		2	420.1	100	< 100	0	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	✓		2	524.2	0.3	< 0.3	0	4.4 µg/L	
1,2 Dichlorobenzene	✓		2	524.2	0.5	< 0.5	0	600 µg/L	---
1,3 Dichlorobenzene	✓		2	524.2	0.5	< 0.5	0	320 µg/L	---
1,4 Dichlorobenzene	✓		2	524.2	0.5	< 0.5	0	5.0 µg/L	---
Total dichlorobenzene	✓		2	524.2	0.5	< 0.5	0	763 µg/L in NH	---
1,1 Dichloroethane	✓		2	524.2	0.5	< 0.60	0	70 µg/L	---
1,2 Dichloroethane	✓		2	524.2	0.5	< 0.5	0	5.0 µg/L	---
1,1 Dichloroethylene	✓		2	524.2	0.5	< 0.5	0	3.2 µg/L	---
Ethylene Dibromide	✓		2	504.1	0.015	< 0.015	0	0.05 µg/L	---
Methylene Chloride	✓		2	524.2	0.5	< 0.5	0	4.6 µg/L	---
1,1,1 Trichloroethane	✓		2	524.2	0.5	< 0.5	0	200 µg/L	---
1,1,2 Trichloroethane	✓		2	524.2	0.5	< 0.5	0	5.0 µg/L	---
Trichloroethylene	✓		2	524.2	0.5	< 0.5	0	5.0 µg/L	---
Tetrachloroethylene	✓		2	524.2	0.5	< 0.5	0	5.0 µg/L	
cis-1,2 Dichloroethylene	✓		2	524.2	0.5	< 0.5	0	70 µg/L	---
Vinyl Chloride	✓		2	524.2	0.2	< 0.2	0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✓		2	625SIM	1.94	3.14*	3.09*	190 µg/L	
Diethylhexyl phthalate	✓		2	625SIM	1.94	< 1.94	0	101 µg/L	
Total Group I PAHs	✓		2	625SIM	0.05	< 0.05	0	1.0 µg/L	---
Benzo(a)anthracene	✓		2	625SIM	0.05	< 0.05	0	As Total PAHs	
Benzo(a)pyrene	✓		2	625SIM	0.05	< 0.05	0		
Benzo(b)fluoranthene	✓		2	625SIM	0.05	< 0.05	0		
Benzo(k)fluoranthene	✓		2	625SIM	0.05	< 0.05	0		
Chrysene	✓		2	625SIM	0.05	< 0.05	0		
Dibenzo(a,h)anthracene	✓		2	625SIM	0.05	< 0.05	0		
Indeno(1,2,3-cd)pyrene	✓		2	625SIM	0.05	< 0.05	0		

*detection attributed to laboratory contamination, compounds not believed to be present at the Property.

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✓	2	625SIM	0.19	1.97	1.04	100 µg/L	---
Naphthalene	✓		2	625SIM	0.19	< 0.19	0	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✓		2	608	0.10	< 0.10	0	0.000064 µg/L	---
Pentachlorophenol	✓		2	625SIM	0.87	< 0.87	0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✓		2	1664A	5,000	< 5.000	0	5.0 mg/L	---
Ethanol	✓		2	ASTMD36	10,000	< 10,000	0	Report mg/L	---
Methyl-tert-Butyl Ether	✓		2	524.2	0.5	< 0.5	0	70 µg/L	
tert-Butyl Alcohol	✓		2	524.2	25.0	< 25.0	0	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✓		2	524.2	1.0	< 1.0	0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Hardness		✓	2	200.7	2,500	383,000	306,500		
Temperature		✓	2	Field	NA	10.43	9.1		
pH		✓	2	Field	NA	6.61	6.56		

E. Treatment system information

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

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption

■ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ■ Other; if so, specify:

Iron treatment and other treatments as needed to meet effluent limits.

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

Prior to discharge, dewatering effluent will be routed through a fractionation tank and bag filters to remove suspended solids, granulated carbon to remove undissolved chemical compounds,ion exchange , and precipitation/coagulation/flocculation to remove iron and metals. Other treatments will be added as need to meet effluent limits. See Figure 4.

Identify each major treatment component (check any that apply):

■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter

☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ■ Other; if so, specify: Granulated activated carbon, ion exchange, and other treatments as need to meet effluent limits.

Indicate if either of the following will occur (check any that apply):

☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Flowmeter Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	250
Provide the proposed maximum effluent flow in gpm.	100
Provide the average effluent flow in gpm.	50
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA

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

F. Chemical and additive information

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

☐ Algaecides/biocides ☐ Antifoams ■ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ■ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ■ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:
pH conditioners, coagulants and/or flocculants may be added to the treatment system if necessary to meet effluent limits.

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

See attached letter report prepared by GEI.

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

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

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented on the Property.
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: 4/6/18
Print Name and Title: Chris Wholey Manager - Development

J. Certification requirement

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

BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented on the Property.	
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: Gary Weinberger	Date: 4/13/2018
Print Name and Title: Gary Weinberger, Project Manager	

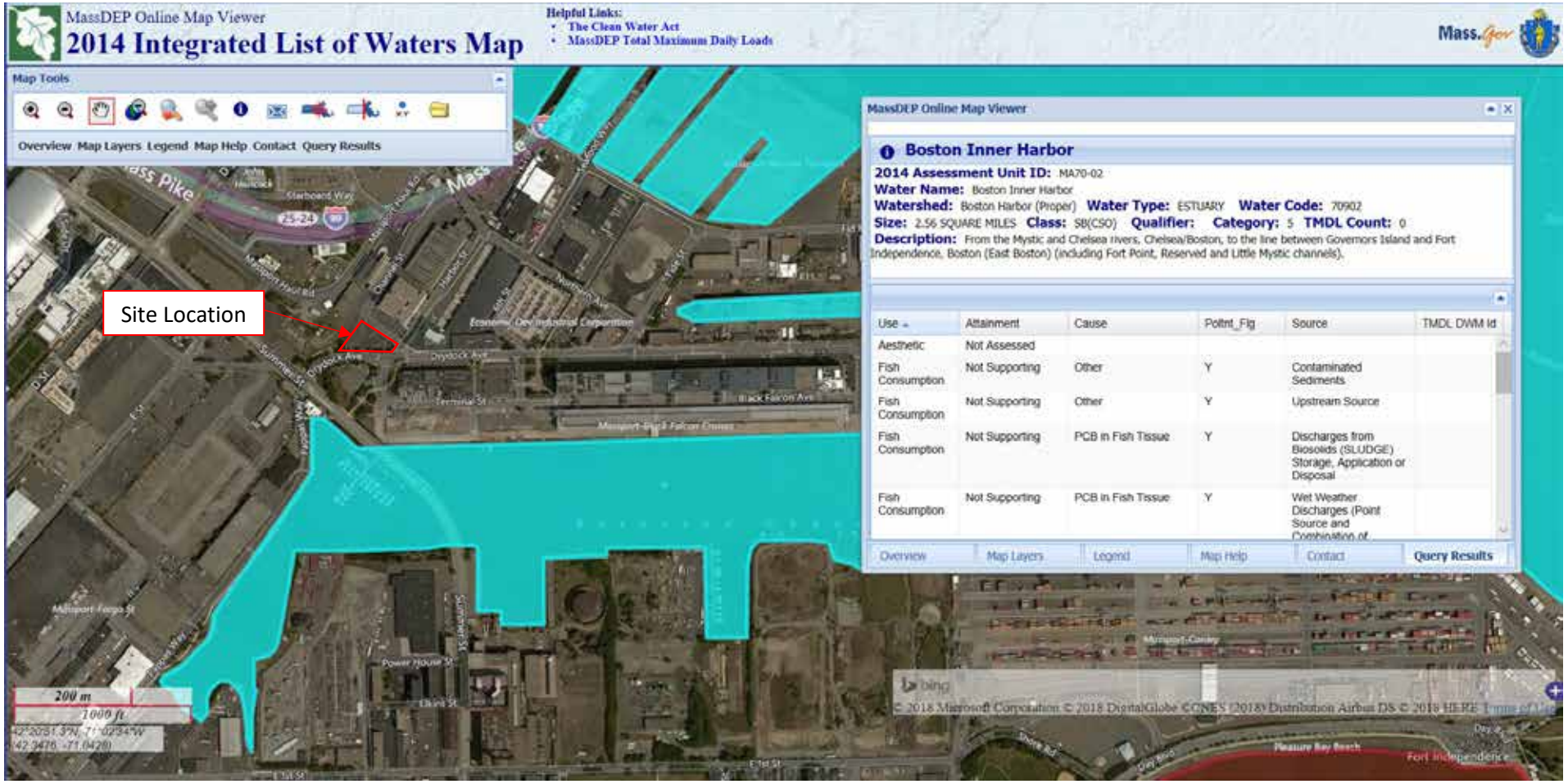

MassDEP Online Map Viewer
2014 Integrated List of Waters Map
Helpful Links:
The Clean Water Act
MassDEP Total Maximum Daily Loads
Mass.gov
Map Tools
Overview Map Layers Legend Map Help Contact Query Results
Site Location
MassDEP Online Map Viewer
Boston Inner Harbor
2014 Assessment Unit ID: MA70-02
Water Name: Boston Inner Harbor
Watershed: Boston Harbor (Proper) Water Type: ESTUARY Water Code: 70902
Size: 2.56 SQUARE MILES Class: SB(CSO) Qualifier: Category: 5 TMDL Count: 0
Description: From the Mystic and Chelsea rivers, Chelsea/Boston, to the line between Governors Island and Fort Independence, Boston (East Boston) (including Fort Point, Reserved and Little Mystic channels).
Use
Attainment
Cause
PolInt_Flg
Source
TMDL DWM Id
Aesthetic
Not Assessed
Fish Consumption
Not Supporting
Other
Y
Contaminated Sediments
Fish Consumption
Not Supporting
Other
Y
Upstream Source
Fish Consumption
Not Supporting
PCB in Fish Tissue
Y
Discharges from Biosolids (SLUDGE) Storage, Application or Disposal
Fish Consumption
Not Supporting
PCB in Fish Tissue
Y
Wet Weather Discharges (Point Source and
Overview
Map Layers
Legend
Map Help
Contact
Query Results
200 m
1000 ft
bing

Table 1. Water Quality Assessment Status for Reporting Year 2014
Boston Inner Harbor

Designated Use	Designated Use Group	Status
Aesthetic	Aesthetic Value	Impaired
Fish Consumption	Aquatic Life Harvesting	Impaired
Fish, Other Aquatic Life And Wildlife	Fish, Shellfish, And Wildlife Protection And Propagation	Impaired
Primary Contact Recreation	Recreation	Impaired
Secondary Contact Recreation	Recreation	Impaired
Shellfish Harvesting	Aquatic Life Harvesting	Impaired

Causes of Impairment for Reporting Year 2014

Cause of Impairment	Cause of Impairment Group	Designated Use(s)	State TMDL Development Status
Dissolved Oxygen	Organic Enrichment/Oxygen Depletion	Fish, Other Aquatic Life And Wildlife	TMDL needed
Enterococcus Bacteria	Pathogens	Primary Contact Recreation, Secondary Contac	TMDL needed
Fecal Coliform	Pathogens	Shellfish Harvesting	TMDL needed
Other Cause	Other Cause	Fish Consumption	TMDL needed
PCB(s) in Fish Tissue	Polychlorinated Biphenyls (PCBs)	Fish Consumption	TMDL needed

General Notes:

1. Information obtained from EPA website: https://ofmpub.epa.gov/waters10/attains_index.home on March 7, 2018.

From:	Vakalopoulos, Catherine (DEP)
To:	Ballantyne, Heather
Cc:	Ruan, Xiaodan (DEP)
Subject:	FW: Dilution Factor Calculation - Reserved Channel
Date:	Wednesday, March 28, 2018 2:06:19 PM

Hi Heather,

Yes, no dilution to salt water unless there is modeling or a dye study that shows otherwise.

Cathy

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026
Please consider the environment before printing this e-mail

From: Ruan, Xiaodan (DEP)
Sent: Wednesday, March 28, 2018 12:29 PM
To: Vakalopoulos, Catherine (DEP)
Subject: FW: Dilution Factor Calculation - Reserved Channel

From: Ballantyne, Heather [mailto:hballantyne@geiconsultants.com]
Sent: Wednesday, March 28, 2018 12:19 PM
To: Ruan, Xiaodan (DEP)
Subject: Dilution Factor Calculation - Reserved Channel

Hi Xiaodan,

We are preparing a NPDES RGP NOI for the 2 Dry Docks site in South Boston. Our effluent would discharge to the Reserved Channel. I'm just confirming that since the Reserved Channel is saltwater, that the Dilution Factor is 1, and no additional calculation is required.

Thank you,
Heather

Heather A. Ballantyne, P.G.
Project Manager
GEI Consultants
Consulting Engineers & Scientists
GEI Consultants, Inc.
400 Unicorn Park Drive | Woburn, MA 01801
T: 781.721.4063 | **M:** 857.345.2100
www.geiconsultants.com | vCard | map | LinkedIn | Twitter | Facebook

Enter number values in green boxes below

Enter values in the units specified

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

Enter a dilution factor, if other than zero

1

Enter values in the units specified

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

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

6.76	pH in **Standard Units**
3.58	Temperature in **°C**
0	Ammonia in **mg/L**
5180	Hardness in **mg/L** $CaCO_3$
20.8	Salinity in **ppt**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
0	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

0	TRC in **µg/L**
1.52	Ammonia in **mg/L**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
2.08	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
13.3	Copper in **µg/L**
13000	Iron in **µg/L**
11.9	Lead in **µg/L**
0	Mercury in **µg/L**
89.2	Nickel in **µg/L**
0	Selenium in **µg/L**
1	Silver in **µg/L**
623	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approved
Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry

Discharge flow is equal to the design flow or 1 MGD, whichever is less
Only if approved by State as the entry for Q_R; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State
Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges
Hardness required for freshwater
Salinity required for saltwater (estuarine and marine)
Metals required for all discharges if present and if dilution factor is > 1
Enter 0 if non-detect or testing not required

if >1 sample, enter maximum
if >10 samples, may enter 95th percentile
Enter 0 if non-detect or testing not required

Dilution Factor	1.0					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	0.2	mg/L	**7.5**	µg/L	50	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	640	µg/L		
Arsenic	**104**	µg/L	36	µg/L		
Cadmium	**10.2**	µg/L	8.9	µg/L		
Chromium III	**323**	µg/L	100.0	µg/L		
Chromium VI	**323**	µg/L	50	µg/L		
Copper	242	µg/L	**3.7**	µg/L		
Iron	**5000**	µg/L	---	µg/L		
Lead	160	µg/L	**8.5**	µg/L		
Mercury	**0.739**	µg/L	1.11	µg/L		
Nickel	1450	µg/L	**8.3**	µg/L		
Selenium	**235.8**	µg/L	71	µg/L		
Silver	**35.1**	µg/L	2.2	µg/L		
Zinc	420	µg/L	**86**	µg/L		
Cyanide	**178**	mg/L	1.0	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	**100**	µg/L	---			
Benzene	**5.0**	µg/L	---			
1,4 Dioxane	**200**	µg/L	---			
Acetone	**7.97**	mg/L	---			
Phenol	**1,080**	µg/L	300	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**		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	---			
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	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	20	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

ECOLOGIX ENVIRONMENTAL SYSTEMS

Water & WasteWater Treatment Solutions
(888) 326-2020 / (678) 514-2100

Click to Find Us On:

Bag Filters / Accugaf Filter Bags

Accugaf filter bags are constructed from FDA compliant materials. They are ideal for food processing applications and will filter particulate from 1 micron to 25 microns with 99% efficiency..

Related Product Links
Accugaf Filter Bags | Duragaf Filter Bags | Hayflow Filter Element | Lofclear Filter Bags | Nylon & Polyester Mesh | Progaf Filter Bags | Sentinel® Filter Bags & Seal | Snap Ring Filtration Media Overview

ACCUGAF™, Filter Bags for Applications Demanding Efficiency >99%

The ACCUGAF filter bag pushes the boundaries of bag filtration technology far beyond traditional designs. With efficiencies >99%, each A model provides cost-effective filtration solutions for demanding applications. The five models assure users that particles from the range of can be removed effectively while delivering long service life.

Material	Filter Model	Buy Now	Particle Size at Common Removal Efficiencies (µm)					ΔP (psi) Size 02 @ 45 gpm
			>60%	>90%	>95%	>99%	>99.9%	
Polypropylene	AGF 51		0.2	0.6	0.8	1.5	5	1.30
	AGF 53		0.8	1	2	3	5	3.20
	AGF 55		1	2	3	5	15	0.73
	AGF 57		2	4	5	10	25	0.60
	AGF 59		10	25	30	25	35	0.44
Polyester	AGFE 51		0.2	0.6	0.8	1.5	5	1.30
	AGFE 55		1	2	3	5	15	0.73
	AGFE 57		2	4	5	10	25	0.60

High-Efficiency Performance

ACCUGAF filter bags feature:

- 100% welded seams
- Patented SENTINEL® seal ring
- Meltblown filtration media in polypropylene or polyester
- No additives, such as resins, binders or surface treatments

FDA Compliant Materials

ACCUGAF Polypropylene filter bags are constructed entirely of materials compliant to FDA requirements for materials in contact with food materials conform to US Code of Federal Regulations 21 CFR Part 177 and EU Directive 2002/72/EC.

Applications

Although ideally suited for food and beverages, ACCUGAF filter bags will deliver equal performance in a wide range of demanding applica as:

- Beer, wine, spirits and beverage filtration
- Fine particle removal in parts cleaning
- Final filtration of lacquers
- Final filtration of vinegar
- Activated carbon removal in process systems
- Final filtration of hydraulic oils and lubricants

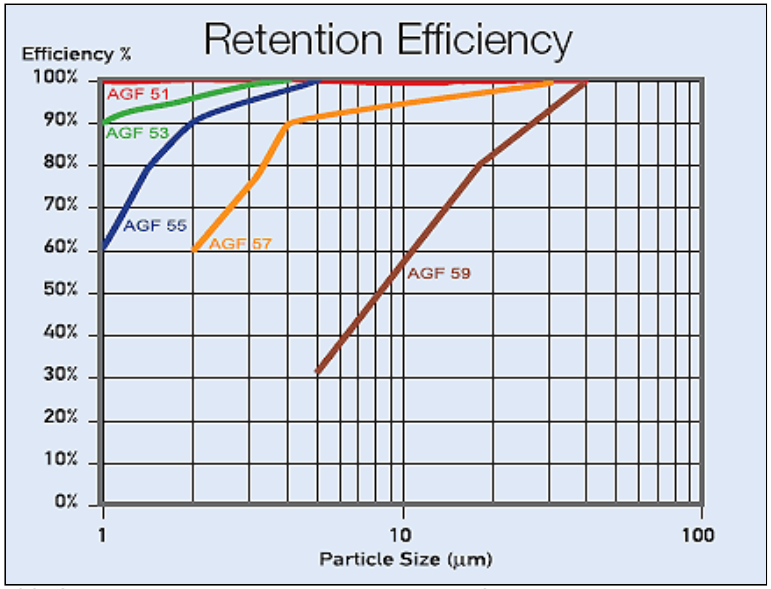
OPERATIONALCONSIDERATIONS

Bag Positioner

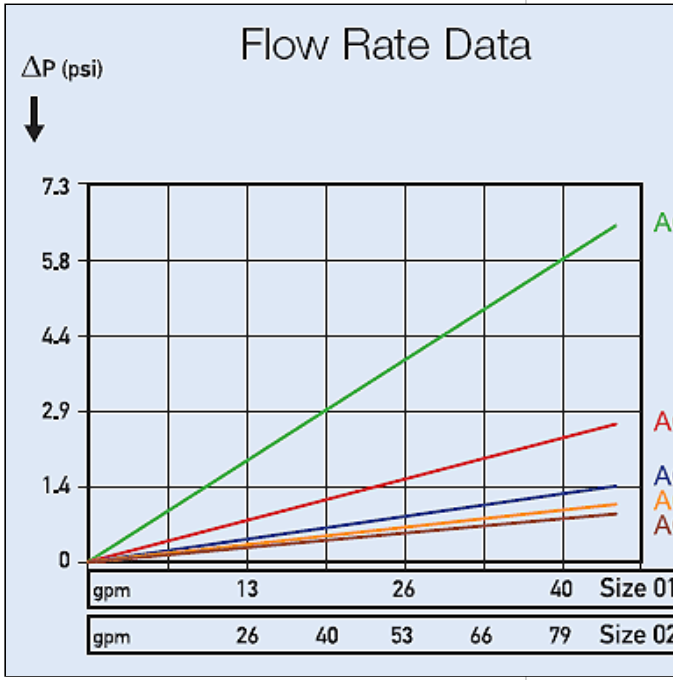
ACCUGAF filter bags must be used with the Eaton bagpositioner. This eases insertion and assures correct alignment of the filter bag inside the restrainer basket. In addition, the be protected against damage to inadvertent back-flow.

Pre-Wetting in Aqueous Solutions

ACCUGAF polypropylene filter bags are fabricated from microfiber filtration media. These materials are hydro-phobic, indicating that water will not wet the fiber surfaces.As will a polypropylene filters, a lower surface tension fluid (wetting agent) must be used to wet the media prior to introducing water. Prior to service, the filter bags must be immersed in a solution compatible with the process fluid. After wetting, an aqueous fluid will be drawn into the media through capillary action. Full details about installation and wetting are prov every box of ACCUGAF filter bags.



ACCUGAF Filter Bags are available in retention codes of 51,53,55,57,and 59.To select the perfect ACCUGAF Filter Bag for your application use the chart and choose the retention efficiency level you need on the left side (Y Axis) of the chart at the particle size in microns at the bottom (X Axis) .Next find which bag efficiency code (identified by the colored lines) is closest to that point.Thsi will assist you in finding the most cost effective filter bag for your critical filtration application.



BAG FILTER PRODUCT CODE EXPLANATION

ACCUGAF™ AGF: polypropylene melt-blown AGFE: polyester melt-blown		E: Polypropylene Mesh R: Polyester Mesh		E: PP SENTINEL® Ring H: Hytrel SENTINEL® Ring		Bags/Box Box Size (inc 01/02 10M 19 x 12
AGF Bag Material	- **53** Micron Rating µm	**E** Bag Cover Layer	**02** Bag Size	**E** Collar/Ring Type	- **O** Bottom Shape	- **10M** Packagi

AGF	AGFE
51	51
53	-
55	55
57	57
59	-

Code	Size	Area
01	ø 7 x 17 inches L	2.6 sqft
02	ø 7 x 32 inches L	5.2 sqft

round bottom

ECOLOGIX ENVIRONMENTAL SYSTEMS
Water & WasteWater Treatment Solutions
(888) 326-2020 / (678) 514-2100

Click to Find Us On:

Applications
- Automotive
- Biodiesel
- Dairy Industry
- Industrial Wastewater
- Food Processing Industry
- Iron Removal
- Latex Removal
- Metals Treatment
- Mining Industry
- Municipal Wastewater
- Odor Control
- Petrochemical Industry
- Poultry Industry

Products
- Activated Carbon
- Bag Filtration
  - Bag Filter Housings
  - Bag Filter Media
- Biological Treatment
- Chemicals (Specialty)
- Clarifiers
- Controls
- Dissolved Air Flotation
- Dewatering
- Evaporators
- Membrane Filtration
- Microbial Bacteria
- Oil/Water Separators
- Ozone
- Pressure Filtration

Bag Filter Media / Lofclear Absolute Rate Oil Removal Filter Bags

Accugaf filter bags are constructed from FDA compliant materials. They are ideal for food processing applications and will filter particulate from 1 micron to 25 microns with 99% efficiency..

Related Product Links
Accugaf Filter Bags | Duragaf Filter Bags | Hayflow Filter Element | Lofclear Filter Bags | Nylon & Polyester Mesh | Progaf Filter Bags | Sentinel® Filter Bags & Seal | Snap Ring Filter Bags | Filtration Media Overview

LOFCLEAR: Cost Effective Filter Bags for Absolute Filtration Applications

A pleated prefilter provides a very large surface (about 32 sq ft) to collect

LOFCLEAR filter bags now make absolute filtration viable in many applications where only standard bags could be used due to cost constraints. Made from 100% pure polypropylene materials compliant with food requirements, LOFCLEAR filter bags contain no leachables or lubricants such as silicone oils. In addition, their excellent oil adsorbancy makes LOFCLEAR filter bags ideally suited to the oil removal needs of the paint and coatings industries.

LOFCLEAR™Filter Bag Filtration Ratings

Filter Model	Particle Size at Common Removal Efficiencies (µm)					ΔP (psi) Size 02 @ 45 gpm
	Buy Now	>60%	>90%	>95%	>99%	
113/123		0.5	1	2	4	0.36
114/124		0.75	2	3	5	0.30
115/125		1.5	3.5	8	10	0.15
116/126		2	6	13	15	<0.15
118/128		25	35	37	40	<0.15
119/129		15	25	27	30	<0.15
130		6	14	15	20	0.72
135		1	6	8	10	0.29
522		0.5	1	1.5	2.6	1.45
525		1	2	3.5	6	0.26
527		2	5	9	13	0.15
529		10	20	23	32	<0.15

Two Series to Match Filters to Applications

- Screens
- Separators/Strainers
- Tanks

gels and solids before it reaches the final filter layers.

LOFCLEAR filter bags are available in two styles, Series100 and Series 500. These two styles make it possible to match the requirements of a wide range of applications, depending on the needs for efficiency and long life. The Series 100 filters use a multi-layer construction for applications where high efficiency is of prime importance. The Series 500 filters utilize a patent pending pleated construction to increase surface area for applications requiring high dirt capacities and long life.

Perfect for Removal of Gelatinous Materials

LOFCLEAR filter bags have proven to be highly effective in the removal of gelatinous contaminants. The combination of deep micro fiber filtration media breaks up gels and retains them within the media depth. These features prevent surface blockage and breakthrough typical of standard filter bag materials.

LOFCLEAR™Series 100 Filter Bags

LOFCLEAR Series 100 Filter Bags feature a proven three layer construction with a sewn filter welded to the SENTINEL® seal. They feature efficiencies >99% over a wide range of particle sizes, with dirt capacities up to 1/2pound. The seven models feature:

• Polypropylene pre filter
• Meltblown polypropylene microfiber final filter
• Polypropylene outer migration barrier

LOFCLEAR Series 100 filter bags are an excellent choice for application such as high purity fluids with low particulate concentration, first pass guard filtration, oil adsorption and activated carbon removal.

The LOFCLEAR 128 and 129 were especially developed for the filtration of electro-coatings in the automotive industry. The filtration design allows pigments to pass through the filtration layers, while retaining impurities and removing silicones and other crater forming substances.The LOFCLEAR 130 filter bag adds extra adsorption capacity for retaining high amounts of oils or other crater forming substances. The LOFCLEAR 135 delivers high removal of particulate and oils for clear coat applications where pigment removal is not an issue.

LOFCLEAR™Series 500 Filter Bags

LOFCLEAR Series 500 Filter Bags have an all welded multi-pleated construction for high efficiency and long life. This series of bags has a pleated prefiltration layer and a complex design of final filtration layers, allowing the removal of difficult to filter gels and deformable particles with a high capacity of solids loading. The outer web covering eliminates any downstream fiber migration.

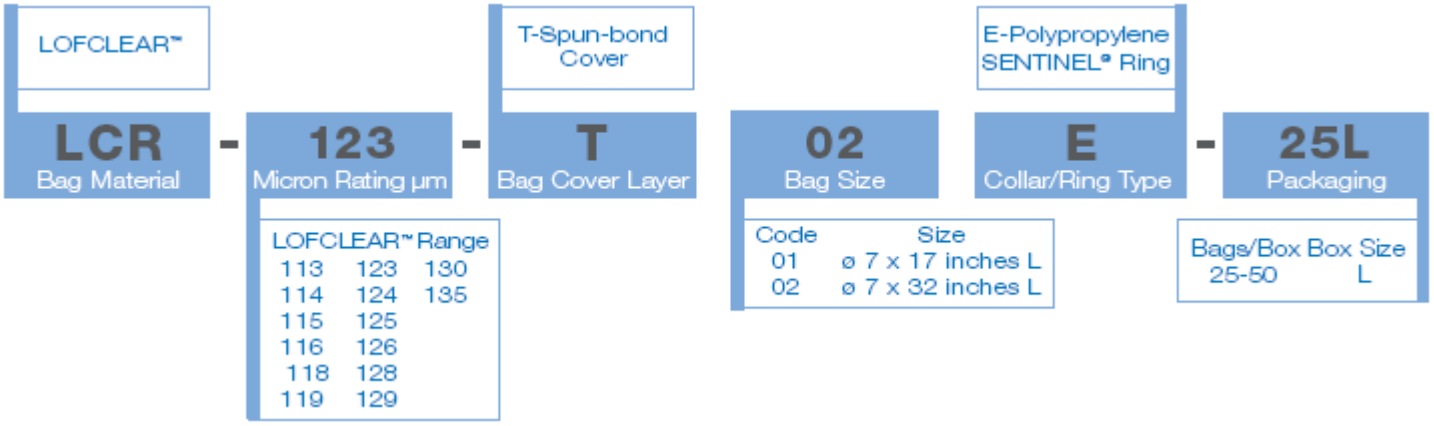
LOFCLEAR Series 500 Filter Bags are available in four different efficiency ratings so you can choose your exact required filtration efficiency. LOFCLEAR Filter Bags have filtration efficiencies from 95 to 99%, with a dirt holding capacity of over 2 pounds.

Among the many applications for LOFCLEAR Series 500 Filter Bags are oils, slurries, dilute oil removal, re-circulating batch systems, and systems with heavy contamination.

