



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

BOSTON, MA 02109-3912

CERTIFIED MAIL RETURN RECEIPT REQUESTED

JAN 06 2012

Robert Bellavia
Senior Superintendant
Skanska USA Building, Inc.
253 Summer Street
Boston, MA 02210

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. NIBRI Campus Expansion Project site located at 181 Mass Avenue,
Cambridge, MA 02139, Suffolk County; Authorization # MAG910515

Dear Mr. Bellavia:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Novartis Institute for Biomedical Research, Inc. (Novartis) by the firm Haley & Aldrich, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: <http://www.epa.gov/region1/npdes/mass.html#dgp>.

Please note the enclosed checklist includes parameters that exceeded Appendix III limits. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP.

In addition, EPA is requiring monitoring and effluent limits for total group I and group II polycyclic aromatic hydrocarbons (PAHs) in view of historic pollutant concentrations. You may request a deletion of these and any other compounds not present in the influent during the first six months to a year of continuously monitoring these compounds by

filing a notice of change (NOC) request. Please see the notice of change (NOC) information under Appendix V on the RGP website.

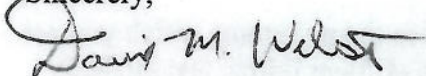
Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR), due to the ample dilution at the point of discharge (144.1) the DFR applicable for this pollutant is greater than one hundred (>100) DFR established in the RGP. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limit for antimony of 141 ug/L, arsenic of 540 ug/L, trivalent chromium of 1,710 ug/L, copper of 520 ug/L, lead of 132 ug/L, nickel of 2,380 ug/L, selenium of 408 ug/L, zinc of 1,480 and iron of 5,000 ug/L, shall not be exceeded in the discharge.

Finally, please note the checklist of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP regulations.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on December 1, 2013. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,



David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP
Lisa Peterson, Commissioner City of Cambridge, DPW
Katherine Leblanc Dilawari, Haley & Aldrich, Inc.

**2010 Remediation General Permit
Summary of Monitoring Parameters^[1]**

NPDES Authorization Number:	MAG910515
Authorization Issued:	January, 2012
Facility/Site Name:	NIBRI Campus Expansion Project
Facility/Site Address:	181 Massachusetts Avenue, Cambridge, MA 02139, Suffolk County
	Email address of owner: Christos.maravelias@novartis.com
Legal Name of Operator:	Skanska USA Building, Inc.
Operator contact name, title, and Address:	Robert Bellavia, Senior Superintendent 253 Summer Street, Boston, MA 02210, Suffolk County
	Email: Robert.bellavia@skanska.com
Estimated Date of Completion:	December 1, 2013
Category and Sub-Category:	Category III. Contaminated Construction Dewatering. Sub category B. Known Contaminated Sites
RGP Termination Date:	September 9, 2015
Receiving Water:	Charles River

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing **, Me#60.2/ML5ug/L
	2. Total Residual Chlorine (TRC) ¹	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
✓	4. Cyanide (CN) ^{2, 3}	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
✓	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
✓	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
✓	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
✓	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
✓	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴	100 ug/L/ Me#8260C/ ML 2ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
✓	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
✓	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
✓	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
✓	14. Naphthalene ⁵	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
✓	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
✓	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
✓	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
✓	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
✓	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) ⁶	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
✓	a. Benzo(a) Anthracene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	b. Benzo(a) Pyrene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	c. Benzo(b)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	d. Benzo(k)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	e. Chrysene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	f. Dibenzo(a,h)anthracene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	g. Indeno(1,2,3-cd) Pyrene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
✓	h. Acenaphthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	i. Acenaphthylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	j. Anthracene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	l. Fluoranthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	m. Fluorene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene ⁵	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	o. Phenanthrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	p. Pyrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) ^{8, 9}	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
✓	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

		<u>Total Recoverable Metal Limit @ H ¹⁰ = 50 mg/l CaCO3 for discharges in Massachusetts (ug/l)</u> <u>11/12</u>	<u>Minimum level=ML</u>
	<u>Metal parameter</u>	<u>Freshwater</u>	
✓	39. Antimony	141/ML 10	
✓	40. Arsenic **	540ML20	

	Metal parameter	<u>Total Recoverable Metal Limit @ H¹⁰ = 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) 11/12</u>	<u>Minimum level=ML</u>
		<u>Freshwater</u>	
	41. Cadmium **	0.2/ML10	
✓	42. Chromium III (trivalent) **	1,710/ML15	
	43. Chromium VI (hexavalent) **	11.4/ML10	
✓	44. Copper **	520/ML15	
✓	45. Lead **	132/ML20	
	46. Mercury **	0.9/ML0.2	
✓	47. Nickel **	2,380/ML20	
✓	48. Selenium **	408/ML20	
	49. Silver	1.2/ML10	
✓	50. Zinc **	1,480/ML15	
✓	51. Iron **	5,000/ML100	
	<u>Other Parameters</u>	<u>Limit</u>	
✓	52. Instantaneous Flow	Site specific in CFS	
✓	53. Total Flow	Site specific in CFS	
✓	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab ¹³	
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab ¹³	
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab ¹³	
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab ¹⁴	
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹⁴	
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹⁴	
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹⁴	
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹⁴	
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹⁴	
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹⁴	
	64. Maximum Change in Temperature in MA –Any Class SB water body - October to June	4°F; 1/Month/Grab ¹⁴	
	65.2- Butanone	Monitoring Only	

Footnotes:

¹ Although the maximum values for TRC are 11ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

² Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.

³ Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

⁴ BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

⁵ Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

⁶ The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁷ Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

⁸ In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁹Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

¹⁰ Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

¹¹ For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using $DF \times 1,000 \text{ ug/L}$ (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit = $1,000 \times 2 = 2,000 \text{ ug/L}$, etc. not to exceed the DF=5.

¹² Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

¹³ pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

¹⁴ Temperature sampling per Method 170.1



05 December 2011
File No. 37254-004

US Environmental Protection Agency
Industrial NPDES Permits (CIP)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Attention: Ms. Shelly Puleo

Subject: Notice of Intent (NOI)- Temporary Construction Dewatering
NIBRI Campus Expansion Project
181 Massachusetts Avenue
Cambridge, Massachusetts

Ladies and Gentlemen:

Dear Ms. Puleo:

On behalf of our client, Novartis Institutes for Biomedical Research, Inc. (Novartis), and in accordance with the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) in Massachusetts, MAG910000, this letter submits a Notice of Intent (NOI) and the applicable documentation as required by the US Environmental Protection Agency (EPA) for temporary discharge of construction site dewatering effluent under the RGP. Temporary dewatering is planned in support of the proposed site development which includes construction of two above-grade buildings which will be seven and eight stories, and a two- to three-level below-grade structure beneath the above-grade structures located at 181 Massachusetts Avenue in Cambridge, Massachusetts as shown on Figure 1 – Project Locus. We anticipate construction dewatering will be conducted, as necessary, during foundation construction and below grade excavations.

The site is bound by Massachusetts Avenue to the south, Windsor Street to the west, State Street to the north and Osborne Street and Albany Street to the east. Site grades range from approximately El. 18 to El. 20.¹ The site is partially occupied by a four-story building, with the remainder an at-grade parking lot. A Site and Subsurface Exploration Location Plan is included as Figure 2.

Site History

Available records indicate that the site was reclaimed land prior to the 1900s. In 1888, portions of the site were occupied by various industrial buildings. In 1934, the site was occupied by various industrial and commercial buildings including a filling station, an auto repair shop, auto storage and machine shops. The existing four-story building at the northern end of the site was constructed in 1984, and by 1986 many of the buildings at the site had been razed and portions of the site were converted to at-grade parking.

¹ Elevations reported herein are in feet and reference the Cambridge City Base (CCB) datum which is 10.84 ft below the National Geodetic Vertical Datum of 1929 (NGVD 29).

Regulatory Background

The subject site has been associated with several MassDEP Release Tracking Numbers (RTNs):

- RTN 3-2267: In June 1990, BTEX in soil and groundwater and PAHs in soil related to historic releases from a former auto repair shop and filling station were reported to the Massachusetts Department of Environmental Protection (MassDEP). Release Tracking Number (RTN) 3-2267 was assigned to the release. In June 1995, a Waiver Completion Statement was issued.
- RTN 3-28147: In November 2008, Reportable Concentrations of compounds associated with urban fill and historic releases from a former filling station, including underground storage tanks (USTs), were reported to the MassDEP. RTN 3-28147 was assigned to the release, and site cleanup and/or regulatory compliance activities are ongoing. Site cleanup is expected to be completed concurrent with the proposed site redevelopment described herein.
- RTN for urban fill, assignment pending: Reportable Concentrations of various compounds were identified in urban fill during soil precharacterization conducted for the NIBRI Campus Expansion project. A Release Notification Form was submitted to MassDEP in December 2011. The project is awaiting assignment of a RTN for this release.
- RTN for vinyl chloride in groundwater, assignment pending: A Reportable Concentration of vinyl chloride was identified in groundwater site characterization conducted for the NIBRI Campus Expansion project. A Release Notification Form was submitted to MassDEP in December 2011. The project is awaiting assignment of a RTN for this release.