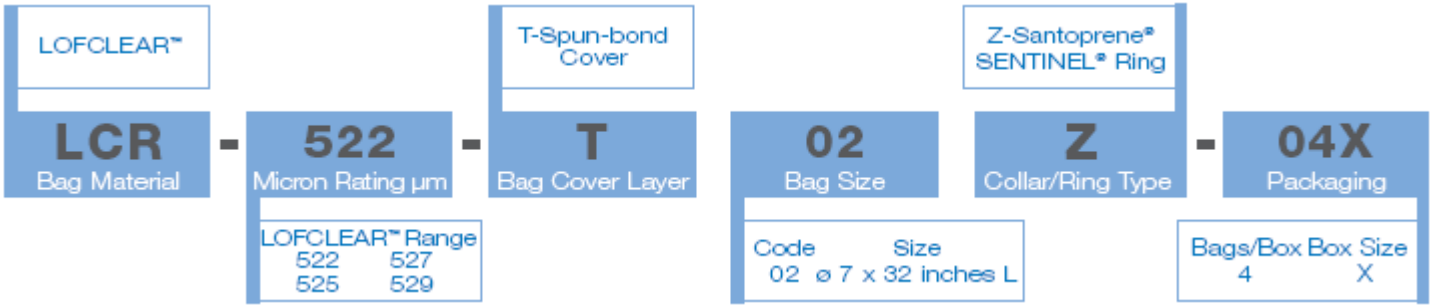
Operational Considerations

LOFCLEAR Series 500 Filter Bags must be used with a bag positioner. This eases insertion and assures correct alignment of the filter bag inside the restrainer basket. In addition, the positioner protects the filter bag from potential damage that could be caused by inadvertent back flow.

LOFCLEAR 100 SERIES BAG FIL TER PRODUCT CODE EXPLANATION



LOFCLEAR 500 SERIES BAG FIL TER PRODUCT CODE EXPLANATION



Activated Carbon | Aeration | Air Treatment | Bag Filters & Housings| Chemicals | Dissolved Air Flotation | Dust Collection | Evaporators | Filter Presses | Flocculation | Inline Filter Vessels | Membrane Filtration | Odor Control |Ozone | Oil Water Separators | Sewage Systems | Liquid and Vapor Phase Vessels | Wet Scrubbers | Careers

ECOLOGIX ENVIRONMENTAL SYSTEMS

Water & WasteWater Treatment Solutions
(888) 326-2020 / (678) 514-2100

Click to Find Us On:

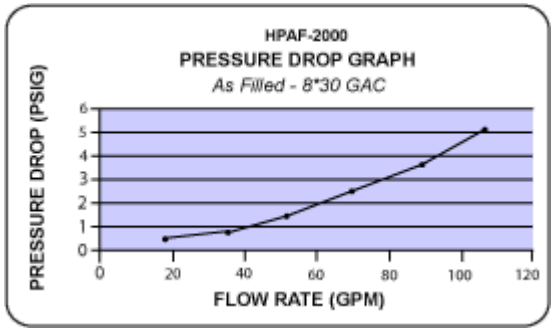
Applications
- Automotive
- Biodiesel
- Dairy Industry
- Industrial Wastewater
- Food Processing Industry
- Iron Removal
- Latex Removal
- Metals Treatment
- Mining Industry
- Municipal Wastewater
- Odor Control
- Petrochemical Industry
- Poultry Industry

Products
- Activated Carbon
- Bag Filtration
- Biological Treatment
- Chemicals (Specialty)
- Clarifiers
- Controls
- Dissolved Air Flotation
- Dewatering
- Evaporators
- Membrane Filtration
- Microbial Bacteria
- Oil/Water Separators
- Ozone
- Pressure Filtration
- Screens
- Separators/Strainers

General Description

The HPAF-2000 filter is a media filter vessel designed to treat liquid streams. While the typical design application is a activated carbon adsorbtion unit, the filter can easily accommodate many medias. Some applications include:

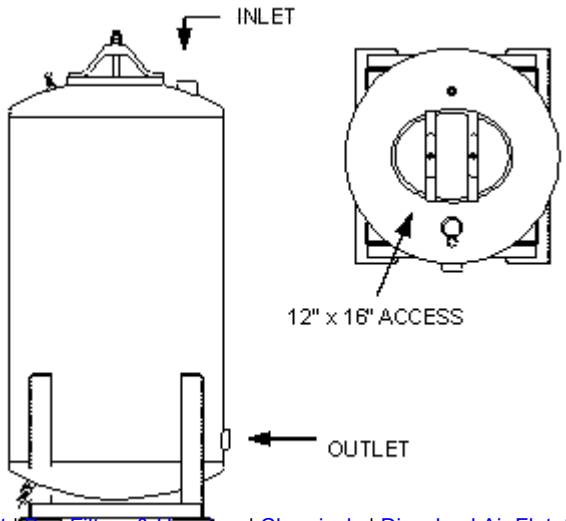
- Dissolved Organic Removal (Activated Carbon)
- Suspended Solids Removal (Sand Filter)
- Dissolved Minerals (Softener Resin)
- Oil and Grease Removal (Organo-Clays)
- Dissolved and Precipitated Metals Removal
- Special Organics (Resin/Carbon Blend)
- Catalytic Reactor (Chlorine and Peroxide Removal)
- Bio-Remediation Contactor Unit



Standard Specifications

HPAF-2000 SPECIFICATIONS			
Overall Height	8'6"	Vessel/Internal Piping Materials	CS(SA-36) / SCH 40 PVC
Diameter	48"	Internal Coating	Polyamide Epoxy Resin
Inlet / Outlet (FNPT)	3"	External Coating	Epoxy Mastic
Drain / Vent (FNPT)	3/4" / 1/2"	Maximum Pressure / Temp	75PSIG / 140° F
GAC Fill (lbs)	2,000	Cross Sectional Bed Area	12.5 FT^2
Shipping / Operational Weight (lbs)	3,020/6,775	Bed Depth/Volume	5.5 FT / 68.7 FT^3
Capacity in gallons	570	Flow rate based on 5-10 min. contact time	57 - 114 GPM

- Tanks



Liquid Phase V essels, Filter Series			
AFD Series	AF Series	HPAF Series	HPP Series
AFD 30	AF 250	HPAF 500	HPP 50
AFD 55	AF 500	HPAF 1000	HPP 100
AFD 85	AF 1000	HPAF 2000	HPP 200
AFD 110	AF 2000	HPAF 3000	HPP 300
AHP 55	AF 3000	HPAF 5000	HPP 500
N/A	AF 5000	HPAF10000	HPP 1000
N/A	AF10000	HPAF20000	HPP2000

Activated Carbon | Aeration | Air Treatment | Bag Filters & Housings | Chemicals | Dissolved Air Flotation | Dust Collection | Evaporators | Filter Presses | Flocculation | Inline Filter Vessels | Membrane Filtration | Odor Control | Ozone | Oil Water Separators | Sewage Systems | Liquid and Vapor Phase Vessels | Wet Scrubbers | Careers

SAFETY DATA SHEET

Section 1 - Identity

Identity (As Used on Label and List): GC Activated Carbon (Including, but not limited to GC C-40, GC 4 x 8B, GC 4 x 8S, GC 6 x 12, GC 6 x 12S, GC 8 x 30, GC 8 x 30AW, GC 8 x 30S, GC 8 x 30SAW, GC 12 x 40, GC 12 x 40AW, GC 12x40SAW, GC 20 x 50, GC 20 x 50S, GC Powdered, GC WDC activated carbons)

Manufacturers Name: General Carbon Corporation
33 Paterson Street
Paterson, NJ 07501
Tel: (973)523-2223
www.generalcarbon.com
Date Prepared: February 16, 2017

Section 2 - Hazardous Identification

2.1 GHS-US Classification

Eye Irritation	2B H320
STOT	SE 3 H335

Hazards not otherwise classified: Combustible dust. May form combustible dust concentrations in air. All powdered activated carbons are classified as weakly explosive (Dust explosion class St1): Given the necessary conditions of a strong ignition source, right concentrations of airborne carbon dust, adequate oxygen levels, and confinement, the potential for a deflagration event exists. A combustible dust hazard assessment and employee training should be carried out. See sections 7 and 9 for further information on combustible dust precautions.

2.2 Label Elements

Hazard Pictograms

Signal word (GHS-US)	: Warning
Hazard Statements	: H320- Causes eye irritation
	: H335- May cause respiratory irritation
Precautionary statements (GHS-US)	: P261- Avoid breathing dust
	: P264- Wash thoroughly after handling
	: P271- Use in well-ventilated area
	: P280- Wear protective gloves/clothing/eye & face protect
	: P304&340: IF INHALED: Remove person to fresh air

: P305&351&P338: If in eyes, Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
: P312- Call Poison Control Center/Doctor if you feel sick
: P403& P233- Store in well-ventilated place. Keep container tightly closed
: P405- Store locked up
: P501- Dispose of container to appropriate receptacle

2.3 Other Hazards

No additional information available

2.4 Unknown acute toxicity (GHS-US)

No data available

Section 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixture

Name	CAS #	%	GHS_US classification
Carbon	7440-44-0	100	Not classified

Section 4 – First Aid Measures

4.1 Description of first aid measures

First aid after inhalation	Remove person to fresh air. If not breathing, administer CPR or artificial respiration. Get immediate medical attention.
First aid after skin contact	If skin reddening or irritation develops, seek medical attention
First aid after eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.
First aid after ingestion	If the material is swallowed, get immediate medical attention or advice. DO NOT induce vomiting unless directed to do so by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	May cause respiratory irritation
Symptoms/injuries after skin contact	May cause skin irritation
Symptoms/injuries after eye contact	Causes serious eye damage
Symptoms/injuries after ingestion	May be harmful is swallowed

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	If involved with fire, flood with plenty of water
Unsuitable extinguishing media	None

5.2 Special hazards arising from substance or mixture

Fire hazard	None known
Explosion hazard	None known
Reactivity	Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, etc. may result in fire.

5.3 Advice for firefighters

Protection during firefighting	Firefighters should wear full protective gear

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

General measures	Avoid contact with the skin and eyes

6.1.1 For non-emergency personnel

No additional information available

6.1.2 For emergency responders

No additional information available

6.2 Environmental precautions

None

6.3 Methods and material for containment and cleaning up

For containment	If possible, stop flow of product
Methods for cleaning up	Shovel or sweep up and put in closed container for disposal

6.4 Reference to other sections

No additional information available

Section 7: Handling and storage

7.1 Precautions for safe handling

Precautions for safe handling	Avoid contact with eyes. Wet activated carbon removes oxygen from air causing severe hazard to workers inside carbon vessels or confined spaces

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Protect containers from physical damage. Store in dry, cool, well-ventilated area. Store away from strong oxidizers, strong acids, ignition sources, combustible materials, and heat. An adequate air gap between packages is recommended to reduce propagation in the case of fire **.**

Handling: A hazard assessment should be carried out. As with all finely divided materials, ground all transfer, blending, and dust collecting equipment to prevent static discharge. Remove all strong ignition sources from material handling, transfer, and processing areas where dust may be present or accumulate. Practice good housekeeping. Excessive accumulations of dust or dusty conditions can create the potential of secondary explosions. Inspection of hidden surfaces for dust accumulation should be made routinely. If possible, eliminate the pathways for dust to accumulate in hidden areas. Fine carbon dust may penetrate electrical equipment and cause electrical shorts. Where dusting is unavoidable, dust-proof boxes and regular electrical line maintenance are recommended. Refer to NFPA standards 654 for guidance.

Caution employees-no smoking in carbon storage and handling areas. Carbon is difficult to ignite, however, cutting and welding operations should be carried out using hot work permit systems where precautions are taken not to ignite carbon, which may smolder undetected.

7.3 Specific end use(s)

No additional information available

Section 8: Exposure controls/ personal protection

8.1 Control parameters

No additional information available

8.2 Exposure controls

Appropriate engineering controls	: Local exhaust and general ventilation must be adequate to meet exposure standards
Hand Protection	: None required under normal product handling conditions
Eye Protection	: safety glasses
Skin and body protection	: Wear suitable working clothes
Respiratory protection	: If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Particulate
Color	: Black
Odor	: No data available
Odor threshold	: No data available
Ph	: No data available
Relative evaporation rate	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor density @ 20 deg C	: No data available
Relative Density	: 28-33 lb/ cubic foot
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

Combustible dust- These products may contain combustible dusts. May form combustible dust concentrations in air. All powdered activated carbons are weakly explosive. No specific information on these carbons are available.
Typical combustible dust data for a variety of activated carbons:
K_{st} values reported between 43-113 (various sources).
Dust explosion class St1 (K_{st} values < 200 are Class St1-weakly explosive).
MEC (minimum explosible concentration) in air 50 and 60 g/m^3 (two reports)
Volatile content (by weight): < 8% ASTM D3175-11 (Watercarb)
MIT (minimum ignition temperature) values reported between 400-680°C (752-1256°F) (four reports)
Maximum Absolute Explosion pressure values reported between 6.0-8.6 bar (four reports)

9.2 Other information
No additional information available

Section 10: Stability and reactivity

10.1 Reactivity
Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, etc. may result in fire

10.2 Chemical stability
Stable under normal conditions

10.3 Possibility of hazardous reactions
Will not occur

10.4 Conditions to avoid
None

10.5 Incompatible materials
Strong oxidizing and reducing agents such as ozone, liquid oxygen or chlorine.

10.6 Hazardous decomposition products
Carbon monoxide may be generated in the event of a fire.

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity : Not classified

Carbon (7440-44-0)

LD50 oral rat	: >10000 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes eye irritation
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity	: May cause respiratory irritation (single exposure)
Specific target organ toxicity	: Not classified (repeated exposure)
Aspiration hazard	: Not classified

Section 12: Ecological Information

12.1 Toxicity
No additional information available

12.2 Persistence and degradability
No additional information available

12.3 Bioaccumulative potential
No additional information available

12.4 Mobility in soil
No additional information available

12.5 Other adverse effects

No additional information available

Section 13: Disposal concerns

13.1 Waste treatment methods

Waste Disposal recommendations : Dispose of contents/container in accordance with local/ regional/ international regulations

Section 14: Transportation information

In accordance with DOT/ADR/RID/ADNR/IMDG/ICAO/IATA

14.1 UN Number

Not applicable. See Note 1 below.

14.2 UN proper shipping name

Not applicable

Note 1: Under the UN classification for activated carbon, all activated carbons have been identified as a class 4.2 product. However, This product has been tested according to the United Nations Transport of Dangerous Goods test protocol for a "self-heating substance" (United Nations Transportation of Dangerous Goods, Manual of Tests and Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances) and it has been specifically determined that this product does not meet the definition of a self heating substance (class 4.2) or any other hazard class, and therefore should not be listed as a hazardous material. This information is applicable only for the Activated Carbon Product identified in this document.

Section 15: Regulatory information

15.1 US Federal regulations

Carbon (7440-44-0)

Listed on the United States TSCA inventory

15.3 US State regulations

No additional information available

Section 16: Other information

Full text of H-phrases:

Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H335	May cause respiratory irritation

NFPA®

NFPA health hazard : 1-Exposure could cause irritation but only minor residual injury even if no treatment is given

NFPA fire hazard : 1- Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur (e.g. mineral oil). Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F)

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

The information contained herein is accurate to the best of our knowledge. General Carbon Corporation makes no warranty with respect hereto said information and disclaims all liability from reliance there in.

Compact tank dosing unit for floor mounting
CTD

sera®
Excellence in Fluid Technology

The new **sera** compact tank dosing unit for floor mounting

- Highest precision and safety through the use of the most modern and proven pump technology
- Wide range of application by 7 different sizes which can be combined with various pump sizes
- Minimum space requirement through compact design
- Use of standard components which can be upgraded by standardized accessories
- Optimized processing and delivery times by setting a standard

Supported by:

Federal Ministry
of Economics
and Technology

on the basis of a decision
by the German Bundestag

Compact tank dosing unit for floor mounting
CTD

Excellence in Fluid Technology

Capability characteristics

- The most modern pump technology
- Standardized dosing tanks
- Highest accuracy
- Flexible control
- High operational safety
- High quality materials
- Easy to operate
- Compact design

Configuration example

Basic design with following options:

- Chemical vapour lock (gas-tight design)
- Drain cock
- Dosing pump
- Container screw connection
- Filling valve
- Level indication

Compact tank dosing unit for floor mounting
CTD

Excellence in Fluid Technology

Technical specifications

Type	Container volume l	Suction lance (without pump)	Flow rate l/h	Pump series (option)	Admissible backpressure bar
CTD-40.1	40	DN5	up to max. 35	R/C 204.1-0,4e … R/C 204.1-35e	up to max. 10
CTD-75.1	75	DN10	up to max. 180	R/C 204.1-0,4e … R/RF/C 409.2-180e	up to max. 10
CTD-100.1	100	DN10	up to max. 180	R/C 204.1-0,4e … R/RF/C 409.2-180e	up to max. 10
CTD-200.1	200	DN10 / DN15	up to max. 570	R/C 204.1-0,4e … R/RF/C 410.2-570e	up to max. 10
CTD-300.1	300	DN10 / DN15	up to max. 570	R/C 204.1-0,4e … R/RF/C 410.2-570e	up to max. 10
CTD-500.1	500	DN10 / DN15	up to max. 570	R/C 204.1-0,4e … R/RF/C 410.2-570e	up to max. 10
CTD-1000.1	1000	DN10 / DN15	up to max. 570	R/C 204.1-0,4e … R/RF/C 410.2-570e	up to max. 10

Compact tank dosing unit for floor mounting
CTD

Excellence in Fluid Technology

Standard scope of delivery

- PE container with litre scale and screw cap
- Type plate
- 4 x angle bracket
- Aeration and vent pipe bend
- Suction lance with foot valve and sieve

Option / Accessories

- Gas-tight design
  (connection to the ventilation system or chemical vapour lock)
- Dosing pump
- Multifunction valve
- Level indication
- Filling valve
- Container screw connection
- Drain cock or collecting basin
- Agitator
- Level indicator (for black container)
- Cabling
- Control system
- Splash guard
- Dosing technology equipment (pressure keeping valve, pulsation damper, shut off valve)
- Solvent cage
- plug lock for screw cap
- Terminal boxes or electrical connection sets

Local sera - representative:

sera GmbH
sera-Straße 1
34376 Immenhausen
Germany
Tel. +49 5673 999-00
Fax. +49 5673 999-01
www.sera-web.com
info@sera-web.com

118-02 en / 07.13 / PM

Slant Plate Clarifier

Features

- Standard models from 5 to 400 GPM
- No moving parts
- Compact size minimizes floor space requirements
- Integral flash mixing and flocculation tanks for increased efficiency
- Heavy duty 1/4" steel construction, welds are dye penetrant tested
- Structure is sandblasted and two coats of epoxy applied to ensure full coverage and superior chemical resistance
- 1/4" PVC removable settling plates
- Dual sludge outlet flanges
- Large side-access hatch
- Sludge sampling ports

Options

- Mixers for flash & flocculation tanks
- Coal-tar epoxy interior coating (other coatings and materials are available)
- Influent feed and sludge discharge pumps
- Custom designs available
- PolyMark™ polymer delivery systems

M.W. Watermark

M.W. Watermark is a leading supplier of water and wastewater equipment, parts, and service. We serve both muncipal and industrial markets globally.

Our team strives to provide unmatched service and value to customers, helping reduce their costs while keeping the environment clean.

CLARIFIER DATA TABLE	SPC 5	SPC 10	SPC 20	SPC 40	SPC 80	SPC 150	SPC 200	SPC 300	SPC 400
Design Flow Maximum (GPM)	5	10	20	40	80	150	200	300	400
Flash Mix Tank Volume (gal)	4.4	4.5	38	50	79	110	110	186	186
Flocculation Tank Volume (gal)	6.5	20.5	62	99	189	316	316	742	742
Total Pre-Treatment Volume (gal)	10.9	25	100	149	268	426	426	928	928
Effluent Piping Connection (Class 150 Flange)	1”	3”	4”	4”	4”	6”	6”	8”	8”
Solids Discharge Connection (Class 150 Flange)	1”	3”	4”	4”	4”	4”	4”	6”	6”
Sludge Capacity (gallons)	17	42	88	150	275	469	611	834	960
Plate Area (ft^2)	16	39	87	160	300	560	1,153	1,167	1,680
Projected Plate Area (ft^2)	9.4	23	50	92	172	321	662	830	964
Empty Shipping Weight (lb)	765	1,400	2,065	3,600	4,800	7,400	11,000	13,200	16,500
Full Operating Weight (lb)	1,325	2,875	5,310	9,000	15,480	22,900	32,760	58,300	60,320
Liquid Volume (gal)	67	177	389	648	1,280	1,859	2,609	5,366	6,000
Overall Length	45”	55.5”	70”	87”	102”	135”	164”	185”	210”
Overall Width	23”	44”	60”	60”	73”	76.5”	77”	100”	100”
Overall Height	51”	64”	94”	104”	130”	147”	149”	145”	143”
Design Solids Removal (200ppm influent)	95%+	95%+	95%+	95%+	95%+	95%+	95%+	95%+	95%+

System Design

Influent is fed into the top of the clarifier (A) and flows under a baffle to the integral flash mixing tank (B). The flash mixing tank is where flocculant may be added with a PolyMark™ polymer blending system and blended with the fluid using an optional high speed mixer.

From the flash mix tank, the fluid flows over a baffle into the integral flocculation tank (C), which may include an optional low speed mixer.

From the flocculation tank, the fluid flows downward through the feed channel between the two plate stacks to the sludge chamber at the bottom of the clarifier. At this point, the fluid velocity decreases and large particles drop out of suspension.

The flow then enters the bottom of the plate stacks and flows between the settling plates. Between each of the plates, the fluid has a low velocity, laminar flow profile which encourages the remaining solids to settle on the surface of the lower plate and flow downward to the sludge holding tank.

As the solids are settling along the plate surfaces, the fluid is moving upward through the plate stacks, over the weirs, and into the discharge trough.

Clarified effluent is then discharged through a flanged pipe connection at the bottom of the trough. Sludge is periodically drawn off the bottom of the sludge holding tank at the bottom of the clarifier.

Sample ports are provided to assist with determining the sludge level, which is periodically pumped to a batch storage tank for further liquid-solid separation via an M.W. Watermark Filter Press for eventual disposal.

Fig.1a – Top View

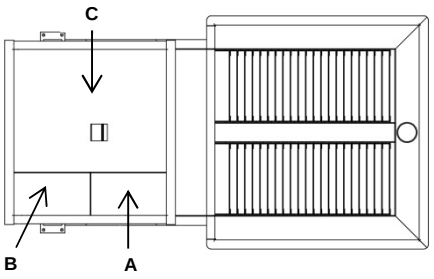
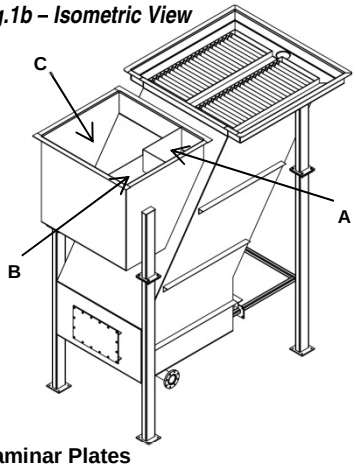


Fig.1b – Isometric View



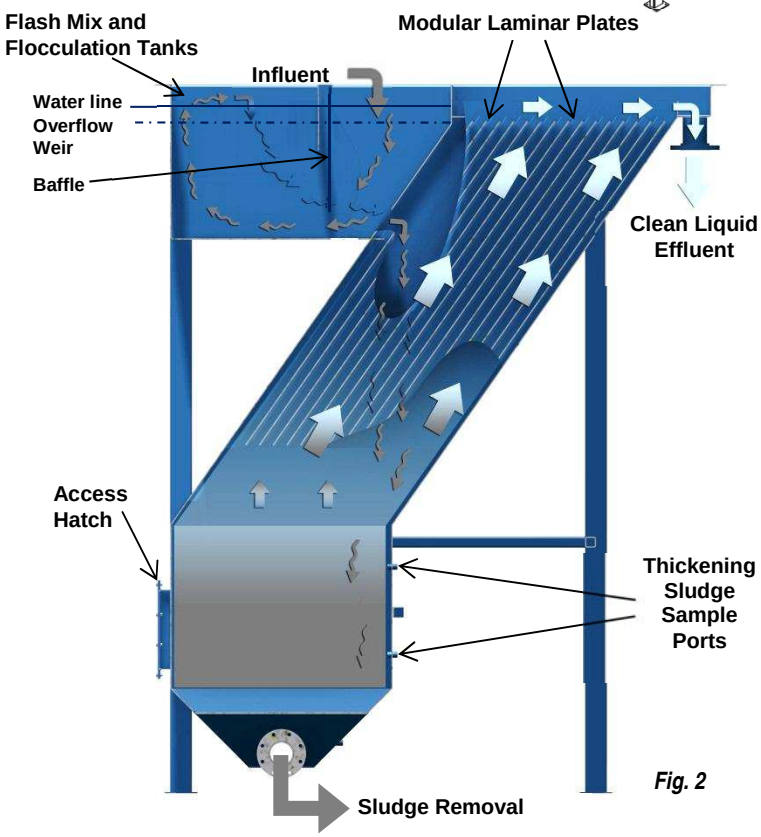
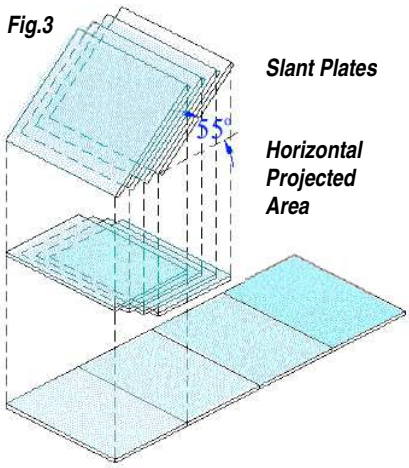


Fig. 2

Floor Space Requirement
Horizontal vs. Slant Plate Clarifier

Fig.3



Slant Plates

Horizontal Projected Area

Equipment Design

The M.W. Watermark SPC Slant Plate Clarifiers are designed to provide efficient solids removal from a wide range of waste and process liquids. The settling plates are inclined at an angle of 55° with 2-inch spacing. The slope of the plates allows the solids to settle by gravity while the fluid moves upward through the plate stack.

Stacking the plates reduces the floor space required by the clarifier compared to a horizontal clarifier. The inclined plate design allows the total gravity settling area to be as much as ten times the floor space occupied by the clarifier.

Fig. 3 illustrates the floor space reduction resulting from stacked plates.

M.W. Watermark mwwatermark.com
4660 136th Avenue, Holland, MI 49424
Office: 616.399.8850 Fax: 616.399.8860
info@mwwatermark.com

11800 Wills Road, Suite 100
Alpharetta, GA 30009
Tel: 678-514-2100 / 888-326-2020
Web Site: www.EcologixSystems.com

DATE OF ISSUE: 05/12/2003 **DATE OF LATEST REVISION**: 12/12/2010

SECTION 1: PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: **CIFSB**
PRIMARY FUNCTION: Coagulant
CHEMICAL FAMILY: Inorganic salts
CHEMICAL NAME: Iron (III) Sulfate

MANUFACTURER: Ecologix Environmental Systems, LLC
11800 Wills Road, Suite 100
Alpharetta, GA 30009 USA
PHONE: 678-514-2100 Fax: 678-514-2106

EMERGENCY 24/7 CONTACT: ECOLOGIX 1-888-326-2020

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	(CAS #)	%WT	OSHA PEL	ACGIH TLV	OTHER
Hydroxy ferric sulfate	127687-53-0	<50		1mg/m^{3}TWA	

Other components may be blended in this formulation. The precise composition is proprietary. Bona fide requests for disclosure to medical personnel must be made in accordance with the procedures in 29 CFR 1910.1200(i) 1-13. This MSDS contains valuable information critical to the safe handling and proper use of the product and should be retained and available for employees and other users of this product. This material is classified as hazardous under OSHA regulations.

SECTION 3: HAZARDS IDENTIFICATION

EYES: May cause pain and is corrosive. May cause burns to inner eyelids.
SKIN: May cause skin irritation**.** Prolonged contact may cause dermatitis and burns.
INGESTION: May produce mild to moderately severe oral and esophageal burns, with mild to severe stomach burns.
INHALATION: Mist or spray may be irritating to mucous membranes, respiratory tract and lung tissues.

SECTION 4: FIRST AID MEASURES

EYES: Flush eyes gently with water for at least 15 minutes while holding eyelids apart. Seek medical attention immediately.
SKIN: Remove contaminated clothing and wash with soap and water for at least 15 minutes. Seek medical attention.
INGESTION: Immediately rinse mouth with water. **Do not induce vomiting**. Do not give bicarbonate to neutralize. Drink milk or water to dilute. If vomiting occurs, drink more liquids. Seek medical attention.
INHALATION: Remove to fresh air. Give oxygen/artificial respiration if needed. Seek medical attention for breathing difficulty.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: N/A
EXTINGUISHING MEDIA: Any appropriate. Respiratory and eye protection required.
SPECIAL FIRE FIGHTING PROCEDURES: Dike area to prevent runoff and contamination of water sources.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Sulfuric acid could react with metals to produce hydrogen.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SMALL SPILLS: Wear appropriate personal protective equipment. Neutralize with lime, limestone or soda ash.
LARGE SPILLS: Dike the spilled liquid and collect residues for proper disposal. Neutralize with lime, limestone or soda ash. This will generate carbon dioxide, so additional ventilation may be necessary. Notify appropriate authorities.
WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations.

SECTION 7: HANDLING and STORAGE

HANDLING AND STORAGE: Protect drum from damage, freezing and intense heat. Keep containers closed and away from light. Do not store in metal containers which will dissolve and generate hydrogen.
OTHER PRECAUTIONS: Do not swallow. Wear protective eye goggles, gloves, boots and clothing.

SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

EYE PROTECTION: Wear chemical splash-proof goggles.
PROTECTIVE GLOVES: Wear rubber gloves, apron and shoe covers.
RESPIRATORY PROTECTION: If vapors or mists excessive, wear a NIOSH/MSHA approved respirator with mist prefilter.
VENTILATION: Always store and use all chemicals in well ventilated areas.
OTHER PROTECTIVE EQUIPMENT: Provide eye wash and safety shower stations.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

BOILING POINT: 220° - 230°F
SPECIFIC GRAVITY: 1.35 – 1.55
EVAPORATION RATE: N/A
VAPOR DENSITY: N/A
VAPOR PRESSURE: N/A
SOLUBILITY IN WATER: Infinite below pH 2. Above pH 3, reddish ferric hydroxide precipitates.
pH of NEAT SOLUTION: <1
APPEARANCE/ODOR: Reddish brown solution; little or no odor.

SECTION 10: STABILITY & REACTIVITY

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBILITY (MATERIALS TO AVOID): Fairly corrosive to mild steel. Avoid contact with bases or alkalies.
HAZARDOUS DECOMPOSITION PRODUCTS: Produces sulfur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC EFFECTS AND MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None noted.
SPECIAL NOTE: None of the components in this product are considered a carcinogen by OSHA, NTP or IARC.

SECTION 12: ECOLOGICAL INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state, and local environmental laws.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: Corrosive Liquid, acidic, inorganic, n.o.s. (contains ferric sulfate), 8, UN 3264, Pg III

SECTION 15: REGULATORY INFORMATION

FEDERAL EPA

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA):

Requires notification to the National Response Center of releases of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ) in 40 CFR 302.4. Components present in this product at a level which would require reporting under the statute are:

Chemical	CAS Number	RQ
NONE		

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III:

Requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQ) in 40 CFR 355 (SARA 302, 304, 311 and 312) Components present in this product at a level which could require reporting under the statute are: NONE

Toxic Substances Control Act (TSCA) Status:
All components of this product are on the TSCA inventory

EPA Priority Pollutants: NONE

RCRA Hazard Class: If discarded - non-hazardous.

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health=, Flammability=, Reactivity=
HMIS HAZARD INDEX: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE

LEGEND:

CAS Chemical Abstract Number
CERCLA Comprehensive Environmental Response, Compensation and Liability Act
CFR Code of Federal Regulations
DOT Department of Transportation
HMIS Hazardous Materials Identification System
IARC International Agency for Research on Cancer
MSDS Material Safety Data Sheet
N/A Not Applicable
N/D Not Determined

NTP National Toxicity Program
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
SARA Superfund Amendments and Reauthorization Act
TSCA Toxic Substance Control Act
TLV Threshold Limit Value

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. Users are responsible to determine the suitability of this product and to evaluate risks prior to use.

PolyMark™ Polymer Blending

The Ultimate Polymer Dosing System

The M.W. Watermark PolyMark™ integrates the best features and designs developed and refined from decades of experience.The PolyMark™ is a combination of proven polymer blending technologies and today's latest in flow and integrated control devices.

M.W. Watermark offers a complete line of blending units ranging from 25 gph to 2400 gph solution flow rates with 0.05 gph to 60 gph neat polymer flow rates to meet all of your process, dewatering, and flocculation needs.

Parts

PolyMark™ polymer blender parts are interchangeable with existing leading brand units. Many parts are in-stock and can ship the same day. Contact M.W. Watermark for a complete list of replacement parts.

M.W. Watermark

M.W. Watermark is a leading supplier of water and wastewater equipment, parts, and service. We serve both muncipal and industrial markets globally.

Our team strives to provide unmatched service and value to customers, helping reduce their costs while keeping the environment clean.

Contact us for more information.

Representing the latest in flow control, polymer metering, and integrated controls:

- Superior Controls Flexibility
- Unmatched Quality
- World-Class Service

The PolyMark™ is the industry's best value, packed with features to optimize polymer consumption.

The PolyMark™ controller integrates state of the art components to provide the user with critical control feedback and optimum polymer dosage.

M.W. Watermark
4660 136th Avenue, Holland, MI 49424
Office: 616.399.8850 Fax: 616.399.8860
mwwatermark.com
info@mwwatermark.com

PolyMark™ Models & Options

1	2	3	4	5	6	7	8	9	10	11	12	13
Product	Solution Flow Rate (GPH)		Dilution		Polymer Pump	Neat Polymer Flow † (GPH)		Power Supply	Controls ‡	Option 1	Option 2	Option 3
PM	25	/	1	-	DP	1	-	1	DC	X	X	X
	50		2		PS	2		2	SFC	C	L	V
	100				PC	4		3		C - Calibration Cylinder		
	240		1 - Primary Only			8		4		L - Loss of Polymer Flow Switch		
	600		2 - Primary / Post Dilution			15		5		V - Variable Speed Mixing		
	1200											
	1800				DP - Diaphragm	30						
	2400				PC - Progressing Cavity	50						

1 - 120VAC 1Φ 60Hz
2 - 240VAC 1Φ 60Hz
3 - 240VAC 3Φ 60Hz
4 - 480VAC 3Φ 60Hz
5 - 575VAC 3Φ 60Hz

† Flow rates are nominal

‡ Controls	Description
DC	On/Off/Remote Control
SFC	Solution flow control via 4-20mA input; Both polymer and dilution water flow rates are controlled to maintain constant polymer solution concentration at varying feed rates.

Industries & Applications

The PolyMark™ can be used for multiple applications in a variety of industries

- Wastewater Treatment Plants
- Steel & Aluminum Plants
- Industrial Wastewater Solids
- Metal Finishing Operation
- Mining Industry Fines
- Chemical Processing
- Foundries
- Power Plants

Clarification & Filtration

Sludge Dewatering

- Belt Filter Presses
- Centrifuges
- Screw Presses
- Plate & Frame

Sludge Thickening

- Gravity Belt Thickeners (GBT)
- Diffused Air Flotation (DAF)

Control Options

The PolyMark™ controllers were developed as a result of customer requests, feedback, and experience. The Watermark engineering team, backed with many years designing, calibrating, and troubleshooting other polymer blending systems, created a superior product and the industry's best value.

The PolyMark™ was designed with two levels of control/automation:

- DC – Direct Control
- SFC – Solution Flow Control

DC Features

- On/Off/Remote start contact
- Optional 4-20 mA pump signal pass through for polymer pump control

SFC Features

- Touchscreen operation with remote capability
- Direct and proportional polymer dosing modes
- Trending display of water flows, polymer rate, percent concentration
- 4-20 mA input for solution concentration or pump rate
- Digital input for Start/Remote selection
- Digital output for Running/Alarm/Remote status
- Configurable start-up and shut down process including a day tank set-up
- Optional variable speed mixing
- Optional Loss of Polymer Flow sensor
- Fully automatic primary and post dilution flow control
- Precise, automated "make down" and "as delivered" solution control
- 4-20 mA input for sludge flow rate
- Recipes for varying polymer type, sludge characteristics, and dewatering equipment
- Trending for polymer dosage as mass of polymer/mass of solids (e.g. lbs/ton)

M.W. Watermark
4660 136th Avenue, Holland, MI 49424
Office: 616.399.8850 Fax: 616.399.8860
mwwatermark.com
info@mwwatermark.com

sc200™ UNIVERSAL CONTROLLER

Applications
- Drinking Water
- Wastewater
- Industrial Water
- Power

One Controller for the Broadest Range of Sensors.

Choose from 30 digital and analog sensor families for up to 17 different parameters.

Maximum Versatility

The sc200 controller allows the use of digital and analog sensors, either alone or in combination, to provide compatibility with Hach's broad range of sensors, eliminating the need for dedicated, parameter-specific controllers.

Ease of Use and Confidence in Results

Large, high-resolution, transreflective display provides optimal viewing resolution in any lighting condition. Guided calibration procedures in 19 languages minimize complexity and reduce operator error. Password-protected SD card reader offers a simple solution for data download and transfer. Visual warning system provides critical alerts.

Wide Variety of Communication Options

Utilize two to five analog outputs to transmit primary and secondary values for each sensor, or integrate Hach sensors and analyzers into MODBUS RS232/RS485, Profibus® DP, and HART networks.

Password protected SD card reader offers a simple solution for data download and transfer, and sc200 and digital sensor configuration file duplication and backup.

HACH®
Be Right™

Controller Comparison

Features	Previous Models sc100™ Controller	Previous Models GLI53 Controller	sc200™ Controller	Benefits
Display	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	160 x 240 pixels 48 x 68 mm (1.89 x 2.67 in.) Transreflective	• Improved user interface—50% bigger • Easier to read in daylight and sunlight
Data Management	irDA Port/PDA Service Cable	N/A	SD Card Service Cable	• Simplifies data transfer • Standardized accessories/max compatibility
Sensor Inputs	2 Max Direct Digital Analog via External Gateway	2 Max Analog Depending on Parameter	2 Max Digital and/or Analog with Sensor Card	• Simplifies analog sensor connections • Works with analog and digital sensors
Analog Inputs	N/A	N/A	1 Analog Input Signal Analog 4-20mA Card	• Enables non-sc analyzer monitoring • Accepts mA signals from other analyzers for local display • Consolidates analog mA signals to a digital output
4-20 mA Outputs	2 Standard	2 Standard	2 Standard Optional 3 Additional	• Total of five (5) 4-20 mA outputs allows multiple mA outputs per sensor input
Digital Communication	MODBUS RS232/RS485 Profibus DP V1.0	HART	MODBUS RS232/RS485 Profibus DP V1.0 HART 7.2	• Unprecedented combination of sensor breadth and digital communication options

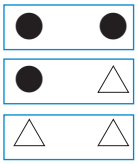
Choose from Hach's Broad Range of Digital and Analog Sensors

Parameter	Sensor	Digital or Analog
Ammonia	AMTAX™ sc, NH4D sc, AISE sc, AN-ISE sc	●
Chlorine	CLF10 sc, CLT10 sc, 9184 sc	●
Chlorine Dioxide	9185 sc	●
Conductivity	GLI 3400 Contacting, GLI 3700 Inductive	△
Dissolved Oxygen	LDO® Model 2, 5740 sc	●
Dissolved Oxygen	5500	△
Flow	U53, F53 Sensors	△
Nitrate	NITRATAX™ sc, NO3D sc, NISE sc, AN-ISE sc	●
Oil in Water	FP360 sc	●
Organics	UVAS sc	●
Ozone	9187 sc	●
pH/ORP	pHD	●
pH/ORP	pHD, pH Combination, LCP	△
Phosphate	PHOSPHAX™ sc	●
Sludge Level	SONATAX™ sc	●
Suspended Solids	SOLITAX™ sc, TSS sc	●
Turbidity	1720E, FT660 sc, SS7 sc, ULTRATURB sc, SOLITAX sc, TSS sc	●
Ultra Pure Conductivity	8310, 8311, 8312, 8315, 8316, 8317 Contacting	△
Ultra Pure pH/ORP	8362	△

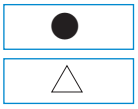
● = Digital △ = Analog

Connect up to two of any of the sensors listed above, in any combination, to meet your application needs. The diagrams below demonstrate the potential configurations. Operation of analog sensors requires the controller to be equipped with the appropriate sensor module. Contact Hach Technical Support for help with selecting the appropriate module.

2 Channel Configurations



1 Channel Configurations



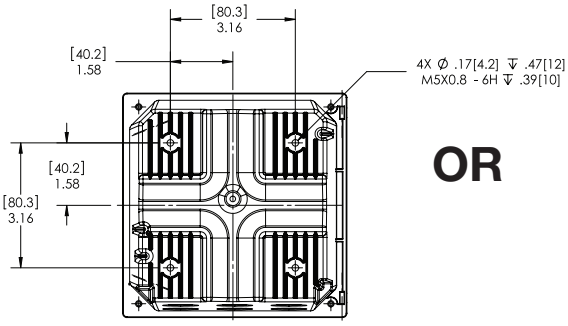
Specifications*

Dimensions (H x W x D)	5.7 in x 5.7 in x 7.1 in (144 mm x 144 mm x 181 mm)
Display	Graphic dot matrix LCD with LED backlighting, transreflective
Display Size	1.9 x 2.7 in. (48 mm x 68 mm)
Display Resolution	240 x 160 pixels
Weight	3.75 lbs. (1.70 kg)
Power Requirements (Voltage)	100 - 240 V AC, 24 V DC
Power Requirements (Hz)	50/60 Hz
Operating Temperature Range	-20 to 60 °C , 0 to 95% RH non-condensing
Analog Outputs	Two (Five with optional expansion module) to isolated current outputs, max 550 Ω , Accuracy: ± 0.1% of FS (20mA) at 25 °C, ± 0.5% of FS over -20 °C to 60 °C range Operational Mode: measurement or calculated value
Analog Output Functional Mode	Linear, Logarithmic, Bi-linear, PID
Security Levels	2 password-protected levels
Mounting Configurations	Wall, pole, and panel mounting
Enclosure Rating	NEMA 4X/IP66
Conduit Openings	1/2 in NPT Conduit
Relay: Operational Mode	Primary or secondary measurement, calculated value (dual channel only) or timer
Relay Functions	Scheduler (Timer), Alarm, Feeder Control, Event Control, Pulse Width Modulation, Frequency Control, and Warning
Relays	Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A
Communication	MODBUS RS232/RS485, PROFIBUS DPV1, or HART 7.2 optional
Memory Backup	Flash memory
Electrical Certifications	EMC CE compliant for conducted and radiated emissions: - CISPR 11 (Class A limits) - EMC Immunity EN 61326-1 (Industrial limits) Safety cETLus safety mark for: - General Locations per ANSI/UL 61010-1 & CAN/CSA C22.2. No. 61010-1 - Hazardous Location Class I, Division 2, Groups A,B,C & D (Zone 2, Group IIC) per FM 3600 / FM 3611 & CSA C22.2 No. 213 M1987 with approved options and appropriately rated Class I, Division 2 or Zone 2 sensors cULus safety mark - General Locations per UL 61010-1 & CAN/CSA C22.2. No. 61010-1

Subject to change without notice.

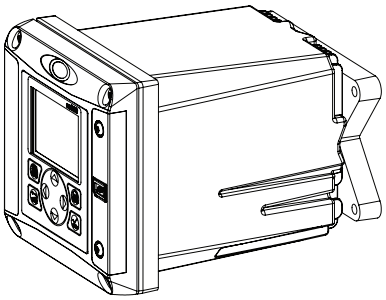
Dimensions

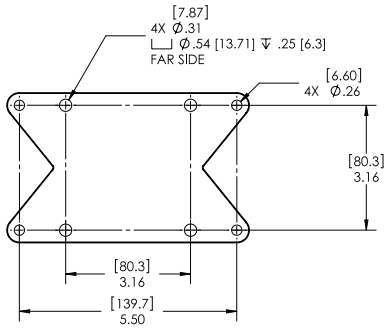
Surface Mounting Dimensions



Mounting Dimensions
(Rear View)

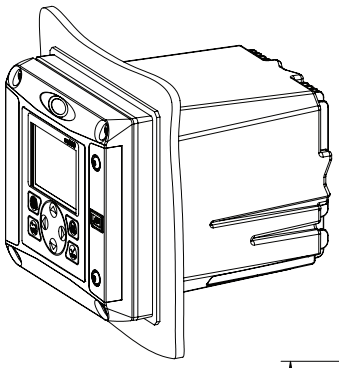
OR

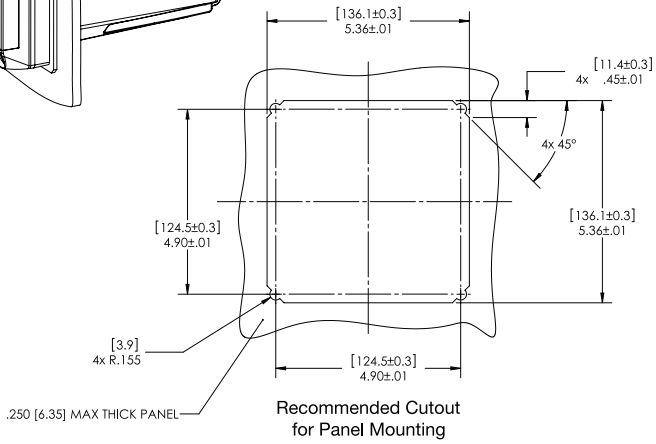




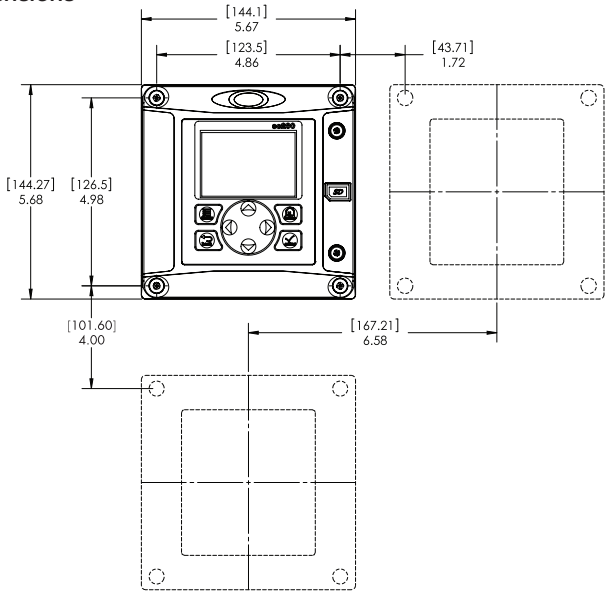
Bracket (supplied) for Surface Mounting
(Not compatible with Weather and Sun Shield p/n 9220600 when surface mounting.)

Panel Mounting Dimensions



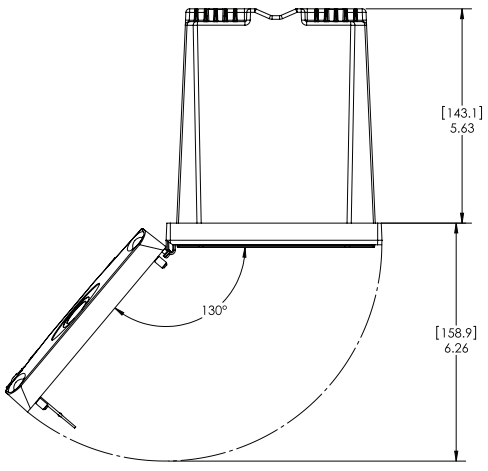


Recommended Cutout
for Panel Mounting

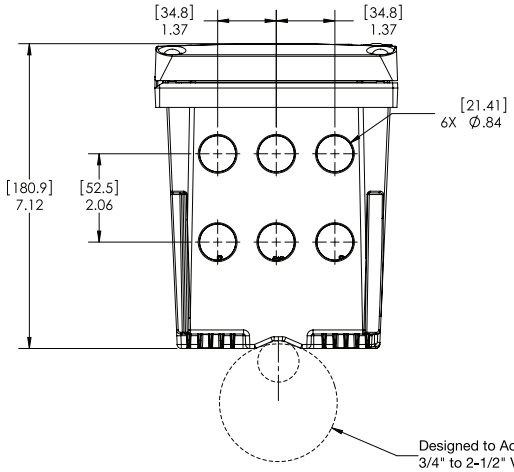


Minimum Spacing Dimensions
for Group Mounting

Top and Bottom Views



Door Opening Details



Ordering Information

sc200 for Hach Digital and Analog Sensors

LXV404.99.00552	sc200 controller, 2 channels, digital
LXV404.99.00502	sc200 controller, 1 channel, digital
LXV404.99.00102	sc200 controller, 1 channel, pH/DO
LXV404.99.00202	sc200 controller, 1 channel, Conductivity
LXV404.99.01552	sc200 controller, 2 channels, digital, Modbus RS232/RS485
LXV404.99.00112	sc200 controller, 2 channel, pH/DO

Note: Other Sensor combinations are available. Please contact Hach Technical Support or your Hach representative.

Note: Communication options (MODBUS, Profibus DPV1, and HART) are available. Please contact Hach Technical Support or your Hach representative.

sc200 for Ultrapure Sensors

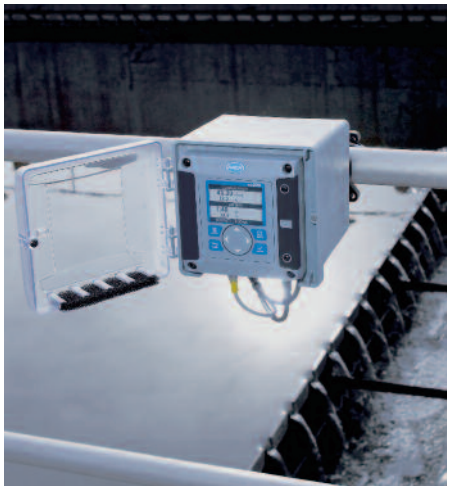
9500.99.00602	sc200 controller, 1 channel, ultrapure conductivity
9500.99.00702	sc200 controller, 1 channel, ultrapure pH
9500.99.00662	sc200 controller, 2 channel, ultrapure conductivity
9500.99.00772	sc200 controller, 2 channel, ultrapure pH

Sensor and Communication Modules

9012900	Analog pH/ORP and DO module for GLI Sensors
9013000	Analog Conductivity module for GLI Sensors
9012700	Flow module
9012800	4-20 mA Input Module
9525700	Analog pH/ORP Module for Polymetron Sensors
9525800	Analog Conductivity Module for Polymetron Sensors
9013200	Modbus 232/485 Module
9173900	Profibus DP Module
9328100	HART Module
9334600	4-20 mA Output Module (Provides 3 additional mA Outputs)

Accessories

9220600	sc200 Weather and Sun Shield with UV Protection Screen
8809200	sc200 UV Protection Screen
9218200	SD card reader (USB) for connection to PC
9218100	4 GB SD card



HACH COMPANY World Headquarters: Loveland, Colorado USA

United States: 800-227-4224 tel 970-669-2932 fax orders@hach.com
Outside United States: 970-669-3050 tel 970-461-3939 fax int@hach.com
hach.com

LIT2665 Rev 7
K13 Printed in U.S.A.

HACH®
Be Right™

Sulfuric Acid, 3M

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Sulfuric Acid, 3M**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **S25899**

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Health hazard
Skin corrosion, category 1A
Serious eye damage, category 1

Corrosive to metals, category 1
skin corr./irrit. 1A
Corrosive to metals. 1
Eye corr. 1

Signal word :Danger

Hazard statements:
May be corrosive to metals
Causes severe skin burns and eye damage
Causes serious eye damage

Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use
Wear protective gloves/protective clothing/eye protection/face protection
Wash ... thoroughly after handling
Do not breathe dust/fume/gas/mist/vapours/spray
Keep only in original container
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Specific treatment (see ... on this label)
Absorb spillage to prevent material damage
Store locked up
Dispose of contents/container to ...

Other Non-GHS Classification:

WHMIS

D1A 

E 

NFPA/HMIS

NFPA SCALE (0-4)

Health	3
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7664-93-9	Sulfuric Acid, ACS	31.004 %
CAS 7732-18-5	Water	68.996 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position.Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.Get medical assistance if cough or other symptoms appear.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes.Seek medical advice if discomfort or irritation persists.

After eye contact: Protect unexposed eye.Rinse/flush exposed eye(s) gently using water for 15-20 minutes.Remove contact lens(es) if able to do so during rinsing.Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation.Headache.Nausea.Shortness of breath.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment.Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.Containerize for disposal. Refer to Section 13.If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing.Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed.Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection

Control Parameters:	7664-93-9, Sulfuric Acid, ACS, OSHA PEL: 1mg/m3 7664-93-9, Sulfuric Acid, ACS, ACGIH TLV: 1 mg/m3
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Safety glasses or goggles are appropriate eye protection.
General hygienic measures:	Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing.Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear, colorless liquid.	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Odorless	**Vapor pressure**:	<0.00120mmHg
Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	< 0.03	**Relative density**:	Not Determined
Melting/Freezing point:	11C	**Solubilities**:	Miscible
Boiling point/Boiling range:	105 - 325C	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials.
Incompatible materials: Organics. Metals. Chlorates. Alkalines. Carbides. Fulminates. Reducing agents. Nitrates. Acetic acid. Oxidizing agents
Hazardous decomposition products: Oxides of sulfur.

SECTION 11 : Toxicological information

Acute Toxicity:		
Inhalation:	510 mg/m3 2 h	Inhalation LC50 Rat
Oral:	2140 mg/kg	Oral LD50 Rat
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity

Freshwater Fish: 96 Hr LC50 Brachydanio rerio: >500 mg/L [static]

Fish: LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h

Invertebrates: EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h

Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material.Dispose of empty containers as unused product.It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1830

UN proper shipping name

Sulfuric Acid Solution

Transport hazard class(es)

Class:
8 Corrosive substances

Packing group:II
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

7664-93-9 Sulfuric Acid

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7664-93-9 Sulfuric Acid 1000 lbs

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the

SDS contains all the information required by the Controlled Products Regulations.Note:. The responsibility to provide a safe workplace remains with the user.The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment.The information contained herein is, to the best of our knowledge and belief, accurate.However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material.It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

Effective date : 02.15.2015
Last updated : 03.19.2015

Appendix B

MassDEP Compliance Form and Fee

Enter your transmittal number → X278156 (Transmittal Number)

Your unique Transmittal Number can be accessed online:
http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

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

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

3. Three copies of this form will be needed.

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

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

MassDEP
P.O. Box 4062
Boston, MA
02211

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

A. Permit Information

1. Permit Code: 4 to 7 character code from permit instructions	2. Name of Permit Category
WM15	NPDES General Permit Notice of Intent

3. Type of Project or Activity: Construction Dewatering

B. Applicant Information – Firm or Individual

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

2. **Last Name** of Individual	3. **First Name** of Individual	4. MI
Ballantyne	Heather	

5. Street Address: 400 Unicorn Park Drive

6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
Woburn	MA	01801	781.721.4063	

11. Contact Person	12. e-mail address
Heather Ballantyne	hballantyne@geiconsultants.com

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual: SCD Drydock Q1 LLC, Skanska USA Commercial Development, Inc.

2. Street Address: 2 Drydock Avenue

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Boston	MA	02210	617.574.1345	

8. DEP Facility Number (if Known)	9. Federal I.D. Number (if Known)	10. BWSC Tracking # (if Known)

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

1. Name of Firm Or Individual

2. Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #

8. Contact Person	9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

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

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

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

Check Number	Dollar Amount	Date
	$500	

Appendix C

Source Water and Receiving Water Laboratory Data Report

CERTIFICATE OF ANALYSIS

Ryan Hoffman
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801

RE: Skanska Parcel Q1 - RGP (1609290)
ESS Laboratory Work Order Number: 1803323

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:59 pm, Mar 29, 2018

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

SAMPLE RECEIPT

The following samples were received on March 15, 2018 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2017 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

ESS Laboratory is unable to achieve the required detection limit of 0.4 mg/L for Ethanol for the RGP permit. We have also been unable to procure a subcontract laboatory that is able to achieve this limit. The data for Ethanol has been reported using our current method reporting limit.

Revision 1 March 29, 2018: This report has been revised to include salinity results for 1803323-03.