Temporary Construction Dewatering Notice of Intent

In support of the NOI, McPhail Associates, Inc. collected three groundwater samples from observation wells B-105(OW), B-106(OW) and B-436(OW) on 24 June 2011. The groundwater samples were submitted to Alpha Analytical, Inc. of Westborough, Massachusetts (Alpha Analytical) for analysis for NPDES permit parameters including VOCs, SVOCs, PAHs, metals, TPH, pesticides, PCBs, total suspended solids (TSS), chloride, total cyanide, total phenolics and total residual chlorine. The analytical results for the groundwater samples identified concentrations of benzene, ethylbenzene, total xylenes, vinyl chloride, naphthalene, arsenic, iron, TSS and total cyanide above applicable NPDES RGP Effluent Limits but below applicable MCP RCGW-2 Reportable Concentrations with the exception of vinyl chloride. The results of water quality testing conducted for this NOI are summarized in Table I. The locations of the observation wells are shown on Figure 2.

Dewatering is generally planned to be conducted from sumps located inside the excavation. Dewatering is necessary to control groundwater, seepage, precipitation, surface water runoff and construction-generated water to enable construction in-the-dry. Construction and construction dewatering is currently anticipated to begin in January 2012.

The dewatering effluent treatment system will be designed by the contractor to meet NPDES RGP discharge criteria. Prior to discharge, collected water will be routed through a sedimentation tank with an oil/water separator component and a bag filter, at a minimum, to remove suspended solids and

undissolved chemical constituents. Supplemental pretreatment may be required to meet discharge criteria as shown in the Proposed Treatment System Schematic included in Figure 3. Supplemental pretreatment, to be designed by the contractor, may include granular activated carbon and ion exchange. Construction dewatering under this RGP NOI will include piping and discharging to storm drains located along the western perimeter of the site. The storm drains travel a short distance southeast below Massachusetts Avenue and discharge directly into the Charles River. The proposed discharge route is shown on Figures 4 and 5.

Appendices

The completed “Suggested Notice of Intent” (NOI) form as provided in the RGP is enclosed in Appendix A. The site operator is Skanska USA Building, Inc. (Skanska). Skanska is the construction manager and will hire a subcontractor to conduct the Site work, including the dewatering activities. An Owner’s representative will monitor the Contractor’s dewatering activities on behalf of the project owner, Novartis. In accordance with the requirements for this NOI submission, Novartis as the project owner and Skanska as the site operator are listed as co-permittees for this NPDES RGP, and therefore both have signed the NOI form.

A Best Management Practices Plan (BMPP), which outlines the proposed discharge operations covered under the RGP, is included in Appendix B. Appendices C and D include National Register of Historic Places and Endangered Species Act Documentation, respectively. Appendix E provides the City of Cambridge Dewatering Permit Application to be submitted separately to the City of Cambridge. A copy of the groundwater testing laboratory results are provided in Appendix F. Appendix G provides Material Safety Data Sheets (MSDSs) and fact sheets for possible chemical additives or treatments to be used in the treatment system.

Dilution Factor Application for Metals

A Dilution Factor (DF) was calculated for the detected levels of total metals greater than the applicable effluent limits. The DF is applicable to arsenic and iron, and the calculated DF was used to find the appropriate Dilution Range concentrations for these metals. The DF was calculated using the following equation:

$$DF = (Q_d + Q_s)/Q_d$$

where Q_d is the maximum discharge flow rate, assumed to be 50 gallons per minute (GPM) on average or approximately 0.1 cubic feet per second (cfs), and Q_s is the receiving water flow rate, minimum for 7 consecutive days with a recurrence interval of 10 years, assumed to be 14.31 cfs based on published values from the United States Geological Survey (USGS). Using these assumed values, the DF is equal to 144.1. According to Appendix IV of the Remediation General Permit, the ceiling limitations for the calculated dilution factor of 144.1 for arsenic and iron are 540 µg/L and 5000 µg/L, respectively. Therefore, detected limits of iron in site groundwater exceed the calculated discharge criteria, and treatment to remove iron will be implemented, if required.

Closing

Please feel free to contact us should you wish to discuss the information contained herein or if you need additional information.

Sincerely yours,
HALEY & ALDRICH, INC



Katherine Leblanc Dilawari, P.E., LEED
Senior Project Manager



Bryan P. Sweeney, P.E., Ph.D.
Senior Vice President

Attachments:

- Table I – Summary of Groundwater Quality Data
- Figure 1 – Site Locus
- Figure 2 – Site and Subsurface Exploration Location Plan
- Figure 3 – Proposed Treatment System Schematic
- Figure 4 – Proposed Dewatering Discharge Route: Part 1 of 2
- Figure 5 – Proposed Dewatering Discharge Route: Part 2 of 2
- Appendix A – Notice of Intent (NOI) for Remediation General Permit (RGP)
- Appendix B – Best Management Practices Plan (BMPP)
- Appendix C – Endangered Species Act Documentation
- Appendix D – National Register of Historic Places and Massachusetts Historical Commission Documentation
- Appendix E – City of Cambridge Dewatering Permit Application
- Appendix F – Laboratory Data Report
- Appendix G – Material Safety Data Sheets (MSDSs) and Fact Sheets

c: Novartis Institutes for Biomedical Research; Attn: Christos Maravelias
Skanska USA Building, Inc.; Attn: Bryan Northrop
City of Cambridge Department of Public Works; Attn: Owen O’Riordan
Massachusetts Department of Environmental Protection; Attn: Division of Watershed Management

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TABLE I

SUMMARY OF RECENT GROUNDWATER QUALITY DATA
 NIBRI CAMPUS EXPANSION PROJECT
 CAMBRIDGE, MASSACHUSETTS
 FILE NO. 37254-004

LOCATION	MCP	NPDES RGP	B-106 (OW)	B-105 (OW)	B-436 (OW)
SAMPLING DATE	RCGW-2	Effluent Limits	6/24/2011	6/24/2011	6/24/2011
LAB SAMPLE ID	(ug/L)	(ug/L)	L1109310-01 L1109310-01 R1	L1109310-02	L1109310-03
VOCs by GC/MS (ug/L)					
1,2-Dichloroethane	5	5	2.4	ND(0.75)	ND(0.75)
Benzene	2000	5	97	ND(0.5)	ND(0.5)
Toluene	40000	100	5.2	ND(0.5)	ND(0.5)
Ethylbenzene	5000	100	120	ND(0.5)	ND(0.5)
Vinyl chloride	2	2	ND(1)	ND(1)	4.1
cis-1,2-Dichloroethylene	100	70	ND(0.5)	ND(0.5)	47
p/m-Xylene	5000	100	170	ND(1)	ND(1)
o-xylene	5000	100	35	ND(0.5)	ND(0.5)
Xylenes (Total)	5000	100	210	ND(1)	ND(1)
2-Butanone	50000	NA	53	ND(5)	ND(5)
Total VOCs	NA	NA	487.6	ND	51.1
SVOCs (ug/L)					
Total SVOCs	NA	NA	ND	ND	ND
PAHs (ug/L)					
Naphthalene	1000	20	57	ND(0.1)	ND(0.1)
1-Methylnaphthalene	NA	NA	12	ND(0.1)	ND(0.1)
2-Methylnaphthalene	2000	NA	18	ND(0.1)	ND(0.1)
Total Metals (ug/L)					
Antimony	8000	5.6	ND(0.5)	2.4	ND(1)
Arsenic	900	540	2.4	1.4	63.6
Cadmium	4	0.2	ND(0.1)	ND(0.1)	ND(0.2)
Chromium	300	48.8	1	1	ND(0.5)
Chromium, Hexavalent	300	11.4	ND(5)	ND(5)	ND(5)
Copper	100000	5.2	ND(0.25)	3.7	ND(0.5)
Iron	NA	5000	15000	120	24000
Lead	10	1.3	1.2	ND(0.25)	ND(0.5)
Mercury	20	0.9	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	200	29	1.1	1.6	2.8
Selenium	100	5	2	ND(0.5)	3
Silver	7	1.2	ND(0.2)	ND(0.2)	ND(0.4)
Zinc	900	66.6	12.1	17.9	36.9
PCBs by GC (ug/L)					
Total PCBs	5	0.000064*	ND	ND	ND
Pesticides by GC (ug/L)					
Total Pesticides	NA	NA	ND	ND	ND
General Chemistry					
Solids, Total Suspended (ug/L)	NA	30000	34000	ND(2500)	32000
Cyanide, Total (ug/L)	30	5.2	5	12	ND(2.5)
Chlorine, Total Residual (ug/L)	NA	11	ND(10)	ND(10)	ND(10)
Chloride (ug/L)	NA	NA	340000	250000	1100000
TPH (ug/L)	5000	5000	ND(2000)	ND(2000)	ND(2000)
Phenolics, Total (ug/L)	NA	300	30	30	ND(15)

Abbreviations:

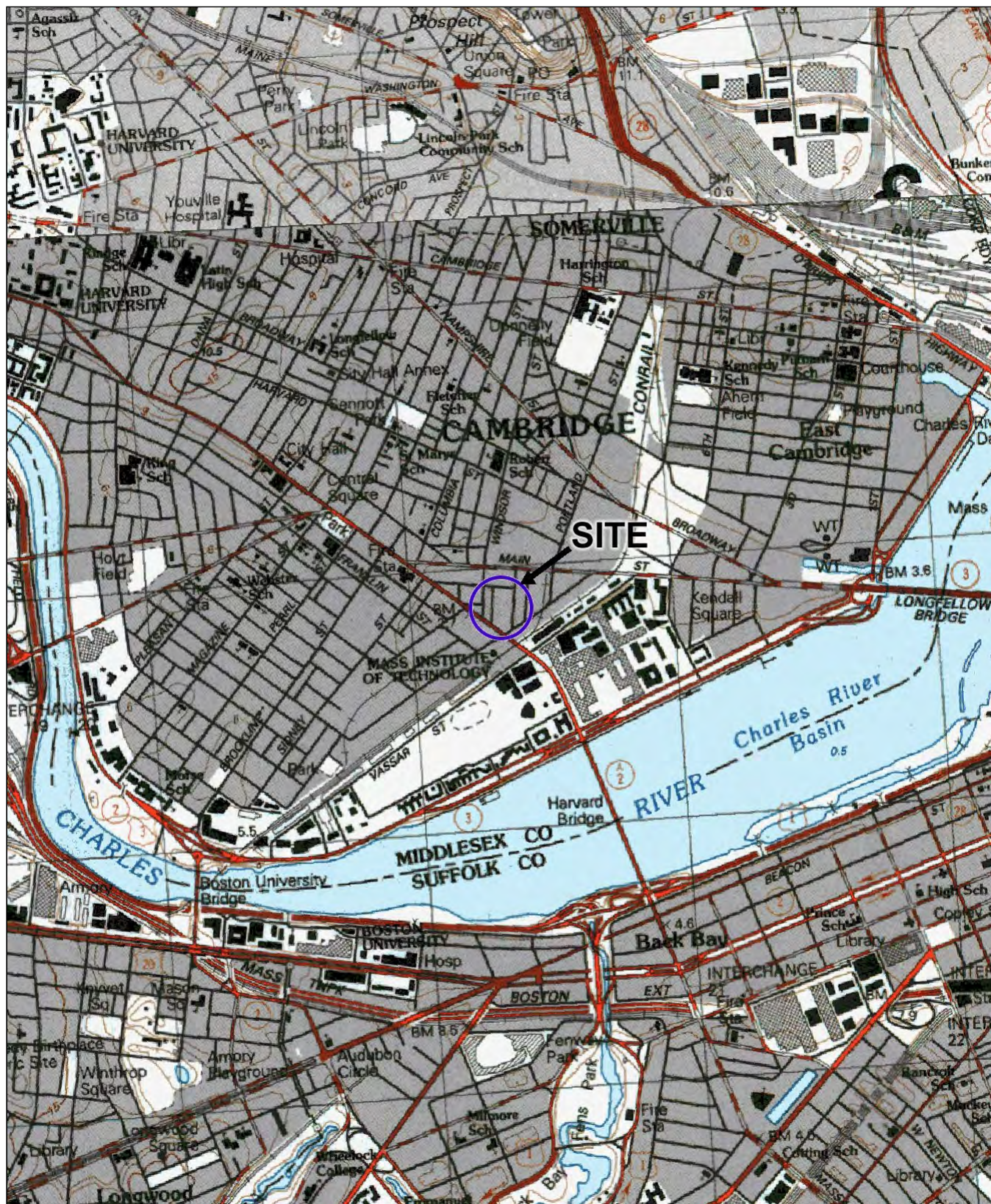
NA : Not applicable

ND(2.5): Not detected; number in parentheses is one-half the laboratory detection limit

* : Or minimum limits per acceptable test method used (ND)

Notes:

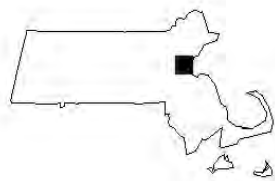
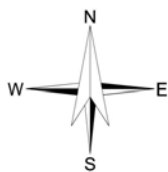
1. NPDES Effluent Limits taken from Appendix III of the EPA Remediation & Miscellaneous Contaminated Sites General Permit (F
2. NPDES RGP effluent limits provided for freshwater receiving waters.
3. Metals samples were not filtered, therefore are not applicable for comparison to MCP RCGW criteria.
4. Bold indicates exceedance of NPDES RGP Effluent criteria.
5. VOC, SVOC, and PAH constituents with RGP effluent limits shown. Additional constituents are ND and not shown in this table.



SITE COORDINATES: 42°21'42"N 71°5'46"W

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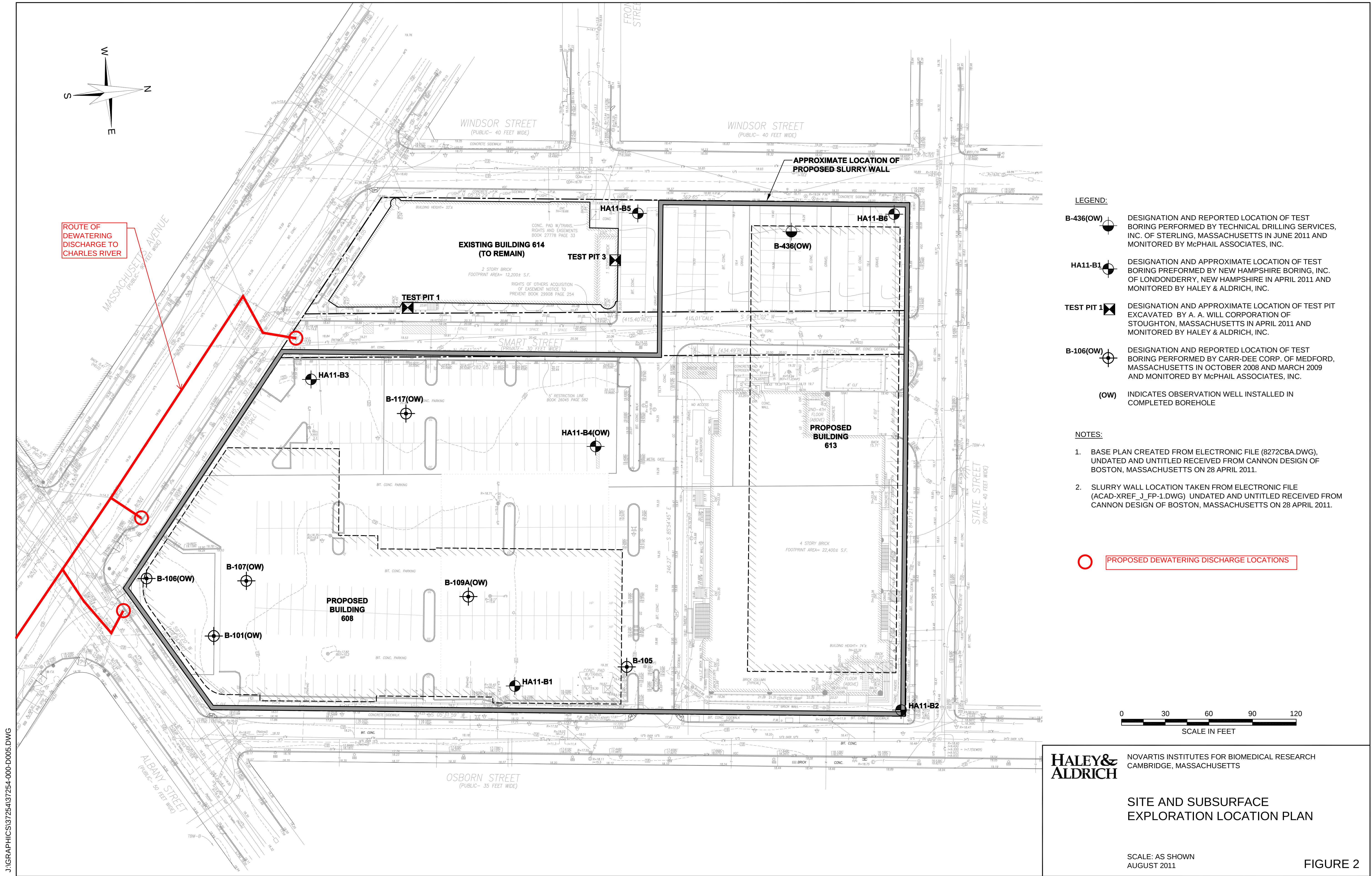