Lab Number	Sample Name	Matrix	Analysis
1803323-01	1609290-MW102	Ground Water	1664A, 200.7, 245.1, 2540D, 300.0, 350.1, 3500Cr B-2009, 420.1, 4500 CN CE, 4500Cl D, 504.1, 524.2, 608, 625 SIM, 8270D SIM, ASTM D3695
1803323-02	1609290-MW103	Ground Water	1664A, 200.7, 245.1, 2540D, 300.0, 350.1, 3500Cr B-2009, 420.1, 4500 CN CE, 4500Cl D, 504.1, 524.2, 608, 625 SIM, 8270D SIM, ASTM D3695
1803323-03	1609290-GRAB	Surface Water	200.7, 245.1, 2520B, 350.1

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP ESS Laboratory Work Order: 1803323

PROJECT NARRATIVE

625(SIM) Semi-Volatile Organic Compounds

1803323-01	**Present in Method Blank (B).**
	Di-n-butylphthalate
1803323-02	**Present in Method Blank (B).**
	Di-n-butylphthalate
CC81909-BSD1	**Blank Spike recovery is above upper control limit (B+).**
	Di-n-butylphthalate (196% @ 40-140%)

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

C8C0266-TUN1	**Benzidine tailing factor >2.**
C8C0266-TUN1	**Pentachlorophenol tailing factor > 2.**

Classical Chemistry

1803323-01	**The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**
1803323-02	**The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

Total Metals

1803323-03	**Elevated Method Reporting Limits due to sample matrix (EL).**
	Copper , Lead , Nickel , Selenium , Silver

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (5.0)		200.7		1	BJV	03/19/18 22:00	100	10	CC81629
Arsenic	ND (10.0)		200.7		1	KJK	03/19/18 22:00	100	10	CC81629
Cadmium	**2.08** (1.00)		200.7		1	KJK	03/17/18 0:09	100	10	CC81629
Chromium	ND (2.0)		200.7		1	KJK	03/17/18 0:09	100	10	CC81629
Chromium III	ND (10.0)		200.7		1	JLK	03/17/18 0:09	1	1	[CALC]
Copper	**13.3** (2.0)		200.7		1	KJK	03/17/18 0:09	100	10	CC81629
Hardness	**383000** (2500)		200.7		50	BJV	03/19/18 22:00	1	1	[CALC]
Iron	**7490** (10.0)		200.7		1	BJV	03/19/18 22:00	100	10	CC81629
Lead	**11.9** (2.0)		200.7		1	KJK	03/17/18 0:09	100	10	CC81629
Mercury	ND (0.200)		245.1		1	MJV	03/19/18 11:39	20	40	CC81632
Nickel	**89.2** (5.0)		200.7		1	BJV	03/19/18 22:00	100	10	CC81629
Selenium	ND (20)		200.7		1	KJK	03/17/18 0:09	100	10	CC81629
Silver	**1.0** (0.5)		200.7		1	BJV	03/19/18 22:00	100	10	CC81629
Zinc	**623** (5.0)		200.7		1	KJK	03/17/18 0:09	100	10	CC81629

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A
Initial Volume: 25
Final Volume: 25
Extraction Method: 524.2

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC

524.2 Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,1,2-Trichloroethane	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,1-Dichloroethane	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,1-Dichloroethene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,2-Dichlorobenzene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,2-Dichloroethane	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,3-Dichlorobenzene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
1,4-Dichlorobenzene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Acetone	ND (5.0)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Benzene	**50.0** (5.0)		524.2		10	03/16/18 14:36	C8C0227	CC81618
Carbon Tetrachloride	ND (0.3)		524.2		1	03/16/18 13:27	C8C0227	CC81618
cis-1,2-Dichloroethene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Ethylbenzene	**0.6** (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Methyl tert-Butyl Ether	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Methylene Chloride	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Naphthalene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Tertiary-amyl methyl ether	ND (1.0)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Tertiary-butyl Alcohol	ND (25.0)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Tetrachloroethene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Toluene	**6.1** (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Trichloroethene	ND (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Vinyl Chloride	ND (0.2)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Xylene O	**2.9** (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618
Xylene P,M	**12.0** (0.5)		524.2		1	03/16/18 13:27	C8C0227	CC81618

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*107 %*		*80-120*
Surrogate: 4-Bromofluorobenzene	*118 %*		*80-120*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A
Initial Volume: 1020
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: CAD
Prepared: 3/19/18 11:22

608 Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1221	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1232	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1242	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1248	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1254	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1260	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1262	ND (0.10)		608		1	03/19/18 19:20		CC81901
Aroclor 1268	ND (0.10)		608		1	03/19/18 19:20		CC81901

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*81 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*83 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*83 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*89 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 3/19/18 14:09

625(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	**1.97** (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Acenaphthylene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Anthracene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Benzo(a)anthracene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Benzo(a)pyrene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Benzo(b)fluoranthene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Benzo(g,h,i)perylene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Benzo(k)fluoranthene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
bis(2-Ethylhexyl)phthalate	ND (1.94)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Butylbenzylphthalate	ND (2.43)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Chrysene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Dibenzo(a,h)Anthracene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Diethylphthalate	ND (2.43)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Dimethylphthalate	ND (2.43)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Di-n-butylphthalate	**B 3.14** (2.43)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Di-n-octylphthalate	ND (2.43)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Fluoranthene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Fluorene	**0.26** (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Indeno(1,2,3-cd)Pyrene	ND (0.05)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Naphthalene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Pentachlorophenol	ND (0.87)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Phenanthrene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909
Pyrene	ND (0.19)		625 SIM		1	03/20/18 3:30	C8C0266	CC81909

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*38 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*83 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*51 %*		*30-130*
Surrogate: Nitrobenzene-d5	*72 %*		*30-130*
Surrogate: p-Terphenyl-d14	*86 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A
Initial Volume: 500
Final Volume: 0.5
Extraction Method: 3535A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 3/19/18 15:10

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	ND (0.250)		8270D SIM		1	03/19/18 21:37	C8C0266	CC81929

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	*53 %*		*15-115*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Ammonia as N	**1.52** (0.10)		350.1		1	EEM	03/20/18 14:40	mg/L	CC81917
Chloride	**1460** (250)		300.0		500	JLK	03/16/18 1:05	mg/L	CC81529
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	JLK	03/15/18 17:55	ug/L	CC81530
Phenols	ND (100)		420.1		1	JLK	03/19/18 17:45	ug/L	CC81937
Total Cyanide (LL)	ND (5.00)		4500 CN CE		1	EEM	03/20/18 10:30	ug/L	CC82010
Total Petroleum Hydrocarbon	ND (5)		1664A		1	LAB	03/21/18 14:54	mg/L	CC82002
Total Residual Chlorine	ND (20.0)		4500Cl D		1	JLK	03/15/18 21:31	ug/L	CC81541
Total Suspended Solids	**10** (5)		2540D		1	EEM	03/16/18 14:55	mg/L	CC81612

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: SMR
Prepared: 3/21/18 14:30

504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)		504.1		1	03/21/18 14:58		CC82125

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*88 %*		*30-150*
Surrogate: Pentachloroethane [2C]	*108 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW102
Date Sampled: 03/15/18 13:20
Percent Solids: N/A
Initial Volume: 1
Final Volume: 1
Extraction Method: No Prep

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC
Prepared: 3/21/18 14:00

Alcohol Scan by GC/FID

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Ethanol	ND (10)		ASTM D3695		1	ZLC	03/21/18 15:32		CC82139

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (5.0)		200.7		1	BJV	03/19/18 22:09	100	10	CC81629
Arsenic	ND (10.0)		200.7		1	KJK	03/19/18 22:09	100	10	CC81629
Cadmium	ND (1.00)		200.7		1	KJK	03/17/18 0:15	100	10	CC81629
Chromium	ND (2.0)		200.7		1	KJK	03/17/18 0:15	100	10	CC81629
Chromium III	ND (10.0)		200.7		1	JLK	03/17/18 0:15	1	1	[CALC]
Copper	ND (2.0)		200.7		1	KJK	03/17/18 0:15	100	10	CC81629
Hardness	**230000** (499)		200.7		10	BJV	03/19/18 22:09	1	1	[CALC]
Iron	**13000** (10.0)		200.7		1	BJV	03/19/18 22:09	100	10	CC81629
Lead	**4.7** (2.0)		200.7		1	KJK	03/17/18 0:15	100	10	CC81629
Mercury	ND (0.200)		245.1		1	MJV	03/19/18 11:41	20	40	CC81632
Nickel	ND (5.0)		200.7		1	BJV	03/19/18 22:09	100	10	CC81629
Selenium	ND (20)		200.7		1	KJK	03/17/18 0:15	100	10	CC81629
Silver	**0.8** (0.5)		200.7		1	BJV	03/19/18 22:09	100	10	CC81629
Zinc	**49.0** (5.0)		200.7		1	KJK	03/17/18 0:15	100	10	CC81629

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A
Initial Volume: 25
Final Volume: 25
Extraction Method: 524.2

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: DMC

524.2 Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,1,2-Trichloroethane	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,1-Dichloroethane	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,1-Dichloroethene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,2-Dichlorobenzene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,2-Dichloroethane	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,3-Dichlorobenzene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
1,4-Dichlorobenzene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Acetone	ND (5.0)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Benzene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Carbon Tetrachloride	ND (0.3)		524.2		1	03/16/18 12:52	C8C0227	CC81618
cis-1,2-Dichloroethene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Ethylbenzene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Methyl tert-Butyl Ether	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Methylene Chloride	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Naphthalene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Tertiary-amyl methyl ether	ND (1.0)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Tertiary-butyl Alcohol	ND (25.0)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Tetrachloroethene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Toluene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Trichloroethene	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Vinyl Chloride	ND (0.2)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Xylene O	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618
Xylene P,M	ND (0.5)		524.2		1	03/16/18 12:52	C8C0227	CC81618

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*111 %*		*80-120*
Surrogate: 4-Bromofluorobenzene	*110 %*		*80-120*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: CAD
Prepared: 3/19/18 11:22

608 Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1221	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1232	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1242	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1248	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1254	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1260	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1262	ND (0.10)		608		1	03/19/18 19:39		CC81901
Aroclor 1268	ND (0.10)		608		1	03/19/18 19:39		CC81901

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*89 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*85 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*70 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*74 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A
Initial Volume: 1020
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 3/19/18 14:09

625(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Acenaphthylene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Anthracene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Benzo(a)anthracene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Benzo(a)pyrene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Benzo(b)fluoranthene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Benzo(g,h,i)perylene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Benzo(k)fluoranthene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
bis(2-Ethylhexyl)phthalate	ND (1.96)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Butylbenzylphthalate	ND (2.45)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Chrysene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Dibenzo(a,h)Anthracene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Diethylphthalate	ND (2.45)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Dimethylphthalate	ND (2.45)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Di-n-butylphthalate	**B 3.03** (2.45)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Di-n-octylphthalate	ND (2.45)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Fluoranthene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Fluorene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Indeno(1,2,3-cd)Pyrene	ND (0.05)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Naphthalene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Pentachlorophenol	ND (0.88)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Phenanthrene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909
Pyrene	ND (0.20)		625 SIM		1	03/20/18 4:17	C8C0266	CC81909

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*42 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*74 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*55 %*		*30-130*
Surrogate: Nitrobenzene-d5	*81 %*		*30-130*
Surrogate: p-Terphenyl-d14	*82 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A
Initial Volume: 500
Final Volume: 0.5
Extraction Method: 3535A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 3/19/18 15:10

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	ND (0.250)		8270D SIM		1	03/19/18 22:11	C8C0266	CC81929

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	52 %		15-115

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Ammonia as N	**0.27** (0.10)		350.1		1	EEM	03/20/18 14:41	mg/L	CC81917
Chloride	**588** (100)		300.0		200	JLK	03/16/18 1:21	mg/L	CC81529
Hexavalent Chromium	ND (10.0)		3500Cr B-2009		1	JLK	03/15/18 17:55	ug/L	CC81530
Phenols	ND (100)		420.1		1	JLK	03/19/18 17:45	ug/L	CC81937
Total Cyanide (LL)	ND (5.00)		4500 CN CE		1	EEM	03/20/18 10:30	ug/L	CC82010
Total Petroleum Hydrocarbon	ND (5)		1664A		1	LAB	03/21/18 14:54	mg/L	CC82002
Total Residual Chlorine	ND (20.0)		4500Cl D		1	JLK	03/15/18 21:31	ug/L	CC81541
Total Suspended Solids	**8** (5)		2540D		1	EEM	03/16/18 14:55	mg/L	CC81612

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: SMR
Prepared: 3/21/18 14:30

504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)		504.1		1	03/21/18 15:52		CC82125

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*76 %*		*30-150*
Surrogate: Pentachloroethane [2C]	*91 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-MW103
Date Sampled: 03/15/18 10:40
Percent Solids: N/A
Initial Volume: 1
Final Volume: 1
Extraction Method: No Prep

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: ZLC
Prepared: 3/21/18 14:00

Alcohol Scan by GC/FID

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Ethanol	ND (10)		ASTM D3695		1	ZLC	03/21/18 16:18		CC82139

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-GRAB
Date Sampled: 03/15/18 08:30
Percent Solids: N/A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-03
Sample Matrix: Surface Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (25.0)		200.7		5	BJV	03/19/18 22:55	100	10	CC81629
Arsenic	ND (25.0)		200.7		5	BJV	03/19/18 22:55	100	10	CC81629
Cadmium	ND (1.00)		200.7		1	KJK	03/17/18 0:20	100	10	CC81629
Chromium	ND (40.0)		200.7		20	BJV	03/19/18 22:27	100	10	CC81629
Copper	**EL** ND (10.0)		200.7		5	KJK	03/19/18 22:55	100	10	CC81629
Hardness	**5180000** (8240)		200.7		100	BJV	03/19/18 22:15	1	1	[CALC]
Iron	ND (200)		200.7		20	BJV	03/19/18 22:27	100	10	CC81629
Lead	**EL** ND (40.0)		200.7		20	BJV	03/19/18 22:27	100	10	CC81629
Mercury	ND (0.200)		245.1		1	MJV	03/19/18 11:44	20	40	CC81632
Nickel	**EL** ND (25.0)		200.7		5	BJV	03/19/18 22:55	100	10	CC81629
Selenium	**EL** ND (100)		200.7		5	BJV	03/19/18 22:55	100	10	CC81629
Silver	**EL** ND (10.0)		200.7		20	BJV	03/19/18 22:27	100	10	CC81629
Zinc	ND (25.0)		200.7		5	BJV	03/19/18 22:55	100	10	CC81629

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP
Client Sample ID: 1609290-GRAB
Date Sampled: 03/15/18 08:30
Percent Solids: N/A

ESS Laboratory Work Order: 1803323
ESS Laboratory Sample ID: 1803323-03
Sample Matrix: Surface Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Ammonia as N	ND (0.10)		350.1		1	EEM	03/20/18 15:00	mg/L	CC81917
Salinity	**20.8** (0.1)		2520B		1	JLK	03/28/18 20:48	ppt	CC82850

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CC81530 - [CALC]										
Blank										
Chromium III	ND	10.0	ug/L							
LCS										
Chromium III	ND		ug/L							
LCS Dup										
Chromium III	ND		ug/L							
Batch CC81629 - 3005A/200.7										
Blank										
Antimony	ND	5.0	ug/L							
Arsenic	ND	10.0	ug/L							
Cadmium	ND	1.00	ug/L							
Chromium	ND	2.0	ug/L							
Chromium III	ND	2.00	ug/L							
Copper	ND	2.0	ug/L							
Hardness	ND	82.4	ug/L							
Iron	ND	10.0	ug/L							
Lead	ND	2.0	ug/L							
Nickel	ND	5.0	ug/L							
Selenium	ND	20	ug/L							
Silver	ND	0.5	ug/L							
Zinc	ND	5.0	ug/L							
LCS										
Antimony	46.2	5.0	ug/L	50.00		92	85-115			
Arsenic	50.4	5.0	ug/L	50.00		101	85-115			
Cadmium	21.3	1.00	ug/L	25.00		85	85-115			
Chromium	43.2	2.0	ug/L	50.00		86	85-115			
Chromium III	43.5	2.00	ug/L							
Copper	47.3	2.0	ug/L	50.00		95	85-115			
Hardness	2990	82.4	ug/L							
Iron	213	10.0	ug/L	250.0		85	85-115			
Lead	43.7	2.0	ug/L	50.00		87	85-115			
Nickel	47.5	5.0	ug/L	50.00		95	85-115			
Selenium	87	20	ug/L	100.0		87	85-115			
Silver	23.5	0.5	ug/L	25.00		94	85-115			
Zinc	43.1	5.0	ug/L	50.00		86	85-115			
LCS Dup										
Chromium III	43.2	2.00	ug/L							
Hardness	1970	82.4	ug/L							
Batch CC81632 - 245.1/7470A										
Blank										
Mercury	ND	0.200	ug/L							
LCS										
Mercury	6.01	0.200	ug/L	6.000		100	85-115			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CC81632 - 245.1/7470A										
LCS Dup										
Mercury	5.87	0.200	ug/L	6.000		98	85-115	2	20	
524.2 Volatile Organic Compounds										
Batch CC81618 - 524.2										
Blank										
1,1,1-Trichloroethane	ND	0.5	ug/L							
1,1,2-Trichloroethane	ND	0.5	ug/L							
1,1-Dichloroethane	ND	0.5	ug/L							
1,1-Dichloroethene	ND	0.5	ug/L							
1,2-Dichlorobenzene	ND	0.5	ug/L							
1,2-Dichloroethane	ND	0.5	ug/L							
1,3-Dichlorobenzene	ND	0.5	ug/L							
1,4-Dichlorobenzene	ND	0.5	ug/L							
Acetone	ND	5.0	ug/L							
Benzene	ND	0.5	ug/L							
Carbon Tetrachloride	ND	0.3	ug/L							
cis-1,2-Dichloroethene	ND	0.5	ug/L							
Ethylbenzene	ND	0.5	ug/L							
Methyl tert-Butyl Ether	ND	0.5	ug/L							
Methylene Chloride	ND	0.5	ug/L							
Naphthalene	ND	0.5	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tertiary-butyl Alcohol	ND	25.0	ug/L							
Tetrachloroethene	ND	0.5	ug/L							
Toluene	ND	0.5	ug/L							
Trichloroethene	ND	0.5	ug/L							
Vinyl Chloride	ND	0.2	ug/L							
Xylene O	ND	0.5	ug/L							
Xylene P,M	ND	0.5	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*5.45*		ug/L	*5.000*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*5.43*		ug/L	*5.000*		*109*	*80-120*			
LCS										
1,1,1-Trichloroethane	11.3		ug/L	10.00		113	70-130			
1,1,2-Trichloroethane	10.8		ug/L	10.00		108	70-130			
1,1-Dichloroethane	10.7		ug/L	10.00		107	70-130			
1,1-Dichloroethene	11.4		ug/L	10.00		114	70-130			
1,2-Dichlorobenzene	10.9		ug/L	10.00		109	70-130			
1,2-Dichloroethane	11.0		ug/L	10.00		110	70-130			
1,3-Dichlorobenzene	10.8		ug/L	10.00		108	70-130			
1,4-Dichlorobenzene	11.0		ug/L	10.00		110	70-130			
Acetone	51.0		ug/L	50.00		102	70-130			
Benzene	10.8		ug/L	10.00		108	70-130			
Carbon Tetrachloride	11.7		ug/L	10.00		117	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
524.2 Volatile Organic Compounds										
Batch CC81618 - 524.2										
cis-1,2-Dichloroethene	10.9		ug/L	10.00		109	70-130			
Ethylbenzene	10.6		ug/L	10.00		106	70-130			
Methyl tert-Butyl Ether	11.2		ug/L	10.00		112	70-130			
Methylene Chloride	10.4		ug/L	10.00		104	70-130			
Naphthalene	11.0		ug/L	10.00		110	70-130			
Tertiary-amyl methyl ether	10.8		ug/L	10.00		108	70-130			
Tertiary-butyl Alcohol	59.0		ug/L	50.00		118	70-130			
Tetrachloroethene	10.6		ug/L	10.00		106	70-130			
Toluene	10.6		ug/L	10.00		106	70-130			
Trichloroethene	11.1		ug/L	10.00		111	70-130			
Vinyl Chloride	10.8		ug/L	10.00		108	70-130			
Xylene O	10.6		ug/L	10.00		106	70-130			
Xylene P,M	20.7		ug/L	20.00		104	70-130			
Surrogate: 1,2-Dichlorobenzene-d4	*5.43*		ug/L	*5.000*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*5.43*		ug/L	*5.000*		*109*	*80-120*			
LCS Dup										
1,1,1-Trichloroethane	11.7		ug/L	10.00		117	70-130	4	20	
1,1,2-Trichloroethane	10.7		ug/L	10.00		107	70-130	1	20	
1,1-Dichloroethane	11.1		ug/L	10.00		111	70-130	4	20	
1,1-Dichloroethene	12.1		ug/L	10.00		121	70-130	6	20	
1,2-Dichlorobenzene	11.1		ug/L	10.00		111	70-130	2	20	
1,2-Dichloroethane	11.4		ug/L	10.00		114	70-130	4	20	
1,3-Dichlorobenzene	10.8		ug/L	10.00		108	70-130	0.2	20	
1,4-Dichlorobenzene	10.8		ug/L	10.00		108	70-130	2	20	
Acetone	50.0		ug/L	50.00		100	70-130	2	20	
Benzene	11.1		ug/L	10.00		111	70-130	3	20	
Carbon Tetrachloride	11.9		ug/L	10.00		119	70-130	2	20	
cis-1,2-Dichloroethene	11.2		ug/L	10.00		112	70-130	3	20	
Ethylbenzene	10.9		ug/L	10.00		109	70-130	2	20	
Methyl tert-Butyl Ether	11.5		ug/L	10.00		115	70-130	3	20	
Methylene Chloride	10.7		ug/L	10.00		107	70-130	3	20	
Naphthalene	11.1		ug/L	10.00		111	70-130	0.6	20	
Tertiary-amyl methyl ether	11.0		ug/L	10.00		110	70-130	2	20	
Tertiary-butyl Alcohol	58.2		ug/L	50.00		116	70-130	1	25	
Tetrachloroethene	10.7		ug/L	10.00		107	70-130	2	20	
Toluene	10.8		ug/L	10.00		108	70-130	2	20	
Trichloroethene	11.4		ug/L	10.00		114	70-130	2	20	
Vinyl Chloride	11.0		ug/L	10.00		110	70-130	2	20	
Xylene O	10.9		ug/L	10.00		109	70-130	3	20	
Xylene P,M	21.1		ug/L	20.00		106	70-130	2	20	
Surrogate: 1,2-Dichlorobenzene-d4	*5.44*		ug/L	*5.000*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*5.29*		ug/L	*5.000*		*106*	*80-120*			
608 Polychlorinated Biphenyls (PCB)										
Batch CC81901 - 3510C										

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
608 Polychlorinated Biphenyls (PCB)										
Batch CC81901 - 3510C										
Blank										
Aroclor 1016	ND	0.10	ug/L							
Aroclor 1016 [2C]	ND	0.10	ug/L							
Aroclor 1221	ND	0.10	ug/L							
Aroclor 1221 [2C]	ND	0.10	ug/L							
Aroclor 1232	ND	0.10	ug/L							
Aroclor 1232 [2C]	ND	0.10	ug/L							
Aroclor 1242	ND	0.10	ug/L							
Aroclor 1242 [2C]	ND	0.10	ug/L							
Aroclor 1248	ND	0.10	ug/L							
Aroclor 1248 [2C]	ND	0.10	ug/L							
Aroclor 1254	ND	0.10	ug/L							
Aroclor 1254 [2C]	ND	0.10	ug/L							
Aroclor 1260	ND	0.10	ug/L							
Aroclor 1260 [2C]	ND	0.10	ug/L							
Aroclor 1262	ND	0.10	ug/L							
Aroclor 1262 [2C]	ND	0.10	ug/L							
Aroclor 1268	ND	0.10	ug/L							
Aroclor 1268 [2C]	ND	0.10	ug/L							
Surrogate: Decachlorobiphenyl	*0.0254*		ug/L	*0.05000*		*51*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0254*		ug/L	*0.05000*		*51*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0256*		ug/L	*0.05000*		*51*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0279*		ug/L	*0.05000*		*56*	*30-150*			
LCS										
Aroclor 1016	0.89	0.10	ug/L	1.000		89	40-140			
Aroclor 1016 [2C]	0.91	0.10	ug/L	1.000		91	40-140			
Aroclor 1260	0.86	0.10	ug/L	1.000		86	40-140			
Aroclor 1260 [2C]	0.86	0.10	ug/L	1.000		86	40-140			
Surrogate: Decachlorobiphenyl	*0.0407*		ug/L	*0.05000*		*81*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0405*		ug/L	*0.05000*		*81*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0368*		ug/L	*0.05000*		*74*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0356*		ug/L	*0.05000*		*71*	*30-150*			
LCS Dup										
Aroclor 1016	0.89	0.10	ug/L	1.000		89	40-140	0.5	20	
Aroclor 1016 [2C]	0.92	0.10	ug/L	1.000		92	40-140	1	20	
Aroclor 1260	0.86	0.10	ug/L	1.000		86	40-140	0.3	20	
Aroclor 1260 [2C]	0.85	0.10	ug/L	1.000		85	40-140	0.5	20	
Surrogate: Decachlorobiphenyl	*0.0408*		ug/L	*0.05000*		*82*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0397*		ug/L	*0.05000*		*79*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0364*		ug/L	*0.05000*		*73*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0349*		ug/L	*0.05000*		*70*	*30-150*			
625(SIM) Semi-Volatile Organic Compounds										

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
625(SIM) Semi-Volatile Organic Compounds										
Batch CC81909 - 3510C										
Blank										
Acenaphthene	ND	0.20	ug/L							
Acenaphthylene	ND	0.20	ug/L							
Anthracene	ND	0.20	ug/L							
Benzo(a)anthracene	ND	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	ug/L							
Benzo(g,h,i)perylene	ND	0.20	ug/L							
Benzo(k)fluoranthene	ND	0.05	ug/L							
bis(2-Ethylhexyl)phthalate	ND	1.90	ug/L							
Butylbenzylphthalate	ND	2.50	ug/L							
Chrysene	ND	0.05	ug/L							
Dibenzo(a,h)Anthracene	ND	0.05	ug/L							
Diethylphthalate	ND	2.50	ug/L							
Dimethylphthalate	ND	2.50	ug/L							
Di-n-butylphthalate	3.51	2.50	ug/L							
Di-n-octylphthalate	ND	2.50	ug/L							
Fluoranthene	ND	0.20	ug/L							
Fluorene	ND	0.20	ug/L							
Indeno(1,2,3-cd)Pyrene	ND	0.05	ug/L							
Naphthalene	ND	0.20	ug/L							
Pentachlorophenol	ND	0.90	ug/L							
Phenanthrene	ND	0.20	ug/L							
Pyrene	ND	0.20	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*0.794*		ug/L	*2.500*		*32*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*2.24*		ug/L	*3.750*		*60*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.08*		ug/L	*2.500*		*43*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.67*		ug/L	*2.500*		*67*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.13*		ug/L	*2.500*		*85*	*30-130*			
LCS										
Acenaphthene	2.33	0.20	ug/L	4.000		58	40-140			
Acenaphthylene	2.58	0.20	ug/L	4.000		65	40-140			
Anthracene	2.62	0.20	ug/L	4.000		65	40-140			
Benzo(a)anthracene	2.44	0.05	ug/L	4.000		61	40-140			
Benzo(a)pyrene	2.72	0.05	ug/L	4.000		68	40-140			
Benzo(b)fluoranthene	2.82	0.05	ug/L	4.000		70	40-140			
Benzo(g,h,i)perylene	2.97	0.20	ug/L	4.000		74	40-140			
Benzo(k)fluoranthene	2.49	0.05	ug/L	4.000		62	40-140			
bis(2-Ethylhexyl)phthalate	2.92	2.50	ug/L	4.000		73	40-140			
Butylbenzylphthalate	3.17	2.50	ug/L	4.000		79	40-140			
Chrysene	2.54	0.05	ug/L	4.000		63	40-140			
Dibenzo(a,h)Anthracene	2.88	0.05	ug/L	4.000		72	40-140			
Diethylphthalate	2.82	2.50	ug/L	4.000		71	40-140			
Dimethylphthalate	2.76	2.50	ug/L	4.000		69	40-140			
Di-n-butylphthalate	5.36	2.50	ug/L	4.000		134	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
625(SIM) Semi-Volatile Organic Compounds										
Batch CC81909 - 3510C										
Di-n-octylphthalate	3.12	2.50	ug/L	4.000		78	40-140			
Fluoranthene	2.83	0.20	ug/L	4.000		71	40-140			
Fluorene	2.65	0.20	ug/L	4.000		66	40-140			
Indeno(1,2,3-cd)Pyrene	2.91	0.05	ug/L	4.000		73	40-140			
Naphthalene	2.05	0.20	ug/L	4.000		51	40-140			
Pentachlorophenol	3.05	0.90	ug/L	4.000		76	30-130			
Phenanthrene	2.65	0.20	ug/L	4.000		66	40-140			
Pyrene	2.69	0.20	ug/L	4.000		67	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*0.843*		ug/L	*2.500*		*34*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.38*		ug/L	*3.750*		*90*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.28*		ug/L	*2.500*		*51*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.88*		ug/L	*2.500*		*75*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.03*		ug/L	*2.500*		*81*	*30-130*			
LCS Dup										
Acenaphthene	2.73	0.20	ug/L	4.000		68	40-140	16	20	
Acenaphthylene	3.00	0.20	ug/L	4.000		75	40-140	15	20	
Anthracene	3.04	0.20	ug/L	4.000		76	40-140	15	20	
Benzo(a)anthracene	2.82	0.05	ug/L	4.000		70	40-140	14	20	
Benzo(a)pyrene	3.04	0.05	ug/L	4.000		76	40-140	11	20	
Benzo(b)fluoranthene	3.19	0.05	ug/L	4.000		80	40-140	13	20	
Benzo(g,h,i)perylene	3.26	0.20	ug/L	4.000		82	40-140	9	20	
Benzo(k)fluoranthene	2.81	0.05	ug/L	4.000		70	40-140	12	20	
bis(2-Ethylhexyl)phthalate	3.41	2.50	ug/L	4.000		85	40-140	15	20	
Butylbenzylphthalate	3.66	2.50	ug/L	4.000		91	40-140	14	20	
Chrysene	2.84	0.05	ug/L	4.000		71	40-140	11	20	
Dibenzo(a,h)Anthracene	3.19	0.05	ug/L	4.000		80	40-140	10	20	
Diethylphthalate	3.36	2.50	ug/L	4.000		84	40-140	17	20	
Dimethylphthalate	3.30	2.50	ug/L	4.000		82	40-140	18	20	
Di-n-butylphthalate	7.86	2.50	ug/L	4.000		196	40-140	38	20	B+
Di-n-octylphthalate	3.57	2.50	ug/L	4.000		89	40-140	13	20	
Fluoranthene	3.24	0.20	ug/L	4.000		81	40-140	14	20	
Fluorene	3.10	0.20	ug/L	4.000		77	40-140	16	20	
Indeno(1,2,3-cd)Pyrene	3.32	0.05	ug/L	4.000		83	40-140	13	20	
Naphthalene	2.34	0.20	ug/L	4.000		58	40-140	13	20	
Pentachlorophenol	3.74	0.90	ug/L	4.000		94	30-130	20	20	
Phenanthrene	3.12	0.20	ug/L	4.000		78	40-140	16	20	
Pyrene	3.07	0.20	ug/L	4.000		77	40-140	13	20	
Surrogate: 1,2-Dichlorobenzene-d4	*1.18*		ug/L	*2.500*		*47*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.97*		ug/L	*3.750*		*106*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.66*		ug/L	*2.500*		*66*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.41*		ug/L	*2.500*		*96*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.54*		ug/L	*2.500*		*102*	*30-130*			
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CC81929 - 3535A										