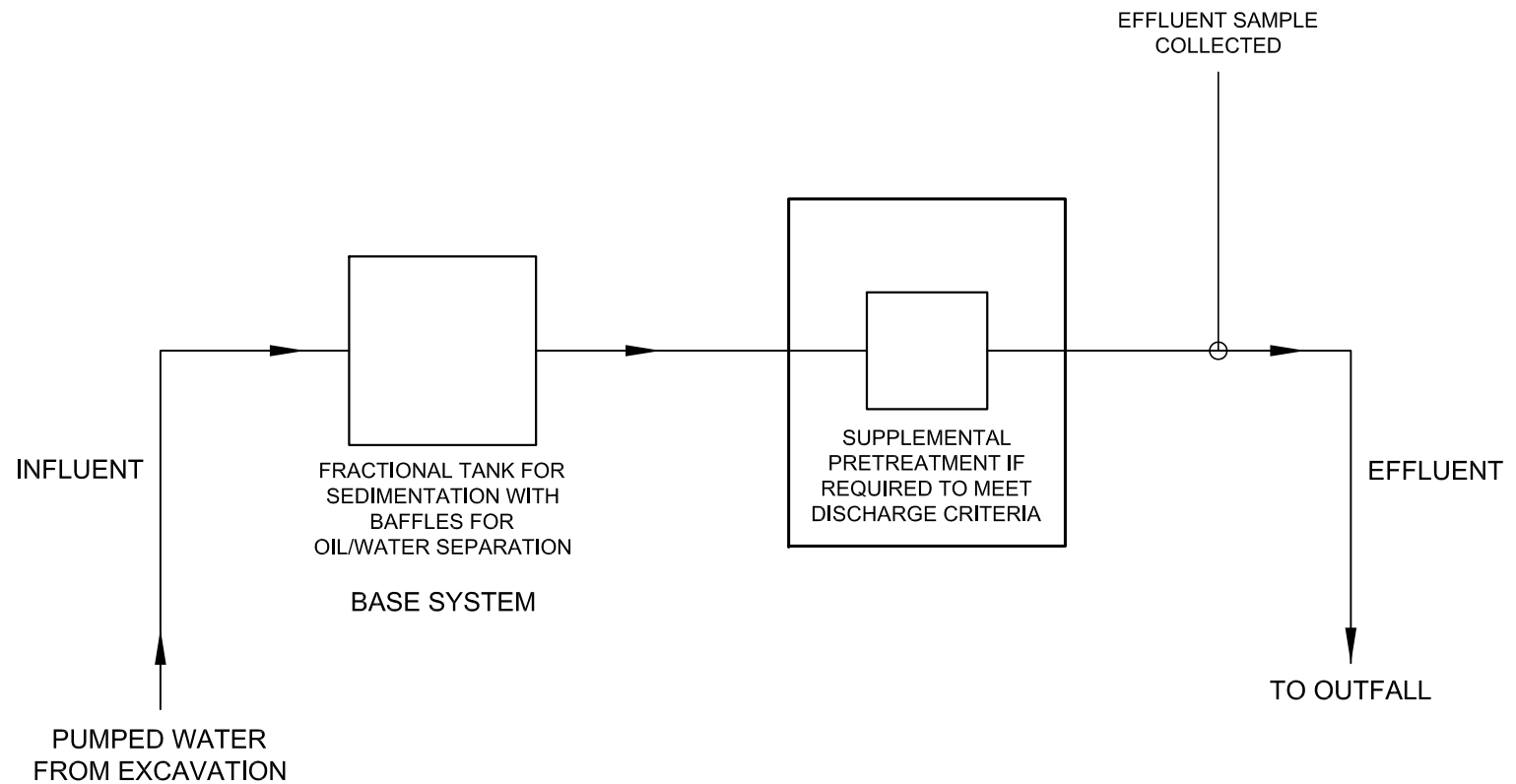
U.S.G.S. QUADRANGLE: BOSTON SOUTH, MA

PROJECT LOCUS

SCALE: 1:24,000
AUGUST 2011

FIGURE 1





LEGEND:

→ DIRECTION OF FLOW

NOTE:

1. DETAILS OF TREATMENT SYSTEM MAY VARY FROM SYSTEM INDICATED ABOVE. SPECIFIC MEANS AND METHODS OF TREATMENT TO BE SELECTED BY CONTRACTOR. WATER WILL BE TREATED TO MEET REQUIRED EFFLUENT STANDARDS.

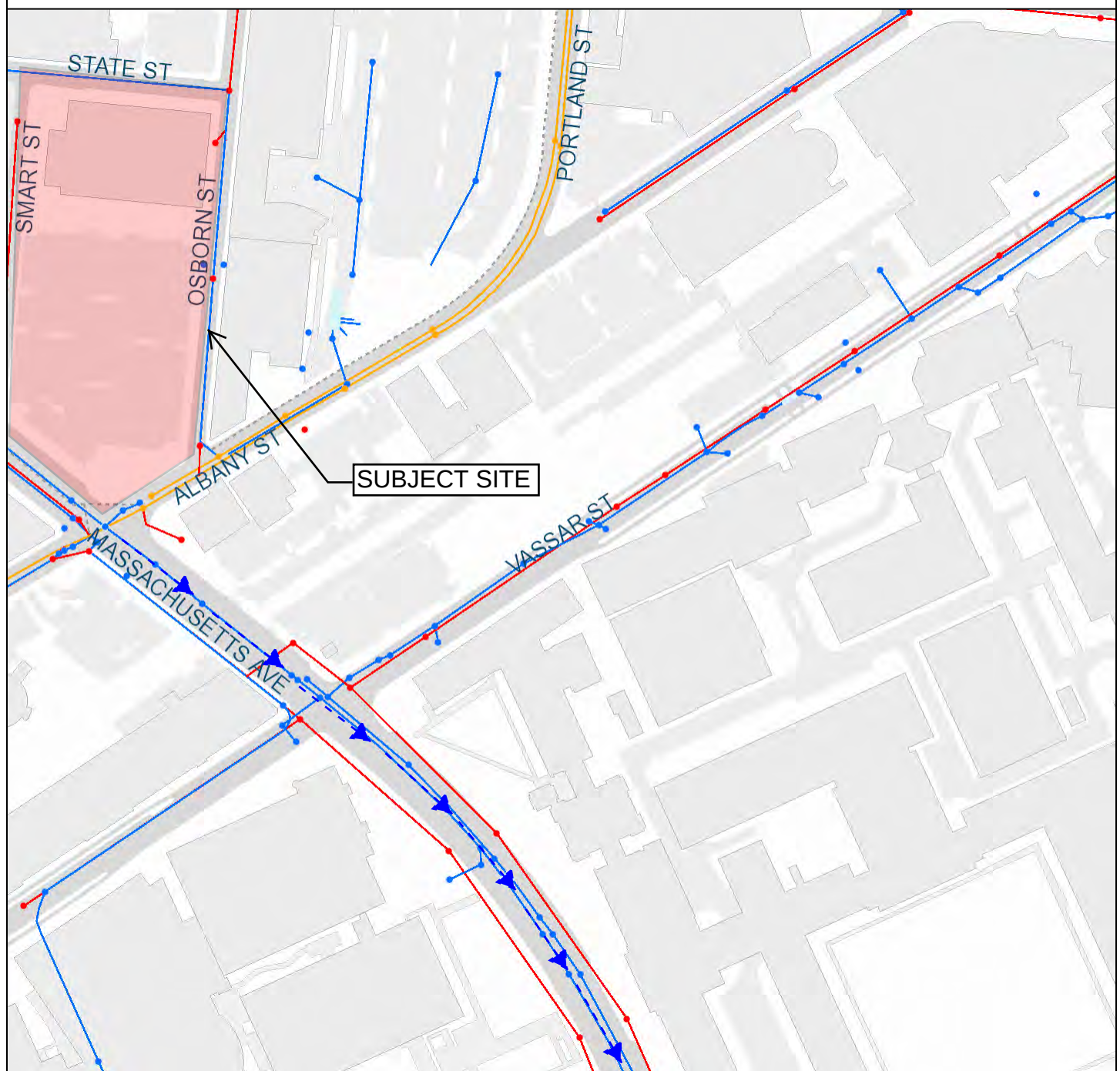
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CAMBRIDGE, MASSACHUSETTS

**PROPOSED TREATMENT SYSTEM
SCHEMATIC**

SCALE: NONE
AUGUST 2011

FIGURE 3



City of Cambridge
Massachusetts

1" = 200 ft

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- Gravity Main
 — Stormwater
 — Sewage
 — Combined Sewage
 - - - Abandoned
- Zoom Three Paved Surfaces
 ■ Paved Roads
 ■ Paved Parking
 ■ Bridges
 ■ Public Footpath

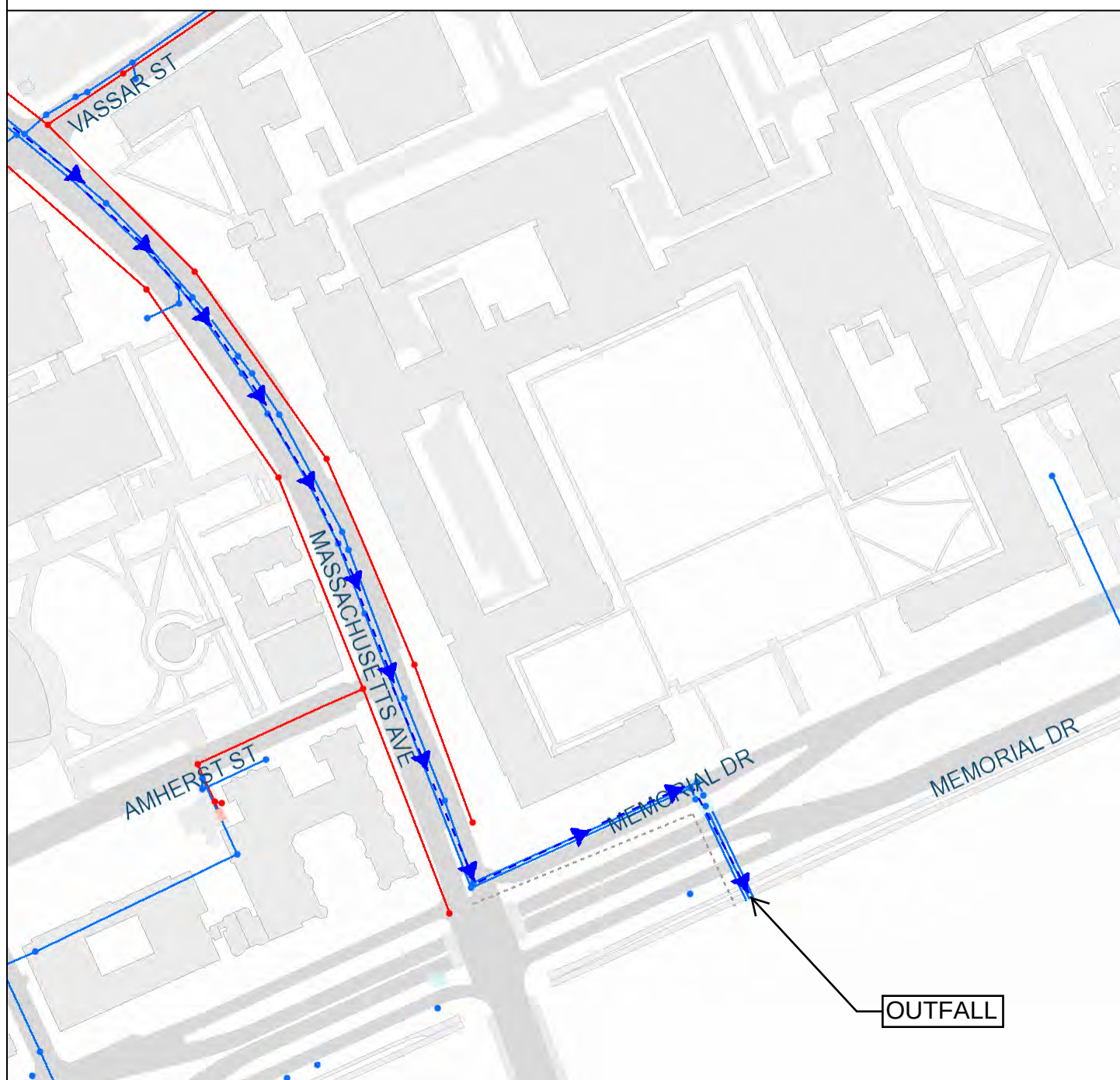
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ALDRICH**