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CC81929 - 3535A										
Blank										
1,4-Dioxane	ND	0.250	ug/L							
Surrogate: 1,4-Dioxane-d8	*ND*		ug/L	*5.000*		*37*	*15-115*			
LCS										
1,4-Dioxane	10.8	0.250	ug/L	10.00		108	40-140			
Surrogate: 1,4-Dioxane-d8	*2.55*		ug/L	*5.000*		*51*	*15-115*			
LCS Dup										
1,4-Dioxane	10.2	0.250	ug/L	10.00		102	40-140	5	20	
Surrogate: 1,4-Dioxane-d8	*2.83*		ug/L	*5.000*		*57*	*15-115*			
Classical Chemistry										
Batch CC81529 - General Preparation										
Blank										
Chloride	ND	0.5	mg/L							
LCS										
Chloride	2.6		mg/L	2.500		106	90-110			
Batch CC81530 - General Preparation										
Blank										
Hexavalent Chromium	ND	10.0	ug/L							
LCS										
Hexavalent Chromium	0.491		mg/L	0.4998		98	90-110			
LCS Dup										
Hexavalent Chromium	0.492		mg/L	0.4998		99	90-110	0.3	20	
Batch CC81541 - General Preparation										
Blank										
Total Residual Chlorine	ND	20.0	ug/L							
LCS										
Total Residual Chlorine	1.82		mg/L	1.800		101	85-115			
Batch CC81612 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	32		mg/L	34.10		94	80-120			
Batch CC81917 - NH4 Prep										
Blank										
Ammonia as N	ND	0.10	mg/L							
LCS										
Ammonia as N	0.10	0.10	mg/L	0.09994		100	80-120			
LCS										
Ammonia as N	0.98	0.10	mg/L	0.9994		98	80-120			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CC81937 - General Preparation										
Blank										
Phenols	ND	100	ug/L							
LCS										
Phenols	94	100	ug/L	100.0		94	80-120			
LCS										
Phenols	1060	100	ug/L	1000		106	80-120			
Batch CC82002 - General Preparation										
Blank										
Total Petroleum Hydrocarbon	ND	5	mg/L							
LCS										
Total Petroleum Hydrocarbon	17	5	mg/L	19.38		88	66-114			
Batch CC82010 - TCN Prep										
Blank										
Total Cyanide (LL)	ND	5.00	ug/L							
LCS										
Total Cyanide (LL)	20.1	5.00	ug/L	20.06		100	90-110			
LCS										
Total Cyanide (LL)	150	5.00	ug/L	150.4		100	90-110			
LCS Dup										
Total Cyanide (LL)	152	5.00	ug/L	150.4		101	90-110	0.9	20	
Batch CC82850 - General Preparation										
LCS										
Salinity	1.0		ppt	1.000		96	85-115			
504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CC82125 - 504/8011										
Blank										
1,2-Dibromoethane	ND	0.015	ug/L							
1,2-Dibromoethane [2C]	ND	0.015	ug/L							
Surrogate: Pentachloroethane	*0.188*		ug/L	*0.2000*		*94*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.219*		ug/L	*0.2000*		*109*	*30-150*			
LCS										
1,2-Dibromoethane	0.071	0.015	ug/L	0.08000		89	70-130			
1,2-Dibromoethane [2C]	0.071	0.015	ug/L	0.08000		89	70-130			
Surrogate: Pentachloroethane	*0.0706*		ug/L	*0.08000*		*88*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.0789*		ug/L	*0.08000*		*99*	*30-150*			
LCS										
1,2-Dibromoethane	0.165	0.015	ug/L	0.2000		83	70-130			
1,2-Dibromoethane [2C]	0.193	0.015	ug/L	0.2000		97	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
504.1 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CC82125 - 504/8011										
Surrogate: Pentachloroethane	*0.150*		ug/L	*0.2000*		*75*	*30-150*			
Surrogate: Pentachloroethane [2C]	*0.172*		ug/L	*0.2000*		*86*	*30-150*			
Alcohol Scan by GC/FID										
Batch CC82139 - No Prep										
Blank										
Ethanol	ND	10	mg/L							
LCS										
Ethanol	1150	10	mg/L	1007		114	60-140			
LCS Dup										
Ethanol	1210	10	mg/L	1007		120	60-140	5	30	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP ESS Laboratory Work Order: 1803323

Notes and Definitions

U	Analyte included in the analysis, but not detected
PT	Pentachlorophenol tailing factor > 2.
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
BT	Benzidine tailing factor >2.
B+	Blank Spike recovery is above upper control limit (B+).
B	Present in Method Blank (B).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Skanska Parcel Q1 - RGP

ESS Laboratory Work Order: 1803323

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB/MM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 1803323
Date Received: 3/15/2018
Project Due Date: 3/22/2018
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.6 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	209009	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209010	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209011	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209012	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209013	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209014	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209015	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209016	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209017	Yes	No	Yes	VOA Vial - HCl	HCl	
01	209019	Yes	NA	Yes	VOA Vial - Unpres	NP	
01	209022	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
01	209023	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
01	209030	Yes	NA	Yes	1L Amber - Unpres	NP	
01	209031	Yes	NA	Yes	1L Amber - Unpres	NP	
01	209032	Yes	NA	Yes	1L Amber - Unpres	NP	
01	209033	Yes	NA	Yes	1L Amber - Unpres	NP	
01	209034	Yes	NA	Yes	1L Amber - Unpres	NP	
01	209035	Yes	NA	Yes	1L Amber - Unpres	NP	
01	209037	Yes	NA	Yes	1L Poly - Unpres	NP	
01	209040	Yes	NA	Yes	500 mL Poly - H2SO4	H2SO4	
01	209043	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
01	209045	Yes	NA	Yes	250 mL Poly - NaOH	NaOH	**pH > 12 3/15/18 1700** VL
01	209048	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
01	209051	Yes	NA	Yes	250 mL Poly - Unpres	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB/MM

ESS Project ID: 1803323

Date Received: 3/15/2018

01	209052	Yes	NA	Yes	250 mL Poly - Unpres	NP	
01	209053	Yes	NA	Yes	250 mL Poly - Unpres	NP	
02	209000	Yes	No	Yes	VOA Vial - HCl	HCl	
02	209001	Yes	No	Yes	VOA Vial - HCl	HCl	
02	209002	Yes	No	Yes	VOA Vial - HCl	HCl	
02	209003	Yes	No	Yes	VOA Vial - HCl	HCl	
02	209004	Yes	No	Yes	VOA Vial - HCl	HCl	
02	209005	Yes	No	Yes	VOA Vial - HCl	HCl	
02	209018	Yes	NA	Yes	VOA Vial - Unpres	NP	
02	209020	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
02	209021	Yes	NA	Yes	1L Amber - H2SO4	H2SO4	
02	209024	Yes	NA	Yes	1L Amber - Unpres	NP	
02	209025	Yes	NA	Yes	1L Amber - Unpres	NP	
02	209026	Yes	NA	Yes	1L Amber - Unpres	NP	
02	209027	Yes	NA	Yes	1L Amber - Unpres	NP	
02	209028	Yes	NA	Yes	1L Amber - Unpres	NP	
02	209029	Yes	NA	Yes	1L Amber - Unpres	NP	
02	209036	Yes	NA	Yes	1L Poly - Unpres	NP	
02	209039	Yes	NA	Yes	500 mL Poly - H2SO4	H2SO4	
02	209042	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
02	209044	Yes	NA	Yes	250 mL Poly - NaOH	NaOH	**pH > 12 3/15/18 1700** KL
02	209047	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
02	209050	Yes	NA	Yes	250 mL Poly - Unpres	NP	
02	209054	Yes	NA	Yes	250 mL Poly - Unpres	NP	
03	209038	Yes	NA	Yes	500 mL Poly - H2SO4	H2SO4	
03	209041	Yes	NA	Yes	500 mL Poly - HNO3	HNO3	
03	209046	Yes	NA	Yes	250 mL Poly - HNO3	HNO3	
03	209049	Yes	NA	Yes	250 mL Poly - Unpres	NP	

2nd Review
Are barcode labels on correct containers? (Yes / No)

Completed By: _____ Date & Time: 3/15/18 1718

Reviewed By: _____ Date & Time: 3/15/18 1726

Delivered By: _____ 3/15/18 1726

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 1803323

Turn Time: X Standard Rush_____ Approved By: _____

Reporting Limits - Discharge into: Fresh Water ☐ Salt Water ☒

State where samples were collected: MA NH

Is this project for: **RGP**

Electonic Deliverable Yes X No____
Format: Excel X Access___ PDF X Other_____

Project Manager: Heather Ballantyne
Company: GEI Consultants
Address: 400 Unicorn Park Drive
Woburn, MA

Project #: 1609290
Project Name: Skanska Parcel Q1
PO #:

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	RGP Metals Total	RGP Metals Dissolved	Hardness (Calculation)	Ethanol ASTM D3695	Chloride 300.0*	Total Cyanide 4500 LL	TPH 1664	TSS 2540D*	TRC 4500-CL D*	Ammonia 350.1	Tri Cr (Calc. MUST run T. Cr)	Hex Cr 3500	Phenol 420.1	RGP VOC Long List 524	1,4-Dioxane 8270-SIM	EDB 504.1	RGP SVOC Log List 625-SIM	PCB 608	Comment #	Salinity**
1	3/15/18	1320		GW	1609290-MW102	25	X		X	x	X	X	X	X	X	X	x	X	X	X	x	x	X	X	1,2	~~VPH~~
2	3/15/18	1040		GW	1609290-MW103	22	X		X	x	X	X	X	X	X	X	x	X	X	X	x	x	X	X	1,2	
3	3/15/18	0830	G	SW	1609290-GRAB	4	X		X							X									1,2	X
Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____							4	4	4	1	1	5	3	1	1	3	-	1	3	2	1	2	1	1		
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA							P	P	P	V	P	P	AG	P	P	P	-	P	AG	V	AG	V	AG	AG		

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present X Yes ____No
Seals Intact ___ Yes ___No NA: ✓
Cooler Temperature: ~4°C ice temp; 1.6

Sampled by : AMW

Comments: 1) RGP Metals include Sb, As, Cd, Cu, Fe, Pb, Ni, Se, Ag and Zn by 200.7/3113B and Hg by 245.1
2) Parameters in **BOLD** have Short hold-time
*** TSS, TRC and Cl taken from the same container**

PERMIT ATTACHED
add remaining analysis per HB mkm 3/19/18

no VPH per HB. mkm 3/19/18

**DPS 03/28/18

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	3/15/1415	3/15/18 1415	3/15/18	15:58	3/15/18 1627
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Page ____ of ____

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 1803323

Turn Time: X Standard Rush_____ Approved By: _____

Reporting Limits - Discharge into: Fresh Water ☐ Salt Water ☒

State where samples were collected: MA NH

Is this project for: **RGP**

Electonic Deliverable Yes X No____
Format: Excel X Access___ PDF X Other_____

Project Manager: Heather Ballantyne
Company: GEI Consultants
Address: 400 Unicorn Park Drive
Woburn, MA

Project # 1609290
Project Name: Skanska Parcel Q1
PO #

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	RGP Metals Total	RGP Metals Dissolved	Hardness (Calculation)	Ethanol ASTM D3695	Chloride 300.0*	Total Cyanide 4500 LL	TPH 1664	TSS 2540D*	TRC 4500-CL D*	Ammonia 350.1	Tri Cr (Calc. MUST run T. Cr)	Hex Cr 3500	Phenol 420.1	RGP VOC Long List 524	1,4-Dioxane 8270-SIM	EDB 504.1	RGP SVOC Log List 625-SIM	PCB 608	Comment #
1	3/15/18	1320		GW	1609290-MW102	25	X		X	x	X	X	X	X	X	X	x	X	X	X	x	x	X	X	1,2 VPH
2	3/15/18	1040		GW	1609290-MW103	22	X		X	x	X	X	X	X	X	X	x	X	X	X	x	x	X	X	1,2
3	3/15/18	0830	G	SW	1609290-GRAB	4	X		X							X									1,2
Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____							4	4	4	1	1	5	3	1	1	3	-	1	3	2	1	2	1	1	
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA							P	P	P	V	P	P	AG	P	P	P	-	P	AG	V	AG	V	AG	AG	

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present X Yes ____No
Seals Intact ___ Yes ___No NA: ✓
Cooler Temperature: ~4°C ice temp; 1.6

Sampled by : AMW

Comments: 1) RGP Metals include Sb, As, Cd, Cu, Fe, Pb, Ni, Se, Ag and Zn by 200.7/3113B and Hg by 245.1
2) Parameters in **BOLD** have Short hold-time
*** TSS, TRC and Cl taken from the same container**

PERMIT ATTACHED
add remaining analysis per HB mkm 3/19/18

no VPH per HB. mkm 3/19/18

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	3/15, 1415	3/15/18 1415	3/15/18	15:58	3/15/18 1627
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Page ____ of ____

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 1803323

Turn Time: X Standard Rush_____ Approved By: _____

Reporting Limits -
Discharge into: Fresh Water ☐ Salt Water ☒

State where samples were collected: MA NH

Is this project for: **RGP**

Electonic Deliverable Yes X No____
Format: Excel X Access___ PDF X Other____

Project Manager: Heather Ballantyne
Company: GEI Consultants
Address: 400 Unicorn Park Drive
Woburn, MA

Project #: 1609290
Project Name: Skanska Parcel Q1
PO #:

Analysis

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Containers	RGP Metals Total	RGP Metals Dissolved	Hardness (Calculation)	Ethanol ASTM D3695	Chloride 300.0*	Total Cyanide 4500 LL	TPH 1664	TSS 2540D*	TRC 4500-CL D*	Ammonia 350.1	Tri Cr (Calc. MUST run T. Cr)	Hex Cr 3500	Phenol 420.1	RGP VOC Long List 524	1,4-Dioxane 8270-SIM	EDB 504.1	RGP SVOC Log List 625-SIM	PCB 608	Comment #
1	3/15/18	1320		GW	1609290-MW102	25	X		X	x	X	X	X	X	X	X	x	X	X	X	x	X	X	X	1,2 VPH
2	3/15/18	1040		GW	1609290-MW103	22	X		X	x	X	X	X	X	X	X	x	X	X	X	x	X	X	X	1,2
3	3/15/18	0830	G	SW	1609290-GRAB	4	X		X							X									1,2

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____

	4	4	4	1	1	5	3	1	1	3	-	1	3	2	1	2	1	1							
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA	P	P	P	V	P	P	AG	P	P	P	-	P	AG	V	AG	V	AG	AG							

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present X Yes ____ No
Seals Intact ___ Yes ___ No NA: ✓
Cooler Temperature: ~4°C ice temp; 1.6

Sampled by : AMW

Comments: 1) RGP Metals include Sb, As, Cd, Cu, Fe, Pb, Ni, Se, Ag and Zn by 200.7/3113B and Hg by 245.1
2) Parameters in **BOLD** have Short hold-time
*** TSS, TRC and Cl taken from the same container**

PERMIT ATTACHED
add remaining analysis per HB mkm 3/19/18

no VPH per HB. mkm 3/19/18

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	3/15, 1415	3/15/18 1415	3/15/18 15:58		3/15/18 1627
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Page ____ of ____

Appendix D

Detailed Plans of Proposed Discharge Points and Proposed Treatment Schematic

0 60 120

Approximate Scale, Feet

NPDES RGP Notice of Intent
2 Drydock Avenue
Boston, Massachusetts

Skanska USA Commercial Development, Inc.
Boston, Massachusetts

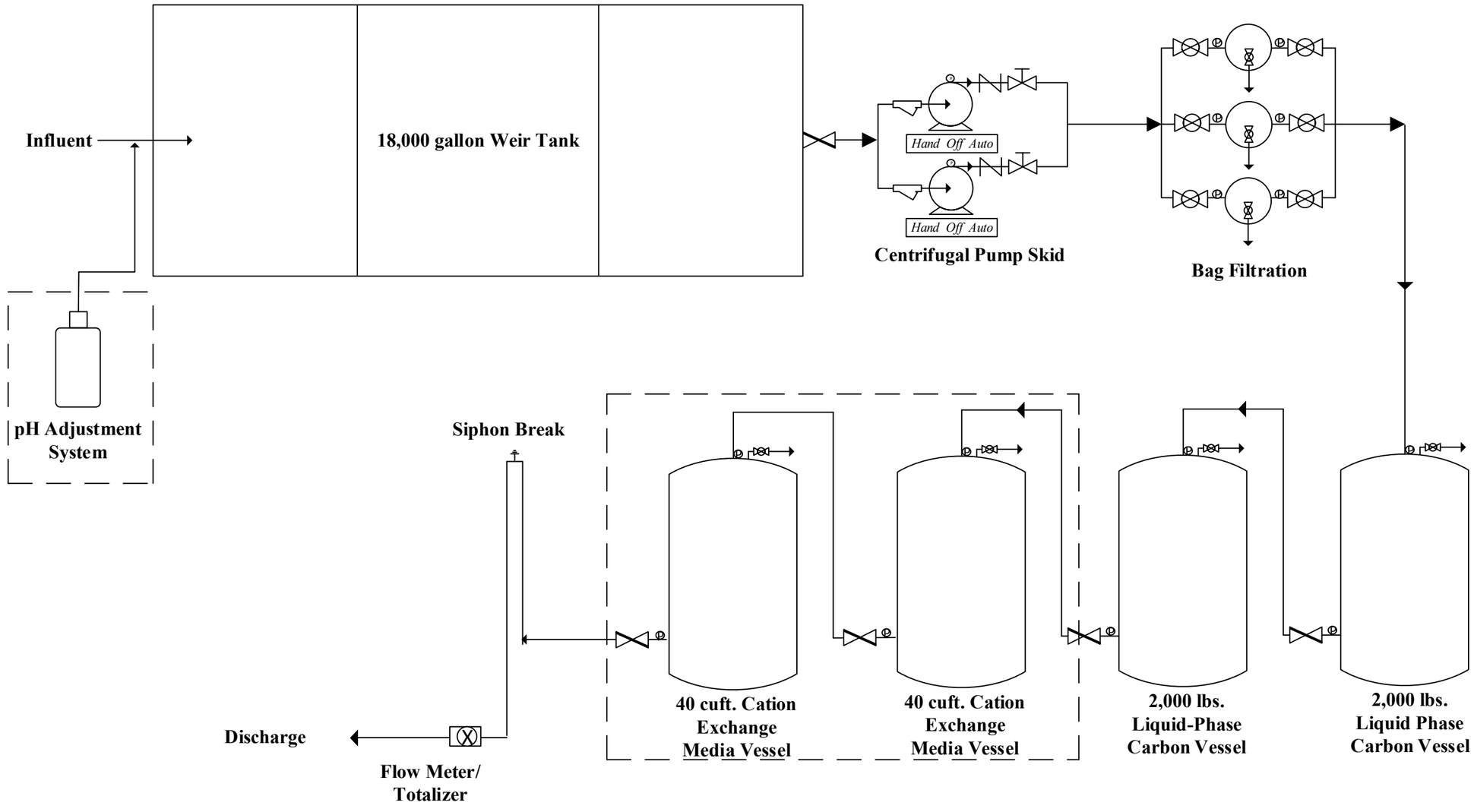
GEI Consultants

PROPOSED DISCHARGE LOCATIONS AND DISCHARGE PATH TO OUTFALL

Project 1609290

April 2018 Fig. D1

\\geiconsulta B:\Working\SKANSKA COMMERCIAL DEVELOPMENT\1609290 - Parcel Q1 Geotechnical & Environmental\00_CAD\Figures\npdes\1609290-05.dwg - 3/29/2018



Notes:
1. Figure not drawn to scale
2. System rated for 100 GPM
3. Sampling ports on all treatment system components

Key:
Piping/Hose
Contingent

Lockwood Remediation Technologies, LLC 89 Crawford Street Leominster, MA 01453 Office: 774-450-7177		Water Treatment System	PROJECT No. 2-1650
DESIGNED BY: LRT	DRAWN BY: K.G.	Parcel Q1 Drydock Avenue South Boston, MA	FIGURE No. 4
DATE: 4/12/18	REVISION:		

Figure 4 - Water Treatment System Schematic

Appendix E

Endangered Species Act Eligibility Documentation

United States Department of the Interior

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

In Reply Refer To:
Consultation Code: 05E1NE00-2018-SLI-1233
Event Code: 05E1NE00-2018-E-02778
Project Name: Parcel Q1

March 08, 2018

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2018-SLI-1233

Event Code: 05E1NE00-2018-E-02778

Project Name: Parcel Q1

Project Type: LAND - DRAINAGE

Project Description: NPDES Permit

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.34492491434246N71.03750475705772W

Counties: Suffolk, MA

Endangered Species Act Species

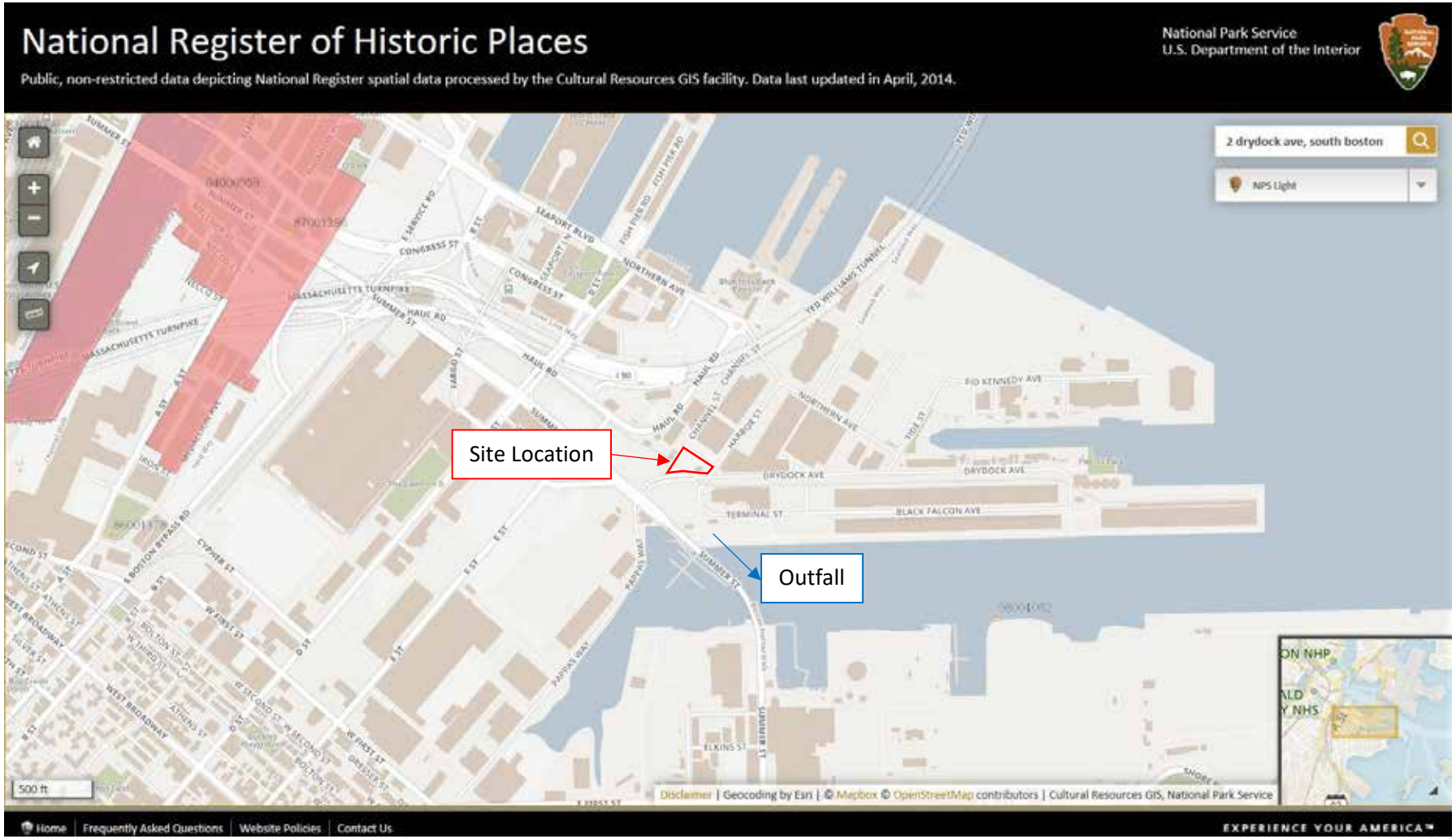
There is a total of 0 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. 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.

Critical habitats

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

Appendix F

Historic Preservation Documentation


National Register of Historic Places
Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. Data last updated in April, 2014.
National Park Service
U.S. Department of the Interior
2 drydock ave, south boston
NPS Light
Site Location
Outfall
DRYDOCK AVE
TERMINAL ST
BLACK FALCON AVE
NORTHERN AVE
CONGRESS ST
SEAPORT BLVD
HAUL RD
MASSACHUSETTS TURNPIKE
BOSTON BYPASS RD
CYPHER ST
PAPPAS WAY
SUMMER ST
ELKINS ST
500 ft
Disclaimer | Geocoding by Esri | © Mapbox © OpenStreetMap contributors | Cultural Resources GIS, National Park Service
Home | Frequently Asked Questions | Website Policies | Contact Us
EXPERIENCE YOUR AMERICA™

MACRIS MAPS 2.0 beta

About || Help || Disclaimer

Address or MHC# Search

Bing MassDOT Street View

Available Layers

Legend

MHC Inventory Points

- Nat'l Register of Historic Places
- Preservation Restriction
- Local Historic District
- NRHP and LHD
- Inventoried Property

MHC Inventory Areas

- Nat'l Register of Historic Places
- Preservation Restriction
- Local Historic District
- NRHP and LHD
- Inventoried Area

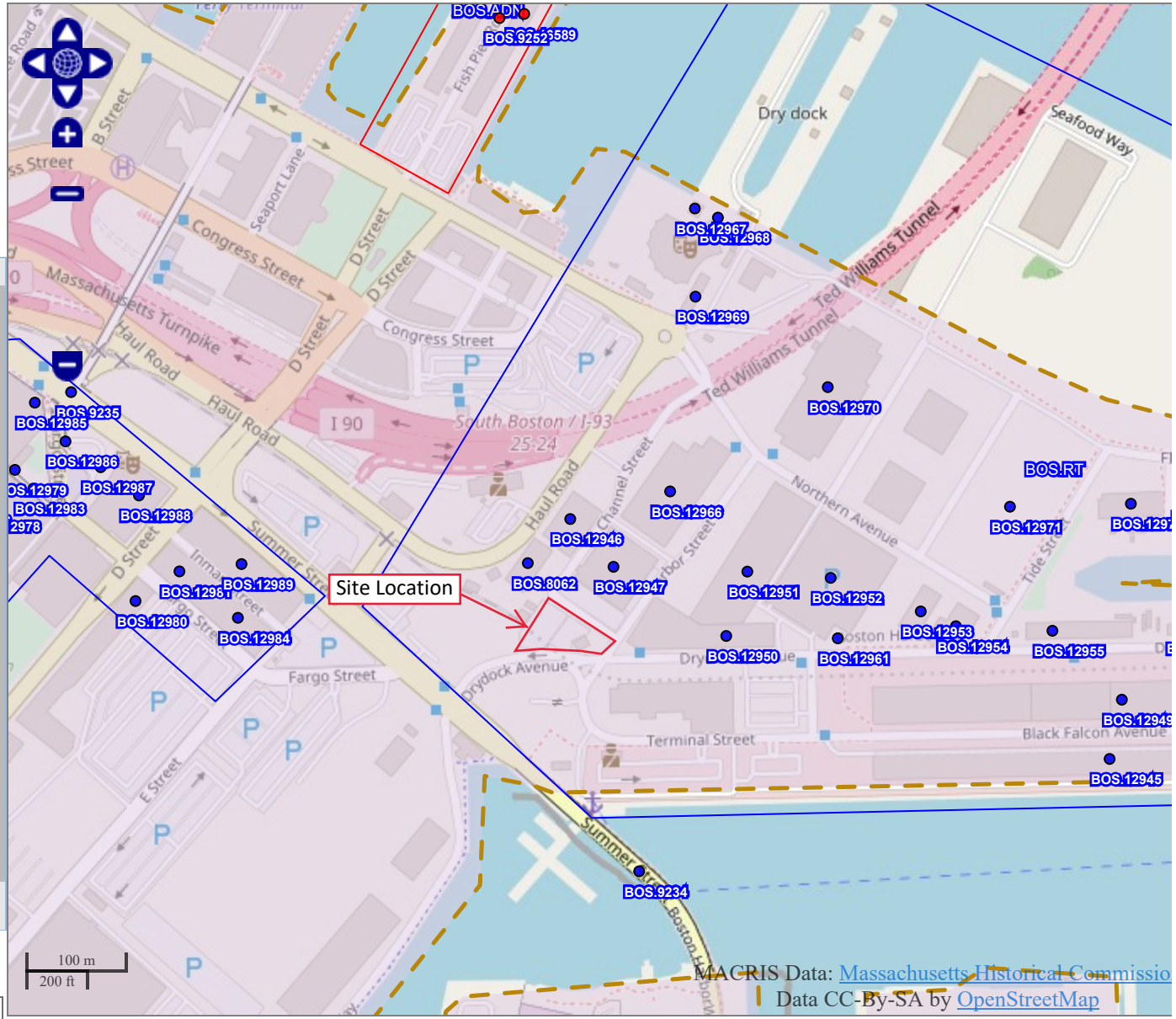
MHC Towns Completed

- Updates Pending
- Completed
- Not Completed

Archaeology Login

Username:

Password: Login



MACRIS Maps Last Updated 01/30/2018

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: South Boston; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.CX	Fort Point Channel District		Boston	
BOS.IQ	Old Harbor Village		Boston	
BOS.IR	Dorchester Heights National Historic Site		Boston	
BOS.IU	Saint Augustine Chapel and Cemetery		Boston	
BOS.IV	South Boston Waterfront District		Boston	
BOS.RT	Boston Army Supply Base		Boston	
BOS.RU	C Street Industrial Area		Boston	
BOS.RV	King Terminal		Boston	
BOS.SI	Cathedral of Saint George Historic District		Boston	
BOS.TP	Dorchester Heights Historic District		Boston	
BOS.WQ	Gate of Heaven Roman Catholic Church Complex		Boston	
BOS.WR	Our Lady of Czestochowa Roman Catholic Church		Boston	
BOS.WS	Saint Augustine Roman Catholic Church Complex		Boston	
BOS.WT	Saint Brigid Roman Catholic Church Complex		Boston	
BOS.WU	Saint Peter (Lithuanian) Roman Catholic Church		Boston	
BOS.WV	Saints Peter and Paul Roman Catholic Church		Boston	
BOS.WW	Saint Vincent de Paul Roman Catholic Church		Boston	
BOS.WZ	Fort Point Channel Historic District		Boston	
BOS.YG	South Boston Boat Clubs Historic District		Boston	
BOS.ZD	Old Harbor Reservation Parkways		Boston	
BOS.ZG	Fort Point Channel Landmark District		Boston	
BOS.AAU	Beckler Avenue, 1-16		Boston	
BOS.ADN	Boston Fish Pier Historic District		Boston	
BOS.6815	Dahlquist Coppersmiths Manufacturing Company	87-97 A St	Boston	r 1895
BOS.6816	United States Post Office Garage	135 A St	Boston	1941

Inv. No.	Property Name	Street	Town	Year
BOS.5498	Boston Wharf Company Warehouse	168-170 A St	Boston	1897
BOS.5499	Boston Wharf Company Warehouse	169 A St	Boston	1919
BOS.5500	Boston Wharf Company Warehouse	172-174 A St	Boston	1897
BOS.5501	Boston Wharf Company Warehouse	176-178 A St	Boston	1897
BOS.5502	Boston Wharf Company Warehouse	191-205 A St	Boston	1919
BOS.5503	Boston Wharf Company Building	207-209 A St	Boston	1916
BOS.5504	Boston Wharf Company Building	211-213 A St	Boston	1915
BOS.5505	Boston Wharf Company Warehouse	215-225 A St	Boston	1922
BOS.5506	Boston Wharf Company Warehouse	227-229 A St	Boston	1903
BOS.5507	Barlow, Frederick Building	239-241 A St	Boston	c 1895
BOS.5508	Factory Buildings Trust Industrial Building #5	249-255 A St	Boston	c 1895
BOS.5509	Keith, George E. Shoe Factory	288-304 A St	Boston	1912
BOS.5510	Boston Wharf Company Warehouse	289-293 A St	Boston	1893
BOS.5511	Boston Wharf Company Warehouse	319-321 A St	Boston	1913
BOS.15340	Dwinell - Wright Company Warehouse	319R A St	Boston	1923
BOS.15342	A Street Deli	324 A St	Boston	1945
BOS.15343	Boston Button Company Warehouse	326 A St	Boston	1889
BOS.12944	McDonald, Matt J. Company Special Steel Company	3 Anchor Way	Boston	c 1980
BOS.6817	Pike, Jacob - Abbott, Timothy Double House	92-94 B St	Boston	c 1834
BOS.6818	Boston Fire Department Hose Company #9	116 B St	Boston	1860
BOS.6819	Lawrence School	125 B St	Boston	1856
BOS.9652	Old Harbor Parkway - Babe Ruth Park Drive	Babe Ruth Park Dr	Boston	1924
BOS.6828	Beckler Avenue Rowhouse	1 Beckler Ave	Boston	c 1872
BOS.6820	Beckler Avenue Rowhouse	2 Beckler Ave	Boston	c 1872
BOS.6829	Beckler Avenue Rowhouse	3 Beckler Ave	Boston	c 1872
BOS.6821	Beckler Avenue Rowhouse	4 Beckler Ave	Boston	c 1872
BOS.6830	Beckler Avenue Rowhouse	5 Beckler Ave	Boston	c 1872
BOS.6822	Beckler Avenue Rowhouse	6 Beckler Ave	Boston	c 1872
BOS.6831	Beckler Avenue Rowhouse	7 Beckler Ave	Boston	c 1872
BOS.6823	Beckler Avenue Rowhouse	8 Beckler Ave	Boston	c 1872
BOS.6832	Beckler Avenue Rowhouse	9 Beckler Ave	Boston	c 1872
BOS.6824	Beckler Avenue Rowhouse	10 Beckler Ave	Boston	c 1872
BOS.6833	Beckler Avenue Rowhouse	11 Beckler Ave	Boston	c 1872
BOS.6825	Beckler Avenue Rowhouse	12 Beckler Ave	Boston	c 1872
BOS.6834	Beckler Avenue Rowhouse	13 Beckler Ave	Boston	c 1872
BOS.6826	Beckler Avenue Rowhouse	14 Beckler Ave	Boston	c 1872
BOS.6835	Beckler Avenue Rowhouse	15 Beckler Ave	Boston	c 1872

Inv. No.	Property Name	Street	Town	Year
BOS.6827	Beckler Avenue Rowhouse	16 Beckler Ave	Boston	c 1872
BOS.5512	Factory Buildings Trust Industrial Building #1	14-18 Binford St	Boston	1895
BOS.5513	Factory Buildings Trust Industrial Building #2	22-30 Binford St	Boston	1895
BOS.5514	Factory Buildings Trust Industrial Building #3	32-40 Binford St	Boston	1895
BOS.5515	Factory Buildings Trust Industrial Building #4	42-48 Binford St	Boston	1895
BOS.12945	Boston Army Supply Base - Wharf Shed	1 Black Falcon Dr	Boston	1918
BOS.15332	Saint Vincent de Paul Roman Catholic Rectory	201 Bolton St	Boston	r 1870
BOS.9243	Boston Street Bridge over MBTA	Boston St	Boston	1925
BOS.15322	Saint Mary's Roman Catholic Parochial School	46 Boston St	Boston	1911
BOS.6836	Broadway Streetcar - Broadway Bus Staton	Broadway Ave	Boston	1919
BOS.9247	Broadway Bridge over Fort Point Channel	Broadway Ave	Boston	1914
BOS.9249	Broadway Subway Station	Broadway Ave	Boston	1917
BOS.6837		450-454 Broadway Ave	Boston	r 1895
BOS.12973	Gahm, Joseph and Son Bottling Plant	340 C St	Boston	1908
BOS.12974	Brooklyn Cooperage Co. Kiln Building & Cooper Shop	352 C St	Boston	1904
BOS.12975	Brooklyn Cooperage Co. Storage & Shipping Building	360-366 C St	Boston	c 1904
BOS.12976	Standard Sanitary Manufacturing Company Building	365 C St	Boston	1924
BOS.12977		445 C St	Boston	1924
BOS.12978		475 C St	Boston	1919
BOS.12979	Brown and Wales Steel and Iron Company Warehouse	489-493 C St	Boston	c 1910
BOS.6838	Fort Independence	Castle Island	Boston	1809
BOS.5546	Boston Wharf Company Warehouse	1-5 Channel Center St	Boston	1916
BOS.5547	Boston Wharf Company Warehouse	1-5 Channel Center St	Boston	1914
BOS.5548	Abbott, W. Herbert, Inc. Building	1-5 Channel Center St	Boston	1913
BOS.5543	Boston Wharf Company Warehouse	15 Channel Center St	Boston	c 1914
BOS.5544	Boston Wharf Company Warehouse	15 Channel Center St	Boston	1911
BOS.5545	Boston Wharf Company Warehouse	15 Channel Center St	Boston	1912
BOS.5541	Boston Wharf Company Warehouse	35 Channel Center St	Boston	1902
BOS.12946	Boston Army Supply Base - Building 17	7 Channel St	Boston	c 1940
BOS.8062	Boston Army Supply Base Steam Locomotive Shop	11 Channel St	Boston	1918
BOS.12947	Boston Army Supply Base - Building 32	12 Channel St	Boston	c 1940
BOS.9648	Old Harbor Reservation Parkway - Columbia Road	Columbia Rd	Boston	1897
BOS.9649	Old Harbor Parkway - Columbia Road Median Strip	Columbia Rd	Boston	1897

Inv. No.	Property Name	Street	Town	Year
BOS.9650	Old Harbor Parkway - Laporte, Joseph E. Monument	Columbia Rd	Boston	1965
BOS.9653	Old Harbor Reservation Parkway - Preble Circle	Columbia Rd	Boston	c 1941
BOS.9656	Old Harbor Reservation Parkway - Columbia Circle	Columbia Rd	Boston	1924
BOS.9657	Old Harbor Parkway - Kosciuszko, Tadeusz Monument	Columbia Rd	Boston	1951
BOS.9651	Old Harbor Parkway - Columbus Park Headworks	1305 Columbia Rd	Boston	1967
BOS.6839	Johnson, Samuel W. Three Decker	1650 Columbia Rd	Boston	1913
BOS.6840	Johnson, Samuel W. Three Decker	1654 Columbia Rd	Boston	1913
BOS.6841	Johnson, Samuel W. Three Decker	1658 Columbia Rd	Boston	1913
BOS.6842	Johnson, Samuel W. Three Decker	1662 Columbia Rd	Boston	1913
BOS.6843	Johnson, Samuel W. Two-Family House	1736 Columbia Rd	Boston	1911
BOS.6844	Johnson, Samuel W. Three Decker	1788 Columbia Rd	Boston	1904
BOS.6845	Johnson, Samuel W. Three Decker	1790 Columbia Rd	Boston	1904
BOS.6846	Johnson, Samuel W. Three Decker	1792 Columbia Rd	Boston	1904
BOS.6855	Boston Yacht Club	1793-1805 Columbia Rd	Boston	1874
BOS.6847	Johnson, Samuel W. Three Decker	1794 Columbia Rd	Boston	1904
BOS.6852	Puritan Canoe Club	1819 Columbia Rd	Boston	1899
BOS.6853	Columbia Yacht Club	1825-1829 Columbia Rd	Boston	1899
BOS.6854	South Boston Yacht Club	1839-1849 Columbia Rd	Boston	1899
BOS.9002	Congress Street Bridge over Fort Point Channel	Congress St	Boston	1930
BOS.9510	The Beaver	Congress St	Boston	
BOS.15344	Congress Street Bridge Tenders House	Congress St	Boston	1930
BOS.15345		305 Congress St	Boston	1983
BOS.5516	New Haven Terminal Stores	308-316 Congress St	Boston	c 1890
BOS.15346	Hood, H. P. Milk Bottle	308 Congress St	Boston	1934
BOS.15347	Lombard's Congress Street Stores	313 Congress St	Boston	1886
BOS.5517	Boston Wharf Company Building	320-324 Congress St	Boston	1888
BOS.5518	Boston Wharf Company Warehouse	326-330 Congress St	Boston	1888
BOS.5519	Boston Wharf Company Warehouse	332-336 Congress St	Boston	1892
BOS.5520	American Railway Express Company Stable	343 Congress St	Boston	1888
BOS.5521	Congress Street Fire Station	344-346 Congress St	Boston	1891
BOS.5522	Chase and Company Candy Company Factory	347-351 Congress St	Boston	1887
BOS.5523	Boston Wharf Company Warehouse	348-352 Congress St	Boston	1894
BOS.5524	Boston Wharf Company Warehouse	354-358 Congress St	Boston	1900
BOS.5525	Tremont Electric Lighting Company	355-359 Congress St	Boston	c 1905
BOS.5526	Boston Wharf Company Building	364-372 Congress St	Boston	1901

Inv. No.	Property Name	Street	Town	Year
BOS.5527	Boston Wharf Company Wool Warehouse	369-375 Congress St	Boston	1918
BOS.5528	Boston Wharf Company Building	374-384 Congress St	Boston	c 1903
BOS.5529	Boston Wharf Company Building	381-389 Congress St	Boston	1907
BOS.9775	Schooner Roseway	Courthouse Pier	Boston	1925
BOS.12980	Burnett, Joseph Company Extract Building	437 D St	Boston	1921
BOS.12981		451 D St	Boston	1910
BOS.6849	Woods, S. A. Woodworking Machinery Company Stable	27-37 Damrell St	Boston	c 1886
BOS.6850	Woods, S. A. Woodworking Machinery Company	28 Damrell St	Boston	1886
BOS.9647	Old Harbor Reservation Parkway - Farragut Rotary	Day, William J. Blvd	Boston	1893
BOS.6856	Gogin, Thomas House	7 Dexter St	Boston	r 1860
BOS.6857	Roers, R. House	9 Dexter St	Boston	r 1860
BOS.6859	Clough, Joseph H. House	15 Dexter St	Boston	r 1860
BOS.6858	Clough, Joseph H. House	19 Dexter St	Boston	r 1860
BOS.6860	Ellis, Charles H. House	23 Dexter St	Boston	r 1860
BOS.6861	Wadleigh, Dexter - Sharp, William Double House	27-29 Dexter St	Boston	c 1852
BOS.13275	Stetson, Alpheus M. House	12 Dixfield St	Boston	c 1869
BOS.13276	Stetson, Alpheus M. House	14 Dixfield St	Boston	c 1869
BOS.13277		15 Dixfield St	Boston	r 1880
BOS.13278	Rich, Reuben House	16 Dixfield St	Boston	c 1869
BOS.6862	Kent, Barker B. House	17 Dixfield St	Boston	c 1849
BOS.13279	Stetson, Alpheus M. House	18 Dixfield St	Boston	c 1869
BOS.13280		19 Dixfield St	Boston	
BOS.13281		21 Dixfield St	Boston	
BOS.13282		24 Dixfield St	Boston	
BOS.13283		26 Dixfield St	Boston	
BOS.12948	Boston Army Supply Base - Building 31	3 Dolphin Way	Boston	c 1940
BOS.6864	Andrew Street Car Transfer Station	Dorchester Ave	Boston	1918
BOS.9242	Dorchester Avenue Bridge over MBTA	Dorchester Ave	Boston	1925
BOS.9244	NY, NH and H Railroad Bridge #1.08	Dorchester Ave	Boston	
BOS.9248	Andrew Subway Station	Dorchester Ave	Boston	1918
BOS.9513	Dorchester Avenue Sea Wall	Dorchester Ave	Boston	
BOS.6863	MacAllen Electric Railway Material Co. Building	135-137 Dorchester Ave	Boston	r 1905
BOS.6865	Norway Iron Works Machine Shop	383 Dorchester Ave	Boston	c 1845
BOS.15319	Our Lady of Czestochowa Roman Catholic Church	655 Dorchester Ave	Boston	1894
BOS.15320	Our Lady of Czestochowa Roman Catholic Rectory	655 Dorchester Ave	Boston	1900

Inv. No.	Property Name	Street	Town	Year
BOS.15321	Our Lady of Czestochowa Roman Catholic Convent	666 Dorchester Ave	Boston	c 1900
BOS.9240	N.Y., N.H. and H. Railroad Bridge (Milepost #1.19)	Dorchester Brook	Boston	1961
BOS.6872	South Boston Gas Light Company	3-5 Dorchester St	Boston	c 1852
BOS.6873	Boston Engine House #1 & Municipal District Court	119-121 Dorchester St	Boston	1868
BOS.13284	White, Amos T. Three Decker	124 Dorchester St	Boston	1891
BOS.13285	Marion Manor	130 Dorchester St	Boston	1965
BOS.6866	Briggs, James Edwin House	142 Dorchester St	Boston	r 1856
BOS.6867	Sears, Jabez H. - Woods, Solomon A. House	146 Dorchester St	Boston	1859
BOS.13286	Morse, Albert House	149 Dorchester St	Boston	r 1860
BOS.13287	Whitcher, Martin C. House	151 Dorchester St	Boston	r 1860
BOS.13288		153 Dorchester St	Boston	r 1860
BOS.13289	Hall, Daniel Double House	154 Dorchester St	Boston	c 1852
BOS.13290	Silsby, Thomas J. House	155 Dorchester St	Boston	c 1852
BOS.13291	Adams, Orison Double House	156 Dorchester St	Boston	c 1852
BOS.13292	Orcutt, William K. House	158 Dorchester St	Boston	r 1860
BOS.13293	Pearson, E. House	159 Dorchester St	Boston	r 1860
BOS.13294	Giles, S. House	160 Dorchester St	Boston	r 1860
BOS.13295		161 Dorchester St	Boston	r 1860
BOS.6868	Lincoln, Charles House	162 Dorchester St	Boston	1858
BOS.13296	Bail, William V. House	164 Dorchester St	Boston	r 1860
BOS.6875	Rose, George Double House	165-169 Dorchester St	Boston	r 1855
BOS.13297	Collins, Jeremiah House	170 Dorchester St	Boston	r 1860
BOS.13298	Thayer, Samuel J. F. House	172 Dorchester St	Boston	c 1865
BOS.811	Saint Augustine Cemetery	181 Dorchester St	Boston	1819
BOS.7180	Saint Augustine Roman Catholic Chapel	181 Dorchester St	Boston	1819
BOS.6869	Mason, William H. House	200 Dorchester St	Boston	r 1855
BOS.6876	Saint Augustine Roman Catholic Church and Rectory	225 Dorchester St	Boston	c 1870
BOS.6870	Boston Fire House Horse Hose Company #10	330 Dorchester St	Boston	1861
BOS.6871	Dorchester Street Methodist Episcopal Church	340 Dorchester St	Boston	c 1889
BOS.6877	Richmond, Augustus C. House	351 Dorchester St	Boston	c 1873
BOS.6878	Hussey, Robert House	381 Dorchester St	Boston	c 1866
BOS.6879	Unity Unitarian Chapel - Washington Village Chapel	385 Dorchester St	Boston	c 1860
BOS.6880		397-403 Dorchester St	Boston	c 1910
BOS.9427	Boston Army Supply Base - Dry Dock #3	Dry Dock Ave	Boston	c 1914

Inv. No.	Property Name	Street	Town	Year
BOS.12949	Boston Army Supply Base - Building 114	Dry Dock Ave	Boston	1918
BOS.12952	Boston Army Supply Base - Parking Garage	Dry Dock Ave	Boston	c 1980
BOS.12957	Boston Army Supply Base - Building 22	Dry Dock Ave	Boston	c 1918
BOS.12958	Boston Army Supply Base - Building 23	Dry Dock Ave	Boston	c 1918
BOS.12961	Boston Army Supply Base - Building 40	Dry Dock Ave	Boston	c 1918
BOS.12962	Boston Army Supply Base - Buildings 117 and 113	Dry Dock Ave	Boston	1918
BOS.12950	Boston Army Supply Base - Building 15	10 Dry Dock Ave	Boston	c 1940
BOS.12951	British Airways World Cargo Building	15 Dry Dock Ave	Boston	c 1980
BOS.12953	Boston Army Supply Base - Building 20	20 Dry Dock Ave	Boston	c 1940
BOS.12954	Boston Army Supply Base - Public Works Building	22 Dry Dock Ave	Boston	c 1940
BOS.12955	Boston Army Supply Base - Building 21	24-26 Dry Dock Ave	Boston	c 1940
BOS.12959	Boston Army Supply Base - Building 1	32 Dry Dock Ave	Boston	c 1918
BOS.12960	Coastal Cement Corporation	39 Dry Dock Ave	Boston	c 1980
BOS.6881	Saint Augustine Roman Catholic Parochial School	201 E St	Boston	1893
BOS.15324	Saint Augustine Roman Catholic Church Convent	207 E St	Boston	1926
BOS.7119	Glynn, Martin T. and William Apartment Building	313 E St	Boston	1897
BOS.7115	Greene, Gardiner Row House	318 E St	Boston	c 1824
BOS.7116	Greene, Gardiner Row House	320 E St	Boston	c 1824
BOS.6882	Fletcher, Henry W. Double House	336-338 E St	Boston	c 1852
BOS.6883	Harris, James W. Double House	368-370 E St	Boston	c 1852
BOS.9257	Farragut, Adm. David Glasgow Statue	East Broadway	Boston	1893
BOS.9259	Independence Square	East Broadway	Boston	1855
BOS.6952	James, Francis Row House	495 East Broadway	Boston	1860
BOS.6918	Monks, John P. - Howes, Osborn Double House	512-514 East Broadway	Boston	1845
BOS.6919	Kenney, John - Hersey, Francis C. Double House	516 East Broadway	Boston	1874
BOS.14295	James, George B. House	517 East Broadway	Boston	c 1868
BOS.6921	Bill, Abner D. House	520 East Broadway	Boston	c 1868
BOS.6884	Cathedral of Saint George	523 East Broadway	Boston	1872
BOS.14296	Jenney, Bernard House	525 East Broadway	Boston	1868
BOS.6922	Stover, Theophilus - Jenkins, Joshua House	534 East Broadway	Boston	c 1856
BOS.6885	South Boston Municipal Building	535 East Broadway	Boston	1913
BOS.6923	Souther, Henry - Gavin, Dr. Michael Freeborn House	546 East Broadway	Boston	1868
BOS.6924	Meins, Walter R. Row House	548 East Broadway	Boston	1871
BOS.6925	Vance, Samuel Row House	550 East Broadway	Boston	1871
BOS.6926		552 East Broadway	Boston	1871

Inv. No.	Property Name	Street	Town	Year
BOS.6927		554 East Broadway	Boston	1871
BOS.6928		556 East Broadway	Boston	1871
BOS.6929	Warner, William D. Row House	558 East Broadway	Boston	1871
BOS.6930		560 East Broadway	Boston	1871
BOS.6931	Warner, William D. Row House	562 East Broadway	Boston	1871
BOS.6886	Driscoll, Mitchell J. House	585 East Broadway	Boston	1892
BOS.6887		705 East Broadway	Boston	1859
BOS.6888		707 East Broadway	Boston	1859
BOS.6889		709 East Broadway	Boston	1859
BOS.6890		711 East Broadway	Boston	1859
BOS.6932	Pilgrim Hall	732-734 East Broadway	Boston	1890
BOS.6933	Handy, Lottie G. Row House	766 East Broadway	Boston	1874
BOS.6891	Warner, William H. House	767 East Broadway	Boston	c 1858
BOS.6934	Cobb Lime Company Row House	768 East Broadway	Boston	1874
BOS.6935	Cobb Lime Company Row House	770 East Broadway	Boston	1874
BOS.6892	Scott, John M. - Bixby, Sampson L. Double House	771-773 East Broadway	Boston	c 1867
BOS.6936	Cobb Lime Company Row House	772 East Broadway	Boston	1874
BOS.6937	Cobb Lime Company Row House	774 East Broadway	Boston	1874
BOS.6893	Scott, John M. Double House	775-777 East Broadway	Boston	1868
BOS.6938	Whitney, William A. House	776 East Broadway	Boston	1875
BOS.6939	Whitney, William A. House	778 East Broadway	Boston	1873
BOS.6894	Scott, John M. Double House	779-781 East Broadway	Boston	1868
BOS.6940	Hawes, Walter E. House	780 East Broadway	Boston	1870
BOS.6941	Gray, Solomon S. - Dana, Otis D. Stable	786 East Broadway	Boston	r 1870
BOS.6895	Scott, John M. House	787 East Broadway	Boston	c 1862
BOS.6942	Gray, Solomon S. - Dana, Otis D. House	788 East Broadway	Boston	c 1866
BOS.6896	Loring, Harrison House	789 East Broadway	Boston	1865
BOS.6897	Clark, William H. Row House	797 East Broadway	Boston	1868
BOS.6898	Moore, Alexander Row House	799 East Broadway	Boston	1868
BOS.6899	Souther, Joaquim Row House	801 East Broadway	Boston	1868
BOS.6900	Souther, John T. Row House	803 East Broadway	Boston	1868
BOS.6901	Brown, Albert Row House	805 East Broadway	Boston	1868
BOS.6902	Brown, Albert Row House	807 East Broadway	Boston	1868
BOS.6903	Hall, Leonard Row House	809 East Broadway	Boston	1868
BOS.6904	Canfield, Rev. C. T. Row House	811 East Broadway	Boston	1868
BOS.6905	Murray, Mary E. T. Row House	813 East Broadway	Boston	c 1870
BOS.6906	Tay, Rodney S. Row House	815 East Broadway	Boston	c 1870

Inv. No.	Property Name	Street	Town	Year
BOS.6907	Gibbs, Horace G. Row House	817 East Broadway	Boston	c 1870
BOS.6908	Baker, Mary Row House	819 East Broadway	Boston	c 1870
BOS.6909	Baker, Charles H. Row House	821 East Broadway	Boston	c 1870
BOS.6910	Bemis, Emily Row House	823 East Broadway	Boston	c 1870
BOS.6911	Hall, Francis D. Row House	825 East Broadway	Boston	c 1870
BOS.6912	Scott, John M. Row House	827 East Broadway	Boston	c 1870
BOS.6943	Whiton, Lewis C. House	838 East Broadway	Boston	c 1869
BOS.15326	Saint Brigid Roman Catholic Church Rectory	845 East Broadway	Boston	c 1917
BOS.15327	Saint Brigid Roman Catholic Church School	866 East Broadway	Boston	1964
BOS.6944		898-904 East Broadway	Boston	1886
BOS.6914	Gleeson, James A. Double House	901-903 East Broadway	Boston	c 1865
BOS.6915	Clark, Henry S. Three Decker	925 East Broadway	Boston	1907
BOS.6916	Blake, Samuel House	927-931R East Broadway	Boston	1835
BOS.6945	Collins, James Mansion	928 East Broadway	Boston	1867
BOS.6946	Collins, James Row House	934 East Broadway	Boston	1884
BOS.6947	Collins, James Row House	936 East Broadway	Boston	1884
BOS.6948	Collins, James Row House	938 East Broadway	Boston	1884
BOS.6949	Collins, James Row House	940 East Broadway	Boston	1884
BOS.6950	Collins, James Row House	942 East Broadway	Boston	1884
BOS.6917	Taylor, William H. House	945 East Broadway	Boston	1939
BOS.6951	Falvey, J. H. House	948 East Broadway	Boston	r 1900
BOS.13299		344 East Eighth St	Boston	c 1884
BOS.13300	Graf, Emily House	348 East Eighth St	Boston	r 1885
BOS.13301	Stapleton, B. J. and E. House	350 East Eighth St	Boston	r 1885
BOS.13302	Towle, A. J. and William House	352 East Eighth St	Boston	r 1885
BOS.13303	Devine - Wenzler House	354 East Eighth St	Boston	r 1885
BOS.13304	McCarthy - Clark House	356 East Eighth St	Boston	r 1885
BOS.13305	Grafter, William House	358 East Eighth St	Boston	r 1885
BOS.13306	Barth, Sophie A. House	360 East Eighth St	Boston	r 1885
BOS.13307		362 East Eighth St	Boston	r 1980
BOS.13308		364 East Eighth St	Boston	r 1980
BOS.13309		366 East Eighth St	Boston	r 1885
BOS.6966	Arion Hall - German-American Singing Society	367 East Eighth St	Boston	1892
BOS.13310		368 East Eighth St	Boston	r 1885
BOS.13311		370 East Eighth St	Boston	r 1885
BOS.13312		372 East Eighth St	Boston	r 1885
BOS.13313		374 East Eighth St	Boston	r 1885
BOS.13314		412 East Eighth St	Boston	r 1890

Inv. No.	Property Name	Street	Town	Year
BOS.13315		413 East Eighth St	Boston	r 1890
BOS.13316		414 East Eighth St	Boston	r 1890
BOS.13317		415 East Eighth St	Boston	r 1890
BOS.13318		417 East Eighth St	Boston	r 1865
BOS.13319		419 East Eighth St	Boston	r 1865
BOS.13320		421 East Eighth St	Boston	r 1865
BOS.13321		428 East Eighth St	Boston	r 1880
BOS.6963	Ellis, Albert House	582 1/2 East Eighth St	Boston	c 1845
BOS.6967	Spinney, Samuel R. House	601 East Eighth St	Boston	1853
BOS.7087	Sharp, John H. House	673 East Eighth St	Boston	1858
BOS.7088	Sharp, John H. House	675 East Eighth St	Boston	1858
BOS.7089	Sharp, John H. House	679 East Eighth St	Boston	1858
BOS.6964	Johnson, Samuel W. Three Decker	690 East Eighth St	Boston	1909
BOS.6965	Perry, Oliver Hazard Grammar School	770 East Eighth St	Boston	1904
BOS.13322		390 East Fifth St	Boston	r 1865
BOS.13323	Thompson, A. D. House	391 East Fifth St	Boston	r 1865
BOS.13324		392 East Fifth St	Boston	r 1865
BOS.13325	Manson, George H. House	393 East Fifth St	Boston	r 1865
BOS.13326		395 East Fifth St	Boston	r 1865
BOS.13327		397 East Fifth St	Boston	r 1865
BOS.6793	Perkins Institute for the Blind Rental Housing	422-424 East Fifth St	Boston	1893
BOS.6794	Emerson, Jacob House	562 East Fifth St	Boston	1847
BOS.6795	Hawes, John House	568 East Fifth St	Boston	c 1805
BOS.6796	Hathaway, Hiram F. House	611 East Fifth St	Boston	c 1852
BOS.6797	Masury, Joseph Double House	620-622 East Fifth St	Boston	1848
BOS.6798	Wheaton, Timothy Building	779 East Fifth St	Boston	1886
BOS.6800	Collins, James Apartment Block	828-834 East Fifth St	Boston	c 1880
BOS.6801	Harriss, John A. House	847 East Fifth St	Boston	c 1852
BOS.6802	Griffith, Mary A. - Butler, N. House	848 East Fifth St	Boston	c 1870
BOS.6803	Gleason, Michael House	855 East Fifth St	Boston	c 1856
BOS.12994		East First St	Boston	r 1950
BOS.12991		564 East First St	Boston	1919
BOS.12992	Grueby Faience Company Work Shop	566 East First St	Boston	c 1899
BOS.12993		570 East First St	Boston	r 1920
BOS.6752	Condit Electrical Company Building	603-609 East First St	Boston	1915
BOS.6753	Boston Elevated Railway South Boston Power Station	696 East First St	Boston	1911
BOS.6754	Walworth Radiator Manufacturing Company	881 East First St	Boston	1904