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CAMBRIDGE, MASSACHUSETTS

**PROPOSED DEWATERING
DISCHARGE ROUTE:
PART 1 OF 2**

SCALE AS SHOWN
AUGUST 2011

FIGURE 4



City of Cambridge
Massachusetts

1" = 200 ft

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- Gravity Main
 — Stormwater
 — Sewage
 — Combined Sewage
 - - - Abandoned
- Zoom Three Paved Surfaces
 ■ Paved Roads
 ■ Paved Parking
 ■ Bridges
 ■ Public Footpath

HALEY & ALDRICH

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH
CAMBRIDGE, MASSACHUSETTS

**PROPOSED DEWATERING
DISCHARGE ROUTE:
PART 2 OF 2**

SCALE AS SHOWN
AUGUST 2011

FIGURE 5

APPENDIX A

Notice of Intent (NOI) for Remediation General Permit (RGP)

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General facility/site information. Please provide the following information about the site:

a) Name of facility/site : NIBRI Campus Expansion Project		Facility/site mailing address:	
Location of facility/site :	Facility SIC code(s):	Street:	
longitude: 71 5' 46" W		181 Massachusetts Avenue	
latitude: 42 21' 42" N	N/A		
b) Name of facility/site owner :		Town: Cambridge	
Email address of facility/site owner: christos.maravelias@novartis.com		State:	Zip:
		MA	02139
Telephone no. of facility/site owner : 617-871-4120		County: Suffolk	
Fax no. of facility/site owner : NA		Owner is (check one): 1. Federal ☐ 2. State/Tribal ☐	
Address of owner (if different from site):		3. Private ☒ 4. Other ☐ if so, describe:	
		Novartis Institutes for Biomedical Research, Inc.	
Street: 301 Massachusetts Avenue			
Town: Cambridge	State: MA	Zip: 02139	County: Suffolk
c) Legal name of operator :		Operator telephone no: 857-998-3541	
Skanska USA Building, Inc.		Operator fax no.: 617-574-1400	Operator email: robert.bellavia@skanska.com
Operator contact name and title: Robert Bellavia, Senior Superintendant			
Address of operator (if different from owner):		Street:	
		253 Summer Street	
Town: Boston	State: MA	Zip: 02210	County: Suffolk

d) Check Y for “yes” or N for “no” for the following:

1. Has a prior NPDES permit exclusion been granted for the discharge? Y ☐ N ☒, if Y, number:
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ☐ N ☒, if Y, date and tracking #:
3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Y ☒ N ☐
4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y ☐ N ☒

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ☐ N ☒

If Y, please list:

1. site identification # assigned by the state of NH or MA:
2. permit or license # assigned:
3. state agency contact information: name, location, and telephone number:

f) Is the site/facility covered by any other EPA permit, including:

1. Multi-Sector General Permit? Y ☐ N ☒,
if Y, number:
2. Final Dewatering General Permit? Y ☐ N ☒,
if Y, number:
3. EPA Construction General Permit? Y ☒ N ☐,
if Y, number:
4. Individual NPDES permit? Y ☐ N ☒,
if Y, number:
5. any other water quality related individual or general permit? Y ☐ N ☒, if Y, number:

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y ☐ N ☒

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☐
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☐ B. Known Contaminated Sites ☒

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ☐ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐
---------------------------------------	---

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:			
Temporary construction dewatering			
b) Provide the following information about each discharge:			
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)?		
1	Max. flow	0.1	Is maximum flow a design value ? Y ☐ N ☒
	Average flow (include units)	0.02 cfs	Is average flow a design value or estimate? Estimate
3) Latitude and longitude of each discharge within 100 feet:			
pt.1: lat.	42.361218	long.	-71.096575
pt.2: lat.		long.	
pt.3: lat.	42.360847	long.	-71.095963
pt.4: lat.		long.	
pt.5: lat.	42.360918	long.	-71.096153
pt.6: lat.		long.	
pt.7: lat.		long.	
pt.8: lat.		long.	
etc.			
4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent ☒ or seasonal ☐ ?		
N/A	Is discharge ongoing? Y ☐ N ☒		
c) Expected dates of discharge (mm/dd/yy): start Oct 1, 2011 end Dec 1, 2013			
d) Please attach a line drawing or flow schematic showing water flow through the facility including:			
1. sources of intake water. 2. contributing flow from the operation. 3. treatment units. and 4. discharge points and receiving waters(s).			
See Figures 3 through 5			

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1. Total Suspended Solids (TSS)		☐	☒	3	GRAB	2540D	5000	34000		33000	
2. Total Residual Chlorine (TRC)		☒	☐	3	GRAB	4500CL-D	20	ND		ND	
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	3	GRAB	1664A	4000	ND		ND	
4. Cyanide (CN)	57125	☐	☒	3	GRAB	4500CN-LE	5	12		8.5	
5. Benzene (B)	71432	☐	☒	3	GRAB	624	1	97		97	
6. Toluene (T)	108883	☐	☒	3	GRAB	624	1	5.2		5.2	
7. Ethylbenzene (E)	100414	☐	☒	3	GRAB	624	1	120		120	
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☐	☒	3	GRAB	624	2	210		210	
9. Total BTEX ²	n/a	☐	☒	3	GRAB	624	N/A	432.2		432.2	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934	☒	☐	3	GRAB	504.1	0.01	ND		ND	
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	3	GRAB	624	20	ND		ND	
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	3	GRAB	624	100	ND		ND	

* Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

² BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

³ EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	3	GRAB	624	20	ND		ND	
14. Naphthalene	91203	☐	☒	3	GRAB	8270C-SIM	1	57		57	
15. Carbon Tetrachloride	56235	☒	☐	3	GRAB	624	1	ND		ND	
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	3	GRAB	624	5	ND		ND	
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	3	GRAB	624	5	ND		ND	
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	3	GRAB	624	5	ND		ND	
18a. Total dichlorobenzene		☒	☐	3	GRAB	624	N/A	ND		ND	
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	3	GRAB	624	1.5	ND		ND	
20. 1,2 Dichloroethane (DCA)	107062	☐	☒	3	GRAB	624	1.5	2.4		2.4	
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	3	GRAB	624	1	ND		ND	
22. cis-1,2 Dichloroethene (DCE)	156592	☐	☒	3	GRAB	624	1	47		47	
23. Methylene Chloride	75092	☒	☐	3	GRAB	624	5	ND		ND	
24. Tetrachloroethene (PCE)	127184	☒	☐	3	GRAB	624	1.5	ND		ND	
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	3	GRAB	624	2	ND		ND	
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	3	GRAB	624	1.5	ND		ND	
27. Trichloroethene (TCE)	79016	☒	☐	3	GRAB	624	1	ND		ND	

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
28. Vinyl Chloride (Chloroethene)	75014	☐	☒	3	GRAB	624	2	4.1		4.1	
29. Acetone	67641	☒	☐	3	GRAB	624	10	ND		ND	
30. 1,4 Dioxane	123911	☒	☐	3	GRAB	624	2000	ND		ND	
31. Total Phenols	108952	☐	☒	3	GRAB	420.1	60	30		30	
32. Pentachlorophenol (PCP)	87865	☒	☐	3	GRAB	8270C-SIM	0.8	ND		ND	
33. Total Phthalates (Phthalate esters) ⁴		☒	☐	3	GRAB	8270C	N/A	ND		ND	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	3	GRAB	8270C	5	ND		ND	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	3	GRAB	8270C-SIM	N/A	ND		ND	
a. Benzo(a) Anthracene	56553	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
b. Benzo(a) Pyrene	50328	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
c. Benzo(b)Fluoranthene	205992	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
d. Benzo(k)Fluoranthene	207089	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
e. Chrysene	21801	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
f. Dibenzo(a,h)anthracene	53703	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	3	GRAB	8270C-SIM	N/A	ND		ND	

⁴The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
i. Acenaphthylene	208968	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
j. Anthracene	120127	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
k. Benzo(ghi) Perylene	191242	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
l. Fluoranthene	206440	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
m. Fluorene	86737	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
n. Naphthalene	91203	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
o. Phenanthrene	85018	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
p. Pyrene	129000	☒	☐	3	GRAB	8270C-SIM	0.2	ND		ND	
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	3	GRAB	608	0.25	ND		ND	
38. Chloride	16887006	☐	☒	3	GRAB	300.0	5000	1100000		563333.3	
39. Antimony	7440360	☐	☒	3	GRAB	6020	1	2.4			
40. Arsenic	7440382	☐	☒	3	GRAB	6020	0.5	63.6		22.5	
41. Cadmium	7440439	☒	☐	3	GRAB	6020	0.2	ND		ND	
42. Chromium III (trivalent)	16065831	☐	☒	3	GRAB	6020	1	1		1	
43. Chromium VI (hexavalent)	18540299	☒	☐	3	GRAB	3500CR-D	10	ND		ND	
44. Copper	7440508	☐	☒	3	GRAB	6020	0.5	3.7		3.7	
45. Lead	7439921	☐	☒	3	GRAB	6020	0.5	1.2		1.2	
46. Mercury	7439976	☒	☐	3	GRAB	245.1	0.2	ND		ND	
47. Nickel	7440020	☐	☒	3	GRAB	6020	0.5	2.8		1.8	
48. Selenium	7782492	☐	☒	3	GRAB	6020	1	3		2.5	
49. Silver	7440224	☒	☐	3	GRAB	6020	0.4	ND		ND	
50. Zinc	7440666	☐	☒	3	GRAB	6020	5	36.9		22.3	
51. Iron	7439896	☐	☒	3	GRAB	200.7	50	24000		13040	
Other (describe): 2-Butanone	78-93-3	☐	☒	3	GRAB	624	10	53		53	

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1-Methylnaphthalene	90-12-0	☐	☒	3	GRAB	8270C-SIM	0.2	12		12	
2-Methylnaphthalene	91-57-6	☐	☒	3	GRAB	8270C-SIM	0.2	18		18	

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y ☒ N ☐	If yes, which metals? Arsenic, Iron										
<i>Step 2:</i> For any metals which exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? <table border="1"> <tr> <td>Metal: Arsenic</td> <td>DF: 144.1</td> </tr> <tr> <td>Metal: Iron</td> <td>DF: 144.1</td> </tr> <tr> <td>Metal: </td> <td>DF: </td> </tr> <tr> <td>Metal: </td> <td>DF: </td> </tr> <tr> <td>Etc.</td> <td></td> </tr> </table>	Metal: Arsenic	DF: 144.1	Metal: Iron	DF: 144.1	Metal:	DF:	Metal:	DF:	Etc.		Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ☒ N ☐ If Y, list which metals: Iron
Metal: Arsenic	DF: 144.1										
Metal: Iron	DF: 144.1										
Metal:	DF:										
Metal:	DF:										
Etc.											

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

See "Notice of Intent (NOI), Temporary Construction Dewatering, NIBRI Campus Expansion Project, Cambridge, Massachusetts",

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☒	Equalization tanks ☐	Bag filter ☐	GAC filter ☒
	Chlorination ☐	De-chlorination ☐	Other (please describe):	Ion Exchange		

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate(s)** (gallons per minute) of the treatment system:

Average flow rate of discharge gpm Maximum flow rate of treatment system gpm

Design flow rate of treatment system gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

N/A

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:

Direct to
receiving
water ☐

Within facility
(sewer) ☐

Storm
drain ☒

Wetlands ☐

Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Effluent will be discharged to a storm drain located near the site which discharges into the Charles River

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:

1. For multiple discharges, number the discharges sequentially.

2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water

The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water cfs

Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y ☒ N ☐ If yes, for which pollutant(s)?

Is there a final TMDL? Y ☒ N ☐ If yes, for which pollutant(s)?

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ☒ B ☐ C ☐ D ☐ E ☐ F ☐

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ☐ N ☐ Underway ☐

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is “not likely to adversely affect” listed species or critical habitat received? Y ☐ N ☐

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?

1 ☒ 2 ☐ 3 ☐

f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. Supplemental information.

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

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 gather and evaluate 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	NIBRI Campus Expansion Project
Operator signature:	
Printed Name & Title:	Robert Bellavia, Senior Superintendant, Skanska USA Building, Inc.
Date:	

B. Submission of NOI to EPA - All operators applying for coverage under this General Permit must submit a completed Notice of Intent (NOI) to EPA. Signed and completed NOI forms and attachments must be submitted to EPA-NE at:

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912
ATTN: Remediation General Permit NOI Processing

or electronically mailed to NPDES.Generalpermits@epa.gov

or faxed to the EPA Office at 617-918-0505

If filling out the suggested NOI form electronically on EPA's website, the signature page must be signed and faxed or mailed to EPA at the fax number and/or address listed above.

1. Filing with the states - A copy of any NOI form filed with EPA-NE must also be filed with state agencies. The state agency may elect to develop a state specific form or other information requirements.

a) Discharges in Massachusetts - In addition to the NOI, permit applicants must submit copies of the State Application Form BRPWM 12, Request for General Permit coverage for the RGP. The application form and the Transmittal Form for Permit Application and Payment may be obtained from the Massachusetts Department of Environmental Protection (MassDEP) website at www.state.ma.us/dep. Municipalities are fee-exempt, but should send a copy of the transmittal form to that address for project tracking purposes. All applicants should keep a copy of the transmittal form and a copy of the application package for their records.

1) A copy of the NOI, the transmittal form, a copy of the check, and Form BRPWM 12 should be sent to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608

2) A copy of the transmittal form and the appropriate fee should be sent to:

Massachusetts Department of Environmental Protection
P.O. Box 4062
Boston, MA 02111

Please note: Applicants for discharges in Massachusetts should note that under 310 CMR 40.000, *as a matter of state law*, the general permit only applies to discharges that are **not** subject to the

Massachusetts Contingency Plan (MCP) and 310 CMR 40.000. Therefore, discharges subject to the MCP are **not** required to fill out and submit the State Application Form BRPWM 12 or pay the state fees. However, they must submit a NOI to EPA.

b) Discharges in New Hampshire - applicants must provide a copy of the Notice of Intent to:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095.

2. Filing with Municipalities - A copy of the NOI must be submitted to the municipality in which the proposed discharge would be located.

APPENDIX B

Best Management Practices Plan (BMPP)

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
REMEDATION GENERAL PERMIT (RGP)
TEMPORARY CONSTRUCTION DEWATERING
NIBRI CAMPUS EXPANSION PROJECT
181 MASSACHUSETTS AVENUE
CAMBRIDGE, MASSACHUSETTS**

Best Management Practices Plan

A Notice of Intent for a Remediation General Permit (RGP) under the National Pollutant Discharge Elimination System (NPDES) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction site dewatering planned to occur during proposed construction of two above-grade buildings which will be seven and eight stories, respectively, with an additional mechanical penthouse level and a two- to three-level below-grade structure beneath portions of the above-grade structures located at 181 Massachusetts Avenue in Cambridge, Massachusetts. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

Water Treatment and Management

Construction dewatering will be conducted from sumps located inside the excavation. The treatment system will be designed by the contractor. Prior to discharge, collected water will be routed through a sedimentation tank with an oil/water separator component, at a minimum, to remove suspended solids and undissolved chemical constituents. Supplemental pretreatment may be required to meet discharge criteria and if necessary, may include granular activated carbon and ion exchange. Construction dewatering under this RGP NOI will include piping and discharging to storm drains located near the site. The storm drains travel a short distance southeast below Massachusetts Avenue and discharge directly into the Charles River.

Discharge Monitoring and Compliance

Regular sampling and testing of the treated effluent will be conducted as required by the RGP. This includes chemical testing required within the first month of discharging, and the monthly testing to be conducted through the end of the scheduled discharge.

Monitoring will include checking the condition of the treatment system, assessing the need for treatment system adjustments based on monitoring data, observing and recording daily flow rates and discharge quantities, and verifying the flow path of the discharged effluent.

The total monthly flow will be monitored by checking and documenting the flow through the flow meter to be installed on the system. Flow will be maintained below the “system design flow” by regularly monitoring flow and adjusting the amount of construction dewatering as needed.

Monthly monitoring reports will be compiled and maintained at the site.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
REMEDATION GENERAL PERMIT (RGP)
TEMPORARY CONSTRUCTION DEWATERING
NIBRI CAMPUS EXPANSION PROJECT
181 MASSACHUSETTS ANENUE
CAMBRIDGE, MASSACHUSETTS**

System Maintenance

A number of methods will be used to minimize the potential for violations for the term of this permit. Scheduled regular maintenance of the treatment system will be conducted to verify proper operation. Regular maintenance will include checking the condition of the treatment system equipment such as the fractionation tanks, filters, hoses, pumps, and flow meters. Periodic maintenance will include changing bag filters, activated carbon and/or ion exchange units as required to meet discharge criteria. Equipment will be monitored daily for potential issues or unscheduled maintenance requirements.

Employees who have direct or indirect responsibility for ensuring compliance with the RGP will be trained by the Operator.

Miscellaneous Items

Due to the nature of the excavation, erosion control and the nature of the site and surrounding infrastructure, it is not anticipated that there will be any run off into the site from other sources, as well as no run off from the site.

Site security for the treatment system can be covered within the overall site security plan.

No adverse affects of designated water uses of surrounding surface water bodies is anticipated. The Charles River is the nearest surface water body to the site located approximately 0.3 miles from the construction activities on site. As mentioned earlier, the discharged effluent will be pumped directly to a storm drain located near the site and into existing below grade infrastructure.