Inv. No.	Property Name	Street	Town	Year
	Warehouse			
BOS.9258	Lincoln Park	East Fourth St	Boston	c 1860
BOS.13328	Bird - Lord House	469 East Fourth St	Boston	c 1852
BOS.13329		470 East Fourth St	Boston	r 1865
BOS.13330	Bird - Barstow House	471 East Fourth St	Boston	c 1852
BOS.13331		472 East Fourth St	Boston	r 1865
BOS.13332		474 East Fourth St	Boston	r 1865
BOS.13333		476 East Fourth St	Boston	r 1890
BOS.13334		478 East Fourth St	Boston	r 1890
BOS.6763	Bird, John Hawes House	480-482 East Fourth St	Boston	1830
BOS.6764	Mount Washington Female Institute	484 East Fourth St	Boston	c 1874
BOS.13335	Burton, H. J. and R. A. House	491 East Fourth St	Boston	r 1865
BOS.13336		493 East Fourth St	Boston	r 1865
BOS.13337		494 East Fourth St	Boston	r 1980
BOS.13338		495 East Fourth St	Boston	r 1865
BOS.13339		496 East Fourth St	Boston	r 1980
BOS.13340		497 East Fourth St	Boston	r 1865
BOS.13341	Gerrish, Thomas P. Double House	498 East Fourth St	Boston	c 1852
BOS.13342	Pierce, William P. Double House	500 East Fourth St	Boston	c 1852
BOS.13343	Bowen, H. B. House	502 East Fourth St	Boston	c 1852
BOS.13344	Spaulding, Ira D. Double House	504 East Fourth St	Boston	r 1855
BOS.13345	Kingman, George W. Double House	506 East Fourth St	Boston	r 1865
BOS.13346	Lutted, William House	508 East Fourth St	Boston	c 1852
BOS.13347	Cole - Lewis House	510 East Fourth St	Boston	c 1852
BOS.13348	Wright, Albert J. Jr. House	512 East Fourth St	Boston	c 1852
BOS.13349	Leonard, Isaac M. House	514 East Fourth St	Boston	c 1852
BOS.13350	Clapp, Howard House	523 East Fourth St	Boston	r 1865
BOS.13351	Greely, Phillip House	525 East Fourth St	Boston	r 1865
BOS.13352	Clapp, Howard House	527 East Fourth St	Boston	r 1865
BOS.13353		528 East Fourth St	Boston	c 1852
BOS.13354		529 East Fourth St	Boston	r 1865
BOS.13355		530 East Fourth St	Boston	c 1852
BOS.13356		531 East Fourth St	Boston	r 1865
BOS.15317	Gate of Heaven Roman Catholic Church Rectory	606 East Fourth St	Boston	1958
BOS.15318	Gate of Heaven Roman Catholic Church School	609 East Fourth St	Boston	1922
BOS.6766	Gate of Heaven Roman Catholic Church	615 East Fourth St	Boston	c 1896
BOS.6765	Gate of Heaven Roman Catholic Church	616 East Fourth St	Boston	1862
BOS.6775	Boston Police Station #12 and Jail	675 East Fourth St	Boston	1874

Inv. No.	Property Name	Street	Town	Year
BOS.6776	Boston Fire Station Engine #2 - Ladder #19	680 East Fourth St	Boston	1932
BOS.9230	Boston Fire Station #2 Hose Drying Tower	680 East Fourth St	Boston	1932
BOS.6767	Sawyer, Oliver T. House	742 East Fourth St	Boston	1860
BOS.6768	Scanlon, Mary A. Row House	746 East Fourth St	Boston	c 1871
BOS.6769	Pollard, Rev. Andrew Row House	748 East Fourth St	Boston	c 1871
BOS.6770	Miller, Ellen S. Row House	750 East Fourth St	Boston	c 1871
BOS.6771	Becker, J. M. Row House	752 East Fourth St	Boston	c 1871
BOS.6772	Round, Julius S. Row House	754 East Fourth St	Boston	c 1871
BOS.6773	Ring, James - Underwood, Frank H. Double House	756-758 East Fourth St	Boston	c 1865
BOS.6774	Harding, William H. - Bowles, Hiram Double House	760-762 East Fourth St	Boston	c 1865
BOS.6777	Webb Row House	789 East Fourth St	Boston	c 1871
BOS.6778	Flanders - Crawford Row House	791 East Fourth St	Boston	c 1871
BOS.6779	Wilson, Joseph F. Row House	793 East Fourth St	Boston	c 1871
BOS.6780	Jessop, H. H. Row House	795 East Fourth St	Boston	c 1871
BOS.6781	Bird, Lewis J. Row House	797 East Fourth St	Boston	c 1871
BOS.6782	Marous, A. A. Row House	799 East Fourth St	Boston	c 1871
BOS.6783	McCouson, Ansel Three Decker	908 East Fourth St	Boston	1905
BOS.6784	Boyle, Patrick House	913 East Fourth St	Boston	1856
BOS.6785	Simpson, Daniel House	918-920 East Fourth St	Boston	1856
BOS.6791	Simpson, Daniel House	924 East Fourth St	Boston	c 1848
BOS.6787	Johnson, Samuel W. Three Decker	925 East Fourth St	Boston	1909
BOS.6788	Johnson, Samuel W. Three Decker	927 East Fourth St	Boston	1909
BOS.6789	Carmoody, Elizabeth G. Three Decker	929 East Fourth St	Boston	1909
BOS.6790	Johnson, Samuel W. Three Decker	931 East Fourth St	Boston	1909
BOS.6792	Connolly, Mary C. Three Decker	936 East Fourth St	Boston	1892
BOS.6756	Bay State Iron Company Worker Housing	591 East Second St	Boston	c 1852
BOS.6757	Bay State Iron Company Worker Housing	593 East Second St	Boston	c 1852
BOS.6758	Bay State Iron Company Worker Housing	595 East Second St	Boston	c 1852
BOS.6759	Bay State Iron Company Worker Housing	597 East Second St	Boston	c 1852
BOS.6755	Leeds, Samuel House	687 East Second St	Boston	1834
BOS.13357		399 East Seventh St	Boston	1897
BOS.13358		401 East Seventh St	Boston	1897
BOS.13360		403 East Seventh St	Boston	1897
BOS.13359		404 East Seventh St	Boston	r 1865
BOS.13362		405 East Seventh St	Boston	1897
BOS.13361		406 East Seventh St	Boston	r 1865

Inv. No.	Property Name	Street	Town	Year
BOS.6953	Howard, Thomas and Henry Three Decker	447 East Seventh St	Boston	1903
BOS.6954	Meyer, Conrad Double Three Decker	448-450 East Seventh St	Boston	1892
BOS.6955	Lappen, James House	492 East Seventh St	Boston	c 1852
BOS.6956	Hatch, Converse R. Row House	602 East Seventh St	Boston	1869
BOS.6957	Ham, Alonzo G. Row House	604 East Seventh St	Boston	1869
BOS.6958	Whitridge, Thomas Row House	606 East Seventh St	Boston	1869
BOS.6959	Lewis, Albert G. Row House	608 East Seventh St	Boston	1869
BOS.6960	Kimball, Frank H. Row House	610 East Seventh St	Boston	1869
BOS.6961	Small, Maria A. Row House	612 East Seventh St	Boston	1869
BOS.6962	Spofford, Charles Row House	614 East Seventh St	Boston	1869
BOS.6804	Capen Primary School	518 East Sixth St	Boston	1871
BOS.6805	Higgins, William R. Row House	586 East Sixth St	Boston	c 1872
BOS.6806	Wright, Fred S. Row House	588 East Sixth St	Boston	c 1872
BOS.6807	Woodward, Elliot W. Row House	590 East Sixth St	Boston	c 1872
BOS.6808	Shaw, Jeremiah Row House	592 East Sixth St	Boston	c 1872
BOS.6809	Tufts, C. Row House	594 East Sixth St	Boston	c 1872
BOS.6810	Hersey, Francis C. Row House	596 East Sixth St	Boston	c 1872
BOS.6811	Hersey, Francis C. Row House	598 East Sixth St	Boston	c 1872
BOS.6812	Hersey, Francis C. Row House	600 East Sixth St	Boston	c 1872
BOS.6813	Wheaton, Timothy House	814 East Sixth St	Boston	1871
BOS.6814	Atlantic House Hotel	868 East Sixth St	Boston	c 1870
BOS.6760	Locke, Richard House	411R East Third St	Boston	c 1828
BOS.6761	Burnham, Choate Elementary School	486 East Third St	Boston	1892
BOS.6762	Wade, Ellen M. House	512 East Third St	Boston	r 1895
BOS.12996	King Terminal Pump House - Electrical Cabinet	Elkins St	Boston	r 1920
BOS.12995	Puritan Wine - Northern Industrial Chemical Co.	7 Elkins St	Boston	1916
BOS.12997	King Terminal No. 11 - Kohnstamm, H. and Company	11 Elkins St	Boston	1915
BOS.12998	Shaw, John and Company Chemical Works	15 Elkins St	Boston	r 1920
BOS.12999		21 Elkins St	Boston	r 1920
BOS.13000	King Terminal No. 7	22 Elkins St	Boston	1927
BOS.810	Hawes Cemetery	Emerson St	Boston	1817
BOS.6971		133 Emerson St	Boston	r 1905
BOS.6968		172 Emerson St	Boston	c 1830
BOS.6969		176 Emerson St	Boston	r 1850
BOS.6970		204 Emerson St	Boston	r 1830
BOS.6972	Furbush, Milo House	249 Emerson St	Boston	1844
BOS.6973	Hotel Eaton	309-311 Emerson St	Boston	1887

Inv. No.	Property Name	Street	Town	Year
BOS.6974	Pierce, Samuel H. L. House	313 Emerson St	Boston	1862
BOS.15323	Blessed Sacrament Roman Catholic Chapel	9 F St	Boston	1886
BOS.6975	Kent, Barker B. Double House	92-96 F St	Boston	c 1868
BOS.6976	Kent, Barker B. Double House	98-100 F St	Boston	c 1852
BOS.6977	Pond, Adams and Basco Row House	114 F St	Boston	r 1870
BOS.6978	Pond, Adams and Basco Row House	116 F St	Boston	r 1870
BOS.6979	Gifford, Moses S. - Goodwin, Nathaniel Row House	118 F St	Boston	r 1870
BOS.6980	Gifford, Moses S. - Goodwin, Nathaniel Row House	120 F St	Boston	r 1870
BOS.6981	Gifford, Goodwin and Baker Row House	122 F St	Boston	r 1870
BOS.6982	Gifford, Goodwin and Baker Row House	124 F St	Boston	r 1870
BOS.12982	Boston Market Terminal Freight House #12	31 Fargo St	Boston	1928
BOS.12983		51-53 Fargo St	Boston	1920
BOS.12984		80 Fargo St	Boston	1917
BOS.5530	Boston Wharf Company Wool Warehouse	11-15 Farnsworth St	Boston	1893
BOS.5531	Boston Wharf Company Building	12-22 Farnsworth St	Boston	1917
BOS.15348	Farnsworth Street Garage	17-31 Farnsworth St	Boston	1987
BOS.5532	Boston Wharf Company Building	24-32 Farnsworth St	Boston	c 1895
BOS.5533	Boston Wharf Company Building	33-39 Farnsworth St	Boston	1909
BOS.5534	Boston Wharf Company Building	34-36 Farnsworth St	Boston	1909
BOS.5535	Boston Wharf Company Building	41-45 Farnsworth St	Boston	1908
BOS.5536	Boston Wharf Company Building	44-54 Farnsworth St	Boston	1915
BOS.5537	Boston Wharf Company Warehouse	47-53 Farnsworth St	Boston	1895
BOS.9256	Marine Park	Farragut Rd	Boston	c 1883
BOS.6983		65 Farragut Rd	Boston	r 1905
BOS.6984	Higgins, William J. Three Decker	73 Farragut Rd	Boston	1908
BOS.6985	Higgins, William J. Three Decker	75 Farragut Rd	Boston	1908
BOS.6986	Higgins, William J. Three Decker	77 Farragut Rd	Boston	1908
BOS.12964	Subaru Distributors Dealership	FID Kennedy Way	Boston	c 1980
BOS.12963	Au Bon Pain Offices	19 FID Kennedy Way	Boston	c 1980
BOS.12965	Boston Army Supply Base - Building 16	25 FID Kennedy Way	Boston	c 1940
BOS.6987	Saint Peter Lithuanian Roman Catholic Church	75 Flaherty Way	Boston	1901
BOS.9152	Fort Point Channel	Fort Point Channel	Boston	r 1850
BOS.9153	Fort Point Channel Bulkheads	Fort Point Channel	Boston	r 1850
BOS.9241	Fort Point Channel Bridge	Fort Point Channel	Boston	1898
BOS.9514	South Boston Sea Wall	Fort Point Channel	Boston	
BOS.13363		1 Fourth St Place	Boston	r 1865

Inv. No.	Property Name	Street	Town	Year
BOS.13364		2 Fourth St Place	Boston	r 1865
BOS.13365		3 Fourth St Place	Boston	r 1865
BOS.13366		31 G St	Boston	c 1852
BOS.13367		33 G St	Boston	c 1852
BOS.13368		34 G St	Boston	c 1852
BOS.13369		35 G St	Boston	c 1852
BOS.13370		36 G St	Boston	c 1852
BOS.13371		37 G St	Boston	r 1865
BOS.13372	Cook, Samuel House	39 G St	Boston	r 1865
BOS.13373	Kent, Barker B. House	41 G St	Boston	r 1865
BOS.13374	Jenkins, Reuben Y. Double House	43 G St	Boston	r 1865
BOS.13375	Jenkins, Reuben Y. Double House	45 G St	Boston	r 1865
BOS.13376		46 G St	Boston	1834
BOS.13377	Elms, James C. Double House	47 G St	Boston	r 1865
BOS.13378		48 G St	Boston	1834
BOS.13379	Whitman - Tucker Double House	49 G St	Boston	r 1865
BOS.13380		50 G St	Boston	r 1865
BOS.13381	Standish - Burnham Double House	51 G St	Boston	r 1865
BOS.6988	Briggs, Harrison O. House	52 G St	Boston	c 1852
BOS.13382	Fraught, George N. Double House	53 G St	Boston	r 1865
BOS.13383	Peterson, Capt. Peter House	54 G St	Boston	c 1861
BOS.13384	Smith, George P. Double House	55 G St	Boston	r 1865
BOS.13385		56 G St	Boston	c 1861
BOS.13386	Ellis, George W. Double House	57 G St	Boston	r 1865
BOS.13387		58 G St	Boston	c 1861
BOS.13388	Neilson, William House	59 G St	Boston	r 1865
BOS.13389		60 G St	Boston	r 1865
BOS.13390		60A G St	Boston	r 1865
BOS.13391	Johson - Hills Double House	61 G St	Boston	r 1865
BOS.13392		62 G St	Boston	r 1865
BOS.13393	Noyes, Elisha Double House	63 G St	Boston	r 1865
BOS.13394		64 G St	Boston	r 1865
BOS.13395	Wilson, Harvey Double House	65 G St	Boston	r 1865
BOS.13396		66 G St	Boston	r 1865
BOS.13397		67 G St	Boston	r 1890
BOS.13398		68 G St	Boston	r 1865
BOS.13399		69 G St	Boston	r 1890
BOS.13400		70 G St	Boston	r 1865

Inv. No.	Property Name	Street	Town	Year
BOS.13401		72 G St	Boston	r 1865
BOS.13402		73 G St	Boston	r 1880
BOS.13403	Wallackas Meats	73A G St	Boston	r 1905
BOS.13404		74 G St	Boston	r 1865
BOS.13405	Copeland, Joseph House	75 G St	Boston	c 1860
BOS.13407		76 G St	Boston	r 1865
BOS.6989	Harding, Lemon P. House	80 G St	Boston	c 1868
BOS.6990	Harding, Lemon P. House	82 G St	Boston	c 1853
BOS.13408		84 G St	Boston	r 1880
BOS.6991	Connor, James Row House	88 G St	Boston	c 1865
BOS.6992	Connor, James Row House	90 G St	Boston	c 1865
BOS.6993	Connor, James Row House	92 G St	Boston	c 1865
BOS.6994	Connor, James Row House	94 G St	Boston	c 1874
BOS.6995	South Boston High School	95 G St	Boston	1901
BOS.13409		96 G St	Boston	r 1865
BOS.13410		98 G St	Boston	r 1880
BOS.13411		100 G St	Boston	r 1890
BOS.13412		102 G St	Boston	r 1890
BOS.13413		104 G St	Boston	r 1865
BOS.13414		106 G St	Boston	r 1865
BOS.13415		108 G St	Boston	r 1865
BOS.6996	Johnson, Samuel W. Two-Family House	111 G St	Boston	1911
BOS.13416	Johnson, J. L. and S. J. Three Decker	115 G St	Boston	r 1895
BOS.13417		116 G St	Boston	r 1865
BOS.13418		118 G St	Boston	r 1865
BOS.13419	Johnson, J. L. and S. J. Three Decker	119 G St	Boston	r 1895
BOS.13420		120 G St	Boston	r 1865
BOS.13421	James, Francis Double House	121 G St	Boston	r 1880
BOS.13422		122 G St	Boston	r 1880
BOS.13423	Wyman, Charles F. Double House	123 G St	Boston	r 1880
BOS.13424		124 G St	Boston	r 1880
BOS.13425	Reardon, John A. Double House	125 G St	Boston	r 1880
BOS.13426		126 G St	Boston	r 1880
BOS.13427	McGrath, Mary E. Double House	127 G St	Boston	r 1880
BOS.13428		128 G St	Boston	r 1880
BOS.13429		129 G St	Boston	r 1880
BOS.13430		130 G St	Boston	r 1880
BOS.13431		131 G St	Boston	r 1890

Inv. No.	Property Name	Street	Town	Year
BOS.13432		Gates St	Boston	r 1925
BOS.13433		4 Gates St	Boston	r 1865
BOS.13434	Gleason, Alpheus House	5 Gates St	Boston	r 1865
BOS.13435		6 Gates St	Boston	r 1865
BOS.13436		7 Gates St	Boston	r 1865
BOS.13437	Carlton - Dean Double House	8 Gates St	Boston	c 1852
BOS.13438	Webber, William C. Double House	9 Gates St	Boston	r 1865
BOS.13439	Whiton - Sears Double House	10 Gates St	Boston	c 1852
BOS.13440		11 Gates St	Boston	r 1865
BOS.13441		12 Gates St	Boston	r 1865
BOS.13442		13 Gates St	Boston	r 1865
BOS.13443		14 Gates St	Boston	r 1865
BOS.13444		15 Gates St	Boston	r 1865
BOS.13445		16 Gates St	Boston	r 1865
BOS.13446		17 Gates St	Boston	r 1865
BOS.13447		18 Gates St	Boston	r 1865
BOS.13448		19 Gates St	Boston	r 1865
BOS.13449		20 Gates St	Boston	r 1865
BOS.13450		21 Gates St	Boston	r 1880
BOS.6997	Smith, James House	22 Gates St	Boston	c 1875
BOS.13451		23 Gates St	Boston	r 1880
BOS.13452		26 Gates St	Boston	r 1865
BOS.15227	Saint Monica's Roman Catholic Church Rectory	70 Gen. Wm. Devine Way	Boston	1955
BOS.6998	Power, Jacob P. House	98 H St	Boston	r 1880
BOS.6999	Power, Jacob P. House	100 H St	Boston	r 1880
BOS.7000	Stetson, Alpheus M. Three Decker	174 H St	Boston	c 1885
BOS.7001	Souther, Henry Row House	1 H Street Pl	Boston	r 1880
BOS.7002	Souther, Henry Row House	2 H Street Pl	Boston	r 1880
BOS.7003	Souther, Henry Row House	3 H Street Pl	Boston	r 1880
BOS.12966	Boston Army Supply Base - Building 19	6 Harbor St	Boston	c 1940
BOS.7004		36 I St	Boston	1905
BOS.7005	Gray, Solomon S. Row House	86 I St	Boston	c 1874
BOS.7006	Gray, Solomon S. Row House	88 I St	Boston	c 1874
BOS.7007	Gray, Solomon S. Row House	90 I St	Boston	c 1874
BOS.7008	Stark, Hannah Row House	92 I St	Boston	c 1884
BOS.7009	Stark, Hannah Row House	94 I St	Boston	c 1884
BOS.7010	Stark, Hannah Row House	96 I St	Boston	c 1884
BOS.7011	Stark, Hannah Row House	98 I St	Boston	c 1884

Inv. No.	Property Name	Street	Town	Year
BOS.7012	Stark, Hannah Row House	100 I St	Boston	c 1884
BOS.7013	Stark, Hannah Row House	102 I St	Boston	c 1884
BOS.7014	Saint Agnes Convent - Gate of Heaven Church	127 I St	Boston	1879
BOS.7015	Griffin Brothers Row House	151 I St	Boston	c 1874
BOS.7016	Griffin Brothers Row House	153 I St	Boston	c 1874
BOS.7017	Griffin Brothers Row House	155 I St	Boston	c 1874
BOS.7018	Griffin Brothers Row House	157 I St	Boston	c 1874
BOS.13453		1 Jason Terr	Boston	r 1865
BOS.13454		2 Jason Terr	Boston	r 1865
BOS.13455		3 Jason Terr	Boston	r 1865
BOS.13456		4 Jason Terr	Boston	r 1865
BOS.7019		10-12 Jenkins St	Boston	c 1852
BOS.13002	Goller, Allen Shoe Factory	60 K St	Boston	r 1920
BOS.13003	Dimes, Richard Silversmith Company	72 K St	Boston	r 1920
BOS.13004	New England Annealing and Tool Company Building	80 K St	Boston	r 1920
BOS.7020	Hawes, The	278 K St	Boston	r 1895
BOS.7032	Beckler, Daniel W. Row House	283 K St	Boston	1870
BOS.7033	Beckler, Daniel W. Row House	285 K St	Boston	1870
BOS.7034	Beckler, Daniel W. Row House	287 K St	Boston	1870
BOS.7035	Beckler, Daniel W. Row House	289 K St	Boston	1870
BOS.7036	Beckler, Daniel W. Row House	291 K St	Boston	1870
BOS.7037	Beckler, Daniel W. Row House	293 K St	Boston	1870
BOS.7038	Beckler, Daniel W. Row House	295 K St	Boston	1870
BOS.7039	Beckler, Daniel W. Row House	297 K St	Boston	1870
BOS.7021	James, Benjamin - James, George B. Row House	298 K St	Boston	1872
BOS.7040	Beckler, Daniel W. Row House	299 K St	Boston	1870
BOS.7022	James, Benjamin - James, George B. Row House	300 K St	Boston	1872
BOS.7041	Beckler, Daniel W. Row House	301 K St	Boston	1870
BOS.7023	James, Benjamin - James, George B. Row House	302 K St	Boston	1872
BOS.7042	Beckler, Daniel W. Row House	303 K St	Boston	1870
BOS.7024	James, Benjamin - James, George B. Row House	304 K St	Boston	1872
BOS.7043	Beckler, Daniel W. Row House	305 K St	Boston	1870
BOS.7025	James, Benjamin - James, George B. Row House	306 K St	Boston	1872
BOS.7026	Beckler, Daniel W. Row House	308 K St	Boston	1872

Inv. No.	Property Name	Street	Town	Year
BOS.7027	Berry, David A. House	318 K St	Boston	c 1870
BOS.7028	Berry, David A. Row House	354 K St	Boston	c 1871
BOS.7029	Russell, Sheppard Row House	356 K St	Boston	c 1871
BOS.7030	Berry, David A. Row House	358 K St	Boston	c 1871
BOS.7031	Rodgers, Josephine W. Row House	360 K St	Boston	c 1871
BOS.7044	O'Brien, Thomas House	372 K St	Boston	1853
BOS.7045	Goodnow, Jane H. House	384 K St	Boston	c 1858
BOS.7046	Mullay, John House	390 K St	Boston	1859
BOS.7047	Johnson, Samuel W. Three Decker	415 K St	Boston	1911
BOS.7054	Reardon, John W. House	7 Knowlton St	Boston	1909
BOS.7048	Eaton, William T. Apartment Building	92-96 L St	Boston	1884
BOS.7050	Eaton, William T. Row House	98 L St	Boston	1884
BOS.7051	Eaton, William T. Row House	100 L St	Boston	1884
BOS.7052	Eaton, William T. Apartment Building	102-108 L St	Boston	1884
BOS.7055	Flint, H. G. Three Decker	206 L St	Boston	1902
BOS.7056	Flint, H. G. Three Decker	208 L St	Boston	1902
BOS.7057		2 Leeds St	Boston	c 1863
BOS.7058		4 Leeds St	Boston	c 1863
BOS.7059		6 Leeds St	Boston	c 1863
BOS.13457	Wright, Frederick S. Double House	1 Linden St	Boston	c 1860
BOS.13458	James, Elisha F. Double House	2 Linden St	Boston	c 1860
BOS.13459	Wright, Frederick S. Double House	3 Linden St	Boston	c 1860
BOS.13460	Pettingill Double House	4 Linden St	Boston	c 1860
BOS.13461	James, Benjamin Double House	5 Linden St	Boston	c 1860
BOS.13462	Bowen, Hosea B. Double House	6 Linden St	Boston	c 1860
BOS.13463	Neale, Mary A. Double House	7 Linden St	Boston	c 1860
BOS.13464	James, Edward P. Double House	8 Linden St	Boston	c 1860
BOS.13465	Shales, Daniel House	9 Linden St	Boston	1863
BOS.13466	Hasting, Zorilda House	10 Linden St	Boston	1863
BOS.13467	Covington, Leonard House	11 Linden St	Boston	1863
BOS.13468	Richardson, Mary A. House	12 Linden St	Boston	1863
BOS.13469	Davis, Mary D. House	13 Linden St	Boston	1863
BOS.13470	Jenkins, Isaac N. House	14 Linden St	Boston	1863
BOS.13471	Patch, Charles F. House	15 Linden St	Boston	1863
BOS.13472	James, Benjamin House	16 Linden St	Boston	1863
BOS.13473	Hoyt, Anna M. House	17 Linden St	Boston	1863
BOS.13474	Foster, Dara S. House	18 Linden St	Boston	1863
BOS.13475	Kemp House	19 Linden St	Boston	1863

Inv. No.	Property Name	Street	Town	Year
BOS.13476	Knapp, H. C. House	20 Linden St	Boston	1863
BOS.7060	Winchester, William W. House	21 Linden St	Boston	c 1863
BOS.13477		23 Linden St	Boston	1863
BOS.7061	Burrell, Adoniram Row House	47 M St	Boston	1872
BOS.7062	Burrell, Adoniram Row House	49 M St	Boston	1872
BOS.7063	Burrell, Adoniram Row House	51 M St	Boston	1872
BOS.7064	Burrell, Adoniram Row House	53 M St	Boston	1872
BOS.7065	Ford, Catherine House	99-101 M St	Boston	c 1862
BOS.7066	Carmody, Mary J. Three Decker	177 M St	Boston	1910
BOS.7067	Carmody, Mary J. Three Decker	179 M St	Boston	1910
BOS.7068	Carmody, Mary J. Three Decker	181 M St	Boston	1910
BOS.5576	Boston Wharf Company Wool Warehouse	10 Melcher St	Boston	c 1903
BOS.9511	Boston Wharf Company Roof Sign	10 Melcher St	Boston	
BOS.15349	Boston Wharf Company Offices	10 Melcher St	Boston	1905
BOS.15350	New England Confectionary Company	11-17 Melcher St	Boston	1902
BOS.15351	New England Confectionary Company	19-27 Melcher St	Boston	1902
BOS.15352	New England Confectionary Company	29-37 Melcher St	Boston	1902
BOS.5538	Boston Wharf Company Building	49 Melcher St	Boston	1910
BOS.5539	Boston Wharf Company Building	51-61 Melcher St	Boston	1916
BOS.5540	French, Shriner and Urner Shoe Manufacturing Co.	63 Melcher St	Boston	1909
BOS.5542	Boston Wharf Company Warehouse	18-22 Midway St	Boston	c 1912
BOS.5549	Boston Wharf Company Warehouse	76-82 Midway St	Boston	1905
BOS.7069	Hemmen, Herman Double House	46-48 N St	Boston	1896
BOS.7071	Beckler, Daniel W. Row House	58 N St	Boston	1887
BOS.7072	Beckler, Daniel W. Row House	60 N St	Boston	1887
BOS.7073	Beckler, Daniel W. Row House	62 N St	Boston	1887
BOS.6913	Saint Brigid Roman Catholic Church	96 N St	Boston	1933
BOS.15328	Saint Brigid Roman Catholic Church Convent	100 N St	Boston	1966
BOS.7074	Stratton, Henry B. House	110-112 N St	Boston	1882
BOS.13478	Hayes, E. House	2 National St	Boston	r 1880
BOS.13479	Leonard, N. House	4 National St	Boston	r 1865
BOS.13480	Tappan, F. House	6 National St	Boston	r 1880
BOS.13481	Romosky, Anna House	8 National St	Boston	r 1865
BOS.13482	Sturtevant, George W. House	10 National St	Boston	r 1865
BOS.13483	Tripp, Abner L. House	12 National St	Boston	r 1865
BOS.13484	Stratton, Henry B. House	14 National St	Boston	r 1865
BOS.13485	Stratton, Henry B. - Roche House	18 National St	Boston	r 1890