Management of Treatment System Materials

No potential sources of pollutants are anticipated during construction dewatering activities. Dewatering effluent will be pumped directly to the treatment system from the excavation with use of hoses and sumps to minimize handling. The contractor will establish staging areas on the site for any equipment or materials storage which may be possible sources of pollution away from any dewatering activities.

Sediment from the fractionalization tank used in the treatment system will be characterized and disposed of as soil at an appropriate receiving facility in accordance with applicable laws and regulations. If used, Granular Activated Carbon and Ion Exchange resin will be likely recycled and/or manifested to the appropriate receiving facility. Bag filters, if used, will be placed in drums and manifested for off-site disposal.

APPENDIX C

National Register of Historic Places and Massachusetts Historical Commission Documentation

Massachusetts Historical Commission

William Francis Galvin, Secretary of the Commonwealth

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Massachusetts Cultural Resource Information System **MACRIS**

[Scanned forms and photos now available for selected towns!](#)

The Massachusetts Cultural Resource Information System (MACRIS) allows you to search the Massachusetts Historical Commission database for information on historic properties and areas in the Commonwealth.

Users of the database should keep in mind that it does not include information on all historic properties and areas in Massachusetts, nor does it reflect all the information on file on historic properties and areas at the Massachusetts Historical Commission.

[Click here to begin your search of the MACRIS database.](#)



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Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

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

Inv. No.	Property Name	Street	Town	Year
CAM.A	Cambridge Common Historic District		Cambridge	
CAM.B	Lockhart, William L. and Company Coffin Factory		Cambridge	
CAM.C	Blake and Knowles Steam Pump Company		Cambridge	
CAM.D	Fort Washington Historic District		Cambridge	
CAM.E	East Cambridge Historic District		Cambridge	
CAM.F	Winter Street Historic District		Cambridge	
CAM.G	Cambridge Multiple Resource Area		Cambridge	
CAM.H	Lechmere Point Corporation Houses		Cambridge	
CAM.I	Sacred Heart Church, Rectory, School and Convent		Cambridge	
CAM.J	Upper Magazine Street Historic District		Cambridge	
CAM.K	Hastings Square Historic District		Cambridge	
CAM.L	Salem - Auburn Streets Historic District		Cambridge	
CAM.M	Inman Square Historic District		Cambridge	
CAM.N	Old Cambridgeport Historic District		Cambridge	
CAM.O	Norfolk Street Historic District		Cambridge	
CAM.P	Massachusetts Institute of Technology		Cambridge	
CAM.Q	Central Square Historic District		Cambridge	
CAM.R	Bigelow Street Historic District		Cambridge	
CAM.S	Garfield Street Historic District		Cambridge	
CAM.T	Harvard Street Historic District		Cambridge	
CAM.U	Kirkland Place Historic District		Cambridge	
CAM.V	Maple Avenue Historic District		Cambridge	
CAM.W	City Hall Historic District		Cambridge	
CAM.X	Shady Hill Historic District		Cambridge	
CAM.Y	Ash Street Historic District		Cambridge	
CAM.Z	Avon Hill Historic District		Cambridge	

Inv. No.	Property Name	Street	Town	Year
CAM.AA	Berkeley Street Historic District		Cambridge	
CAM.AB	Harvard Square Historic District		Cambridge	
CAM.AC	Harvard Houses Historic District		Cambridge	
CAM.AD	Harvard Yard Historic District		Cambridge	
CAM.AE	Old Cambridge Historic District		Cambridge	
CAM.AF	Gray Gardens East and West Historic District		Cambridge	
CAM.AG	Memorial Drive Apartments Historic District		Cambridge	
CAM.AH	Follen Street Historic District		Cambridge	
CAM.AI	Bennink - Douglas Cottages		Cambridge	
CAM.AJ	Charles River Basin Historic District		Cambridge	
CAM.AK	Boston Woven Hose and Rubber Complex		Cambridge	
CAM.AL	Fresh Pond		Cambridge	
CAM.AM	Old Cambridge Historic District		Cambridge	
CAM.AN	Harvard Riverfront		Cambridge	
CAM.AO	East Cambridge		Cambridge	
CAM.AP	Hubbard Park Historic District		Cambridge	
CAM.AQ	Davenport - Allen and Endicott Factory		Cambridge	
CAM.AR	Mount Auburn Cemetery		Cambridge	
CAM.AS	Metropolitan Park System of Greater Boston		Cambridge	
CAM.AT	Elmwood (James Russell Lowell House)		Cambridge	
CAM.AU	Christ Church		Cambridge	
CAM.AV	Blake and Knowles Steam Pump Company		Cambridge	
CAM.AW	Alewife Brook Parkway		Cambridge	
CAM.AX	Fresh Pond Parkway		Cambridge	
CAM.AY	Church of the Blessed Sacrament Catholic Church		Cambridge	
CAM.AZ	Immaculate Conception Roman Catholic Church		Cambridge	
CAM.BA	Immaculate Conception (Lithuanian) Catholic Church		Cambridge	
CAM.1	Wyeth, John House	56 Aberdeen Ave	Cambridge	1841
CAM.1009		24 Agassiz St	Cambridge	1889
CAM.1010	Shaw, Edward L. House	30 Agassiz St	Cambridge	1890
CAM.1011	Sands, M. Winslow House	32 Agassiz St	Cambridge	1891
CAM.1012	Blackman, Horace House	33 Agassiz St	Cambridge	1890
CAM.1353	Standard Plate Glass Company Building	270 Albany St	Cambridge	1920
CAM.902	Alewife Brook Parkway Bridge over B & M Railroad	Alewife Brook Pkwy	Cambridge	1929
CAM.903	Alewife Brook Parkway Bridge over B & M Railroad	Alewife Brook Pkwy	Cambridge	1929

Inv. No.	Property Name	Street	Town	Year
CAM.9012	Alewife Brook Parkway - Northern Segment	Alewife Brook Pkwy	Cambridge	1908
CAM.9013	Alewife Brook Parkway Tree Border	Alewife Brook Pkwy	Cambridge	1920
CAM.1372	Immaculate Conception Roman Catholic Church	45 Alewife Brook Pkwy	Cambridge	1929
CAM.1373	Immaculate Conception Catholic Church Rectory	45 Alewife Brook Pkwy	Cambridge	1935
CAM.359		6-24 Allston St	Cambridge	1946
CAM.2	Fay, Isaac House	125 Antrim St	Cambridge	1843
CAM.3	Withey, S. B. House	10 Appian Way	Cambridge	1855
CAM.4	Howe, Lois Lilly House	6 Appleton St	Cambridge	1887
CAM.5	Cook, William House	71 Appleton St	Cambridge	1876
CAM.1016		8-10 Arlington St	Cambridge	1864
CAM.1027	Aldrich, Frank A. House	11 Arlington St	Cambridge	1899
CAM.1017		12-14 Arlington St	Cambridge	1864
CAM.1028	Graustein, Adolph H. House	19 Arlington St	Cambridge	1902
CAM.1018		22 Arlington St	Cambridge	1862
CAM.1019	Fillmore, Wellington House	24 Arlington St	Cambridge	1869
CAM.1347		25 Arlington St	Cambridge	
CAM.1020	Moor, Rev. Clark House	26 Arlington St	Cambridge	1869
CAM.1021	Blackman, Horace P. House	28 Arlington St	Cambridge	1876
CAM.1022		30 Arlington St	Cambridge	1876
CAM.1023	Jameson, Edwin A. L. House	32 Arlington St	Cambridge	1872
CAM.1029	Davis, John House	33 Arlington St	Cambridge	1869
CAM.1024		36 Arlington St	Cambridge	1872
CAM.1030	Kelsey, Albert House	37 Arlington St	Cambridge	1875
CAM.1025	Moor, Rev. Clark Double House	38-40 Arlington St	Cambridge	1874
CAM.1026	Boardman, Charles House	42 Arlington St	Cambridge	1871
CAM.1061	Harvard Catholic Student Center	20 Arrow St	Cambridge	1890
CAM.1062	Saint Paul's Church	24 Arrow St	Cambridge	1920
CAM.784	Brooks, John House	5 Ash St	Cambridge	1887
CAM.6	Johnson, Philip House	9 Ash St	Cambridge	1942
CAM.785	Ela, Lucia House	13 Ash St	Cambridge	1869
CAM.787	Eliot, T. S. House	16 Ash St	Cambridge	1855
CAM.786	Nowell, Henry House	19 Ash St	Cambridge	1825
CAM.788	Hunnewell, James A. House	6 Ash Street Pl	Cambridge	1848
CAM.522		107 Auburn St	Cambridge	1803
CAM.523		108-110 Auburn St	Cambridge	1803
CAM.524		114 Auburn St	Cambridge	1844
CAM.525		119 Auburn St	Cambridge	1829
CAM.526		122 Auburn St	Cambridge	1840