Inv. No.	Property Name	Street	Town	Year
BOS.5550	Boston Wharf Company Building	1 Necco Ct	Boston	1907
BOS.5551	Boston Wharf Company Building	3 Necco Ct	Boston	1907
BOS.15353	New England Confectionary Company	5 Necco Ct	Boston	1907
BOS.15354	New England Confectionary Company	6 Necco Ct	Boston	1907
BOS.15355	Necco Street Garage	10 Necco St	Boston	1992
BOS.9000	Northern Avenue Draw Bridge	Northern Ave	Boston	c 1907
BOS.12967	Boston Army Supply Base - Refrigeration Plant	Northern Ave	Boston	c 1980
BOS.12968	Boston Army Supply Base - Building 38	Northern Ave	Boston	c 1940
BOS.12971	Boston Army Supply Base - Building 18	Northern Ave	Boston	c 1940
BOS.15356	Northern Avenue Draw Bridge Tenders House	Northern Ave	Boston	1908
BOS.15229	Chapel of Our Lady of Good Voyage	65 Northern Ave	Boston	1952
BOS.9252	South Boston Fish Pier	212-234 Northern Ave	Boston	c 1910
BOS.16589	South Boston Fish Pier - East Building	212-234 Northern Ave	Boston	c 1910
BOS.16590	South Boston Fish Pier - West Building	212-234 Northern Ave	Boston	c 1910
BOS.16591	South Boston Fish Pier - Fish Exchange Building	212-234 Northern Ave	Boston	c 1910
BOS.12969	Boston Army Supply Base - Building 56	300 Northern Ave	Boston	c 1940
BOS.12970	Boston Army Supply Base - Building 53	306 Northern Ave	Boston	c 1940
BOS.7075	Judkins, Charles S. - Robinson, L. Double House	84-86 O St	Boston	r 1880
BOS.6799	Pope, Benjamin Primary School	114 O St	Boston	1883
BOS.7076	Johnson, Samuel W. Three Decker	124 O St	Boston	1912
BOS.7077	Johnson, Samuel W. Three Decker	126 O St	Boston	1912
BOS.7078	Johnson, Samuel W. Three Decker	128 O St	Boston	1912
BOS.7079	Johnson, Samuel W. Three Decker	130 O St	Boston	1912
BOS.9654	Old Harbor Parkway - Old Colony Avenue	Old Colony Ave	Boston	1898
BOS.9655	Old Harbor Parkway - Old Harbor Village Footbridge	Old Colony Ave	Boston	1941
BOS.15226	Saint Monica's Roman Catholic Church	333 Old Colony Ave	Boston	1955
BOS.9645	Old Harbor Reservation Parkways	Old Harbor Pkwy	Boston	1883
BOS.9646	Old Harbor Reservation Parkway - Gardner Way	Old Harbor Pkwy	Boston	1883
BOS.9484		Old Harbor St	Boston	
BOS.7080	Carney Hospital Outpatient Building	4 Old Harbor St	Boston	1901
BOS.13486	Hatch - Powell House	17 Old Harbor St	Boston	r 1865
BOS.13487	Hatch - Stickney Double House	19 Old Harbor St	Boston	r 1880
BOS.13488	Hersey - Mosely Double House	23 Old Harbor St	Boston	r 1880
BOS.13489	Hersey, Charles H. Double House	25 Old Harbor St	Boston	r 1880
BOS.13490	Nickerson - Stapleton Double House	27 Old Harbor St	Boston	r 1880
BOS.13491	Moore, Nicholas F. House	37 Old Harbor St	Boston	r 1865
BOS.13492	Adamson - Crosby House	39 Old Harbor St	Boston	r 1865

Inv. No.	Property Name	Street	Town	Year
BOS.7081	Carney Hospital Nurses Residence	40 Old Harbor St	Boston	1925
BOS.13493	Bassett - Moore House	41 Old Harbor St	Boston	r 1865
BOS.13494	Bassett - Kellum House	43 Old Harbor St	Boston	r 1865
BOS.13495	Bassett - Lucas House	45 Old Harbor St	Boston	r 1865
BOS.13496	Wilson - Stout Double House	47 Old Harbor St	Boston	r 1865
BOS.13497	Thompson, William Double House	49 Old Harbor St	Boston	r 1865
BOS.13498	Bassett - Lockwood House	51 Old Harbor St	Boston	r 1865
BOS.13499	Bedlington, S. M. Double House	53 Old Harbor St	Boston	r 1865
BOS.13500		61 Old Harbor St	Boston	r 1880
BOS.13501	Bond, G. H. Double House	63 Old Harbor St	Boston	r 1880
BOS.13502	Simonds, J. F. Double House	65 Old Harbor St	Boston	r 1890
BOS.13503	Arnold, Jonathan M. Double House	67 Old Harbor St	Boston	r 1865
BOS.13504	Payson, Mary Double House	69 Old Harbor St	Boston	r 1865
BOS.13505	Morston, Frances E. House	71 Old Harbor St	Boston	r 1865
BOS.13506	Gill, Charles H. Double House	73 Old Harbor St	Boston	r 1865
BOS.13507	Pond, George F. Double House	75 Old Harbor St	Boston	r 1865
BOS.13508	Pond - Molloy Double House	77 Old Harbor St	Boston	r 1880
BOS.13509	Berry - Carroll Double House	79 Old Harbor St	Boston	r 1865
BOS.13510	Stetson, Alpheus M. House	80 Old Harbor St	Boston	r 1880
BOS.13511	Barstow, M. H. House	81 Old Harbor St	Boston	r 1880
BOS.13512	Suck, G. Frederick House	82 Old Harbor St	Boston	r 1865
BOS.13513	Fuller, C. House	83 Old Harbor St	Boston	r 1895
BOS.13514	Howard, T. and H. Three Decker	85 Old Harbor St	Boston	r 1895
BOS.13515	Boyson, William House	86 Old Harbor St	Boston	c 1852
BOS.13516	Howard, T. and H. Three Decker	87 Old Harbor St	Boston	r 1895
BOS.13517	Smith, Delia Three Decker	89 Old Harbor St	Boston	r 1895
BOS.13518	Kelly, James H. Three Decker	91 Old Harbor St	Boston	r 1895
BOS.13519	Plett, Chris F. Three Decker	93 Old Harbor St	Boston	r 1895
BOS.13520	Megan - Bowen House	99 Old Harbor St	Boston	r 1865
BOS.13521		100 Old Harbor St	Boston	r 1880
BOS.13522		101 Old Harbor St	Boston	r 1890
BOS.13523		102 Old Harbor St	Boston	r 1880
BOS.13524		103 Old Harbor St	Boston	r 1890
BOS.13525		104 Old Harbor St	Boston	r 1880
BOS.13526		106 Old Harbor St	Boston	r 1880
BOS.15330	Saint Peter Roman Catholic Church Rectory	50 Orton Marotta Way	Boston	1913
BOS.7082	Collins, James Row House	50 P St	Boston	1868
BOS.7083	Collins, James Row House	52 P St	Boston	1868

Inv. No.	Property Name	Street	Town	Year
BOS.7084	Collins, James Row House	54 P St	Boston	1868
BOS.7085	Collins, James Row House	56 P St	Boston	1868
BOS.7086	Collins, James Row House	58 P St	Boston	1868
BOS.13527		1 Pacific St	Boston	r 1865
BOS.13528	Tuckerman, W. I. House	2 Pacific St	Boston	r 1865
BOS.13529		3 Pacific St	Boston	r 1865
BOS.13530	Brown, Maria House	4 Pacific St	Boston	r 1865
BOS.13531		5 Pacific St	Boston	r 1865
BOS.13532	Wilson, Henry W. House	6 Pacific St	Boston	r 1865
BOS.13533		7 Pacific St	Boston	r 1865
BOS.13534	Wilson, Henry W. House	8 Pacific St	Boston	r 1865
BOS.13535		9 Pacific St	Boston	r 1880
BOS.13536	Wilson, Henry W. House	10 Pacific St	Boston	r 1865
BOS.13537		11 Pacific St	Boston	r 1880
BOS.13538	Wilson, Henry W. House	12 Pacific St	Boston	r 1865
BOS.13539		13 Pacific St	Boston	r 1865
BOS.13540	Parsons, Joseph C. House	14 Pacific St	Boston	r 1865
BOS.13541	Wilson, Henry W. House	16 Pacific St	Boston	r 1865
BOS.9512	Moakley, Evelyn Bridge	Seaport Blvd	Boston	1996
BOS.7179	Commonwealth Pier Five	162 Seaport Blvd	Boston	1914
BOS.9237	Silver Street Bridge over Conrail	Silver St	Boston	1918
BOS.5561	Boston Wharf Company Building	15-21 Sleeper St	Boston	1911
BOS.5562	Boston Wharf Company Building	29-31 Sleeper St	Boston	1915
BOS.5564	United Shoe Machine Corporation	51 Sleeper St	Boston	1929
BOS.7091	Washington Village Substation	Southampton St	Boston	1914
BOS.9236	Southampton Street Bridge over MBTA	Southampton St	Boston	1902
BOS.5565	Boston Wharf Company Iron Warehouse	5-9 Stillings St	Boston	1907
BOS.5566	Boston Wharf Company Paint Warehouse	11-15 Stillings St	Boston	1907
BOS.15364	Stillings Street Garage	11-23 Stillings St	Boston	2001
BOS.5567	Boston Wharf Company Radiator Warehouse	17-27 Stillings St	Boston	1905
BOS.5568	Boston Wharf Company Warehouse	29 Stillings St	Boston	1926
BOS.5569	Boston Wharf Company Iron Warehouse	35-37 Stillings St	Boston	1913
BOS.5570	Boston Wharf Company Warehouse	38-40 Stillings St	Boston	1913
BOS.5572	Boston Wharf Company Iron and Oil Warehouse	43 Stillings St	Boston	1904
BOS.5571	Boston Wharf Company Wholesale Grocery Warehouse	44-48 Stillings St	Boston	1914
BOS.13542		2 Story St	Boston	r 1865
BOS.13543		4 Story St	Boston	r 1865

Inv. No.	Property Name	Street	Town	Year
BOS.13544		6 Story St	Boston	r 1865
BOS.13545		8 Story St	Boston	r 1865
BOS.13546		9 Story St	Boston	r 1880
BOS.13547		10-12 Story St	Boston	r 1880
BOS.13548		11 Story St	Boston	r 1890
BOS.13550		13 Story St	Boston	r 1890
BOS.13549		14-16 Story St	Boston	r 1890
BOS.13551		20 Story St	Boston	r 1890
BOS.13552		24 Story St	Boston	r 1890
BOS.7092	Dana, Otis D. Two-Family House	26-28 Story St	Boston	r 1885
BOS.13553		28 Story St	Boston	r 1890
BOS.13554		28 Story St	Boston	r 1890
BOS.13555		30 Story St	Boston	r 1890
BOS.9001	Summer Street Bridge over Fort Point Channel	Summer St	Boston	1899
BOS.9155	Summer Street Bridge over A Street	Summer St	Boston	c 1890
BOS.9233	Summer Street Bridge over B Street	Summer St	Boston	1900
BOS.9234	L Street Bridge	Summer St	Boston	1892
BOS.9235	Summer Street Bridge over C Street	Summer St	Boston	1900
BOS.9250	Summer Street Viaduct Bridge	Summer St	Boston	1901
BOS.5573	Boston Wharf Company Wool Warehouse	250-254 Summer St	Boston	1899
BOS.5574	New England Confectionary Company Factory	253 Summer St	Boston	1902
BOS.5575	Boston Wharf Company Wool Warehouse	256-260 Summer St	Boston	1899
BOS.5577	Boston Wharf Company Wool Warehouse	262-266 Summer St	Boston	1899
BOS.5578	Boston Wharf Company Wool Warehouse	268-272 Summer St	Boston	1898
BOS.5579	Boston Wharf Company Wool Warehouse	269-273 Summer St	Boston	1910
BOS.5580	Boston Wharf Company Wool Warehouse	274-278 Summer St	Boston	1898
BOS.5581	United States Rubber Company Warehouse	280-290 Summer St	Boston	1898
BOS.5582	Boston Wharf Company Wool Warehouse	281-283 Summer St	Boston	1904
BOS.5583	Boston Wharf Company Wool Warehouse	285-297 Summer St	Boston	1903
BOS.5584	Williams, J. and Company Wool Warehouse	292-302 Summer St	Boston	1898
BOS.5585	Dwinell-Wright Coffee Importing Company Warehouse	311-319 Summer St	Boston	1904
BOS.5586	Boston Wharf Company Wool Warehouse	312-320 Summer St	Boston	1904
BOS.5587	Howes Brothers Tanning Company	321-325 Summer St	Boston	1911
BOS.5588	Foster, F. A. Dry Goods - Puritan Drapery Fabrics	322-330 Summer St	Boston	1910
BOS.5589	Daylight Baking Supplies Factory	327-333 Summer St	Boston	1911
BOS.15357	Middleby, Joseph Jr. Warehouse	337-347 Summer St	Boston	1907
BOS.12985	Western Electric Co. Electrical Supplies Building	385 Summer St	Boston	1917

Inv. No.	Property Name	Street	Town	Year
BOS.12986		401 Summer St	Boston	1919
BOS.12987		415 Summer St	Boston	1917
BOS.12988	Union Wool Company Wool Warehouse	425 Summer St	Boston	1917
BOS.12989	Williams, Jeremiah Wool Warehouse	495 Summer St	Boston	1910
BOS.12943	Boston Edison L Street Power Station	776 Summer St	Boston	1898
BOS.13005	Clayton, S. C. Syrup - Diamond Drug Company	803 Summer St	Boston	1923
BOS.13006	Karpp Building Supply Company	825 Summer St	Boston	r 1920
BOS.7093	Delaporte, Andrew Gustave House	5 Telegraph St	Boston	c 1870
BOS.7094	Mullin, Thomas M. - Willis, John E. Double House	19-21 Telegraph St	Boston	c 1875
BOS.13556	Molloy, Valentine Double House	52 Telegraph St	Boston	
BOS.13557	Giblin, Daniel C. Double House	54 Telegraph St	Boston	
BOS.13558	Staniford, Lydia E. House	56 Telegraph St	Boston	
BOS.13559		58 Telegraph St	Boston	
BOS.13560	O'Connor, Patrick House	60 Telegraph St	Boston	r 1865
BOS.13561		61 Telegraph St	Boston	r 1865
BOS.13562	Henchy, John House	62 Telegraph St	Boston	r 1865
BOS.13563		63 Telegraph St	Boston	r 1865
BOS.13564		64 Telegraph St	Boston	r 1880
BOS.13565		65 Telegraph St	Boston	r 1865
BOS.13566	Wade, Shadrach Double House	66 Telegraph St	Boston	r 1865
BOS.13567		67 Telegraph St	Boston	r 1865
BOS.13568	Shattuck, Ferdinand Double House	68 Telegraph St	Boston	r 1865
BOS.13569		69 Telegraph St	Boston	r 1865
BOS.9260	Dorchester Heights Monument	Thomas Park	Boston	1901
BOS.9261	Dorchester Heights - Knox, Henry Monument	Thomas Park	Boston	1927
BOS.9262	Dorchester Heights - 1876 Centennial Monument	Thomas Park	Boston	1877
BOS.9263	Dorchester Heights - Perimeter Fence	Thomas Park	Boston	1901
BOS.9485	South Boston Veteran's Memorial	Thomas Park	Boston	1982
BOS.9486	Thomas Park	Thomas Pk	Boston	c 1850
BOS.9795	Dorchester Heights Concrete Path System	Thomas Pk	Boston	c 1870
BOS.13570	Gray - Wadsworth House	5 Thomas Pk	Boston	r 1865
BOS.13571	Elms, Joseph D. Double House	7 Thomas Pk	Boston	r 1865
BOS.13572	James, Charles Double House	9 Thomas Pk	Boston	r 1865
BOS.13573	James, Benjamin House	11 Thomas Pk	Boston	r 1865
BOS.13574	James, Benjamin Stable	12 Thomas Pk	Boston	r 1865
BOS.7095	Whitman, Edward W. - Rogers, William Double House	13-14 Thomas Pk	Boston	c 1871

Inv. No.	Property Name	Street	Town	Year
BOS.13575	Lee - Holbrook Double House	15 Thomas Pk	Boston	r 1880
BOS.13576	Beard - Connors Double House	16 Thomas Pk	Boston	r 1880
BOS.13577	Bray, Susan House	17 Thomas Pk	Boston	r 1880
BOS.13578	Lothrop House	18 Thomas Pk	Boston	r 1880
BOS.7096	Bassett, Joseph Row House	19 Thomas Pk	Boston	1874
BOS.13579	James, Benjamin Double House	21 Thomas Pk	Boston	r 1865
BOS.13580	Earl - Moulton Double House	22 Thomas Pk	Boston	r 1865
BOS.13581		23 Thomas Pk	Boston	r 1865
BOS.13582		24 Thomas Pk	Boston	r 1865
BOS.7097	Callahan, Cornelius H. Double House	25-26 Thomas Pk	Boston	1871
BOS.13583		36 Thomas Pk	Boston	r 1890
BOS.13584	Stratton, Henry J. Double House	39 Thomas Pk	Boston	1884
BOS.13585	Stratton - Kelly Double House	40 Thomas Pk	Boston	r 1880
BOS.13586	Stratton - Kelly Double House	41 Thomas Pk	Boston	r 1880
BOS.13587	Stratton - Kelly Double House	42 Thomas Pk	Boston	r 1880
BOS.13588	Goodwin - Kenney House	43 Thomas Pk	Boston	r 1880
BOS.13589	Stetson - Ormsby House	44 Thomas Pk	Boston	r 1880
BOS.13590	Stetson - Kelly House	45 Thomas Pk	Boston	r 1880
BOS.7098	Hutchins, Clement House	46 Thomas Pk	Boston	c 1875
BOS.13591	Wenners, Elizabeth Double House	47 Thomas Pk	Boston	r 1890
BOS.13592	Goodman, Walter G. Double House	48 Thomas Pk	Boston	r 1890
BOS.13593	Goodman, Walter G. Double House	49 Thomas Pk	Boston	r 1890
BOS.13594	Greene, Maria J. Double House	50 Thomas Pk	Boston	r 1890
BOS.13595	Martin, George House	51 Thomas Pk	Boston	1886
BOS.13596	Martin, George House	52 Thomas Pk	Boston	1886
BOS.13597	Hotel Marie	53 Thomas Pk	Boston	r 1890
BOS.7099	Walbridge, Frederick House	56 Thomas Pk	Boston	1876
BOS.13598	Reardon, Mary C. House	57 Thomas Pk	Boston	r 1890
BOS.13599	Curtis, Thomas C. House	58 Thomas Pk	Boston	r 1890
BOS.7100	Stetson, John A. Double House	59-60 Thomas Pk	Boston	1887
BOS.7101	Gogin, Thomas House	61 Thomas Pk	Boston	c 1873
BOS.13600		63 Thomas Pk	Boston	1927
BOS.13601		65 Thomas Pk	Boston	1927
BOS.13602		67 Thomas Pk	Boston	1927
BOS.13603		68 Thomas Pk	Boston	1927
BOS.7102	Manning, Thomas - Johnson, Samuel W. House	69 Thomas Pk	Boston	c 1867
BOS.5552	Boston Wharf Company Building	12-18 Thomson Pl	Boston	1907
BOS.5553	Boston Wharf Company Paint and Varnish	19-23 Thomson Pl	Boston	1907

Inv. No.	Property Name	Street	Town	Year
	Warehouse			
BOS.15358	Thomson Financial Offices	22-24 Thomson Pl	Boston	1992
BOS.5554	Boston Wharf Company Warehouse	25-27 Thomson Pl	Boston	1909
BOS.5555	Boston Wharf Company Building	26-28 Thomson Pl	Boston	1908
BOS.15359	Boston Wharf Company Building	29-33 Thomson Pl	Boston	1912
BOS.5556	Boston Wharf Company Building	30-34 Thomson Pl	Boston	1916
BOS.15360	Boston Wharf Company Building	35-37 Thomson Pl	Boston	1913
BOS.5557	Boston Wharf Company Building	36-40 Thomson Pl	Boston	1900
BOS.5558	Boston Wharf Company Warehouse	41-45 Thomson Pl	Boston	1924
BOS.5559	Pittsburgh Plate Glass Company Warehouse	42-56 Thomson Pl	Boston	1909
BOS.5560	Boston Wharf Company Warehouse	47-55 Thomson Pl	Boston	1924
BOS.5563	Boston Wharf Company Building	35-37 Thomson St	Boston	1911
BOS.12972	Boston Army Supply Base - Building 54	7 Tide St	Boston	c 1940
BOS.7103		5 Vinton St	Boston	c 1919
BOS.7113	Saints Peter and Paul Roman Catholic Church	45 West Broadway	Boston	1844
BOS.7104	Cardinal Cushing Central High School for Girls	50-72 West Broadway	Boston	c 1868
BOS.7114	Saints Peter and Paul Roman Catholic Rectory	55-59 West Broadway	Boston	c 1868
BOS.15331	Devine Block	72 West Broadway	Boston	c 1890
BOS.7105	Casey, Thomas Building	82 West Broadway	Boston	1896
BOS.7106	Collins, James Liquor Import and Wholesale Dealers	262-270 West Broadway	Boston	r 1860
BOS.9251	Street Clock	342 West Broadway	Boston	c 1870
BOS.7107	Monks and Company Flour and Grain Building	366 West Broadway	Boston	1873
BOS.7108	South Boston Savings Bank	368-372 West Broadway	Boston	r 1870
BOS.7118	Greene, Gardiner Row House	369 West Broadway	Boston	c 1824
BOS.7117	Greene, Gardiner Row House	371 West Broadway	Boston	c 1824
BOS.7120	Nickerson Apartment Building	397-401 West Broadway	Boston	r 1895
BOS.7121	Bethesda Hall - Baker Building	403-415 West Broadway	Boston	1890
BOS.7090		409 West Broadway	Boston	c 1900
BOS.7109	Saint Matthew's Episcopal Church	410 West Broadway	Boston	1860
BOS.7110	U. S. Post Office - South Boston Branch	424-426 West Broadway	Boston	1919
BOS.7111	South Boston Savings Bank	460-462 West Broadway	Boston	1948
BOS.7112	South Boston Market	468-470 West Broadway	Boston	1935
BOS.7173	King, Augustus Double House	197-199 West Eighth St	Boston	c 1874
BOS.9239	West Fifth Street Bridge over Conrail	West Fifth St	Boston	1918
BOS.7160	Minot, William Row House	261 West Fifth St	Boston	c 1868
BOS.7161	Minot, William Row House	263 West Fifth St	Boston	c 1868
BOS.7162	Minot, William Row House	265 West Fifth St	Boston	c 1868

Inv. No.	Property Name	Street	Town	Year
BOS.7163	Burrage, J. Row House	267 West Fifth St	Boston	c 1868
BOS.7164	Frothingham, Nathaniel D. Row House	269 West Fifth St	Boston	c 1868
BOS.7165	Connor, James Row House	271 West Fifth St	Boston	c 1868
BOS.7166	Minot, William Row House	273 West Fifth St	Boston	c 1868
BOS.7167	Minot, William Row House	275 West Fifth St	Boston	c 1868
BOS.7168	Minot, William Row House	277 West Fifth St	Boston	c 1868
BOS.7169	Connor, James Row House	279 West Fifth St	Boston	c 1868
BOS.7170	Minot, William Row House	281 West Fifth St	Boston	c 1868
BOS.7171	Minot, William Row House	283 West Fifth St	Boston	c 1868
BOS.12990	Estabrook's, Rufus Sons Building	202 West First St	Boston	c 1890
BOS.9007	West Fourth Street Bridge - Dover Street Bridge	West Fourth St	Boston	1893
BOS.9245	West Fourth Street Bridge over MBTA	West Fourth St	Boston	1917
BOS.7146	York House - South Boston Hotel	99-101 West Fourth St	Boston	c 1830
BOS.7147	Wood, William W. Double House	123-125 West Fourth St	Boston	c 1845
BOS.7139	Hausman, Harry and Joseph Building	142 West Fourth St	Boston	c 1919
BOS.7140	Hausman, Harry and Joseph Building	150-154 West Fourth St	Boston	1904
BOS.7141	Bigelow School	350 West Fourth St	Boston	1901
BOS.7148	Homer, Henry House	361 West Fourth St	Boston	c 1843
BOS.7149	Thing, Joseph House	375 West Fourth St	Boston	c 1852
BOS.7150	Conley, Charles C. - Safford, Daniel House	377 West Fourth St	Boston	c 1844
BOS.7142	Nickerson, Capt. Jonathan S. House	380 West Fourth St	Boston	c 1870
BOS.7143	Murphy, Mary E. House	388 West Fourth St	Boston	c 1852
BOS.7151	Smith, Horace - Driscoll, J. Double House	389-391 West Fourth St	Boston	c 1852
BOS.7144	Winch, Mary - Lovett, George L. Double House	392-394 West Fourth St	Boston	c 1868
BOS.7152	Miles - Smith, James F. Double House	397-399 West Fourth St	Boston	c 1852
BOS.7153	Hughes, Joshua House	401 West Fourth St	Boston	c 1852
BOS.7154	Atwood, Charles House	411 West Fourth St	Boston	c 1852
BOS.7155	James, Benjamin Row House	417 West Fourth St	Boston	r 1860
BOS.7156	Smith, Freeman Row House	419 West Fourth St	Boston	r 1860
BOS.7157	Brown, Solon F. Row House	421 West Fourth St	Boston	r 1860
BOS.7158	Howard, Samuel Row House	423 West Fourth St	Boston	r 1860
BOS.7159	James, Francis Row House	425 West Fourth St	Boston	r 1860
BOS.6874	South Boston Community Health Center	453 West Fourth St	Boston	1926
BOS.7145	Boston Hook and Ladder Fire House #5	456 West Fourth St	Boston	r 1870
BOS.7122	Ipswich Hosiery Mill	154 West Second St	Boston	1912
BOS.7124	Lawrence, William R. Row House	161 West Second St	Boston	c 1852
BOS.7125	Lawrence, William R. Row House	163 West Second St	Boston	c 1852
BOS.7126	Lawrence, William R. Row House	165 West Second St	Boston	c 1852

Inv. No.	Property Name	Street	Town	Year
BOS.7127	Lawrence, William R. Row House	167 West Second St	Boston	c 1852
BOS.6848	Boston Beer Company	249 West Second St	Boston	c 1882
BOS.7123	Hersey Brothers Machinery Manufacturing Company	314-330 West Second St	Boston	c 1899
BOS.7172	Cunningham, Mary - Furber, Benjamin Double House	190-192 West Seventh St	Boston	c 1868
BOS.9232	West Sixth Street Bridge over Conrail	West Sixth St	Boston	1918
BOS.9238	West Third Street Bridge over Conrail	West Third St	Boston	1918
BOS.7137	Foley, John House	117 West Third St	Boston	c 1868
BOS.7128	Saint Vincent de Paul Roman Catholic Church	212 West Third St	Boston	1872
BOS.7129	Weston, Alden B. House	236 West Third St	Boston	c 1874
BOS.7130	Connors, Ann Double Three Decker	242-244 West Third St	Boston	r 1895
BOS.7131	Lanergan, Richard House	256 West Third St	Boston	c 1852
BOS.7138	Williams, Rev. J. J. House	267 West Third St	Boston	r 1880
BOS.7132	McCarthy, Ellen House	310 West Third St	Boston	c 1852
BOS.7133	Souther, Henry P. Row House	346 West Third St	Boston	c 1868
BOS.7134	Souther, Henry P. Row House	348 West Third St	Boston	c 1868
BOS.7135	Souther, Henry P. Row House	350 West Third St	Boston	c 1868
BOS.7136	Souther, Henry P. Row House	352 West Third St	Boston	c 1868
BOS.7175	Columbus Park Building	William J. Day Blvd	Boston	
BOS.7176	Columbus Park Building	William J. Day Blvd	Boston	
BOS.7177	Carson Beach Bath and Field House	William J. Day Blvd	Boston	c 1922
BOS.7178	Carson Beach Concession Stand	William J. Day Blvd	Boston	
BOS.9253	Columbus Park	William J. Day Blvd	Boston	c 1897
BOS.9254	Carson Beach	William J. Day Blvd	Boston	c 1897
BOS.9255	Strandway, The	William J. Day Blvd	Boston	c 1897
BOS.9579	South Boston Boat Clubs Granite Retaining Wall	William J. Day Blvd	Boston	r 1920
BOS.9580	South Boston Boat Clubs Iron Fence	William J. Day Blvd	Boston	r 1920
BOS.6851	L Street Bath House	1663-1685 William J. Day Blvd	Boston	1931
BOS.7174	Richmond, Augustus C. House	52-54 Woodward St	Boston	c 1874
BOS.15361	Factory Buildings Trust Industrial Building #2	21 Wormwood St	Boston	c 1896
BOS.15365	Factory Buildings Trust Industrial Building #3	23-27 Wormwood St	Boston	c 1896
BOS.15362	Factory Buildings Trust Industrial Building #4	33-37 Wormwood St	Boston	c 1897
BOS.9515	Factory Buildings Trust Chimney Stack	41-45 Wormwood St	Boston	c 1896
BOS.15363	Factory Buildings Trust Industrial Building #5	41-45 Wormwood St	Boston	c 1896