Inv. No.	Property Name	Street	Town	Year
CAM.527		131 Auburn St	Cambridge	1830
CAM.528		134 Auburn St	Cambridge	1845
CAM.7	Ellis, Asa House	158 Auburn St	Cambridge	1805
CAM.564	Hotel Eliot	66 Austin St	Cambridge	1885
CAM.565	Hotel Austin	70 Austin St	Cambridge	1885
CAM.8	Brabrook, Ezra H. House	42-44 Avon St	Cambridge	1849
CAM.352	Blake and Knowles Main Foundry	180 Bent St	Cambridge	1895
CAM.1035		1 Berkeley Pl	Cambridge	1892
CAM.1036		2 Berkeley Pl	Cambridge	1892
CAM.1037		3 Berkeley Pl	Cambridge	1892
CAM.1038		4 Berkeley Pl	Cambridge	1910
CAM.1039		5 Berkeley Pl	Cambridge	1900
CAM.1040		6 Berkeley Pl	Cambridge	1914
CAM.1041		7 Berkeley Pl	Cambridge	1913
CAM.1042		8 Berkeley Pl	Cambridge	1931
CAM.1043	Pryor - Brown House	1 Berkeley St	Cambridge	1852
CAM.10	Thayer, Prof. Studio	2 1/2 Berkeley St	Cambridge	1894
CAM.1044	Pryor - Howells House	3 Berkeley St	Cambridge	1856
CAM.1045	Dana, Richard H. House	4 Berkeley St	Cambridge	1851
CAM.1046	Wyeth - Allen House	5-7R Berkeley St	Cambridge	1852
CAM.1047		6 Berkeley St	Cambridge	1853
CAM.1048	Ware, Henry House	8 Berkeley St	Cambridge	1859
CAM.1049	Allyn, John House	11 Berkeley St	Cambridge	1886
CAM.1050		12 Berkeley St	Cambridge	1881
CAM.1051		13 Berkeley St	Cambridge	1898
CAM.1052	Williston, Lyman House	15 Berkeley St	Cambridge	1863
CAM.1053		16 Berkeley St	Cambridge	1905
CAM.1054		17 Berkeley St	Cambridge	1863
CAM.1055		19 Berkeley St	Cambridge	1854
CAM.1056	Newell, William House	20 Berkeley St	Cambridge	1856
CAM.1057		21 Berkeley St	Cambridge	1854
CAM.1058	Fiske, John House	22 Berkeley St	Cambridge	1877
CAM.1059		23 Berkeley St	Cambridge	1854
CAM.1060		24 Berkeley St	Cambridge	1936
CAM.1355	Craft, William House	5 Bigelow St	Cambridge	1869
CAM.1356	Sharry, William J. House	5A Bigelow St	Cambridge	1940
CAM.663	Montague, Charles House	6 Bigelow St	Cambridge	1873
CAM.655	Snow, Simeon House	7 Bigelow St	Cambridge	1869

Inv. No.	Property Name	Street	Town	Year
CAM.1360	Rhodes, Silas Jr. House	8 Bigelow St	Cambridge	1871
CAM.656	Pollard, John Double House	9-11 Bigelow St	Cambridge	1874
CAM.664	Hurd, Theodore House	10-12 Bigelow St	Cambridge	1884
CAM.657	Bird, Henry House	13 Bigelow St	Cambridge	1874
CAM.1361	Pike, Walter House	14 Bigelow St	Cambridge	1888
CAM.658	Davis, Curtis House	15 Bigelow St	Cambridge	1873
CAM.1362	Brazier, Abbie House	16 Bigelow St	Cambridge	1874
CAM.659	Whitely, Hiram House	17 Bigelow St	Cambridge	1873
CAM.1363	Sawyer - Dole House	18 Bigelow St	Cambridge	1876
CAM.1357	Oxford, Charles House	19 Bigelow St	Cambridge	1871
CAM.660	Snow - Twitchell Double House	21-23 Bigelow St	Cambridge	1873
CAM.665	Hyde, Edward House	22 Bigelow St	Cambridge	1870
CAM.1348	Robbins Block	24-46 Bigelow St	Cambridge	1871
CAM.661	Jessop, Joseph House	25 Bigelow St	Cambridge	1872
CAM.1358	Jessop Tenement House	29 Bigelow St	Cambridge	1891
CAM.1359	Whitcomb, Peter Double House	31-33 Bigelow St	Cambridge	1872
CAM.662	Davis, John W. House	35 Bigelow St	Cambridge	1870
CAM.357	Blake and Knowles Machine Shop #2	195 Binney St	Cambridge	1917
CAM.358	Blake and Knowles Machine Shop #3	199 Binney St	Cambridge	1918
CAM.356	Blake and Knowles Erecting and Assembling Building	201 Binney St	Cambridge	1903
CAM.11	Slowey, Patrick House	73 Bolton St	Cambridge	1852
CAM.1063	Bicycle Exchange Building	3-7 Bow St	Cambridge	1901
CAM.1064		9 Bow St	Cambridge	1884
CAM.1065	Farwell - Russell, Thomas Store	12 Bow St	Cambridge	1830
CAM.1066	Westmorly Court - Harvard University	15-29 Bow St	Cambridge	1898
CAM.12	Harvard Lampoon Building	44 Bow St	Cambridge	1909
CAM.1067	Randolph Hall - Harvard University	47-57 Bow St	Cambridge	1897
CAM.13	Frost, Elizabeth Tenant House	35 Bowdoin St	Cambridge	1812
CAM.926	Anderson, Larz Bridge	Boylston St	Cambridge	1915
CAM.14	Hicks, John House	64 Boylston St	Cambridge	1761
CAM.294	Radcliffe College Graduate Center	Brattle St	Cambridge	1955
CAM.918	Longfellow Park	Brattle St	Cambridge	1887
CAM.987	Lowell Park	Brattle St	Cambridge	
CAM.1068	Brattle Building	4 Brattle St	Cambridge	1913
CAM.1069	Atrium Building	9-11 Brattle St	Cambridge	1979
CAM.1071		12-16 Brattle St	Cambridge	1887
CAM.1070	Estes Block	13-15 Brattle St	Cambridge	1875

Inv. No.	Property Name	Street	Town	Year
CAM.1072	Dow Block	17-35 Brattle St	Cambridge	1936
CAM.1073		18 Brattle St	Cambridge	1922
CAM.1074		26 Brattle St	Cambridge	1909
CAM.1075	Hadley Building	28-36 Brattle St	Cambridge	1974
CAM.1076	Cambridge Federal Savings Bank	38A Brattle St	Cambridge	1937
CAM.1077		39-41 Brattle St	Cambridge	1925
CAM.15		40 Brattle St	Cambridge	1889
CAM.1078	Brattle Hall	40A Brattle St	Cambridge	1925
CAM.16		42 Brattle St	Cambridge	1727
CAM.1079		43-45 Brattle St	Cambridge	1926
CAM.1080	Sage Building	44 Brattle St	Cambridge	1970
CAM.1081		46R Brattle St	Cambridge	1966
CAM.1082		47-49 Brattle St	Cambridge	1926
CAM.1083	Design Research Building	48 Brattle St	Cambridge	1969
CAM.1084	Washington Court	51 Brattle St	Cambridge	1905
CAM.17	Pratt, Dexter House	54 Brattle St	Cambridge	1808
CAM.1229	Warland, John House	69 Brattle St	Cambridge	1838
CAM.1230	Greenleaf, James House	76 Brattle St	Cambridge	1859
CAM.1228	Chamberlin, John House	77 Brattle St	Cambridge	1821
CAM.18	Radcliffe College Alumnae House	79 Brattle St	Cambridge	1836
CAM.19	Wadsworth Chambers	81-83 Brattle St	Cambridge	1908
CAM.20	Burleigh House	85 Brattle St	Cambridge	1847
CAM.21	Stoughton, Mary Fisk House	90 Brattle St	Cambridge	1882
CAM.22		92 Brattle St	Cambridge	1882
CAM.23		94 Brattle St	Cambridge	1635
CAM.24	Vassall, Henry House	99 Brattle St	Cambridge	1960
CAM.25	Episcopal Divinity School - Washburn Hall	99 Brattle St	Cambridge	1960
CAM.25	Saint John's Chapel	99 Brattle St	Cambridge	1868
CAM.26	Episcopal Divinity School Library - Sherrill Hall	99 Brattle St	Cambridge	1965
CAM.27	Episcopal Divinity School - Wright Hall	99 Brattle St	Cambridge	1911
CAM.28	Episcopal Divinity School - Reed Hall	99 Brattle St	Cambridge	1873
CAM.29	Episcopal Divinity School - Lawrence Hall	99 Brattle St	Cambridge	1873
CAM.30	Episcopal Divinity School - Burnham Hall	99 Brattle St	Cambridge	1879
CAM.31	Hastings, Oliver House	101 Brattle St	Cambridge	1844
CAM.32	Longfellow National Historic Site	105 Brattle St	Cambridge	1759
CAM.33	Dana, Edith Longfellow House	113 Brattle St	Cambridge	1887
CAM.34		114 Brattle St	Cambridge	1903
CAM.35		115 Brattle St	Cambridge	1887
CAM.36	Thorp, Annie Longfellow House	121 Brattle St	Cambridge	1843
	Worcester, Joseph House			

Inv. No.	Property Name	Street	Town	Year
CAM.37		121A Brattle St	Cambridge	1941
CAM.38		123 Brattle St	Cambridge	
CAM.39		124 Brattle St	Cambridge	1915
CAM.40		125 Brattle St	Cambridge	1939
CAM.41		126 Brattle St	Cambridge	1890
CAM.1235		127 Brattle St	Cambridge	1970
CAM.42		128 Brattle St	Cambridge	1892
CAM.43		130-130R Brattle St	Cambridge	1886
CAM.44		132 Brattle St	Cambridge	1886
CAM.45	Falxa, Dr. Martin House	133 Brattle St	Cambridge	1970
CAM.46		134-136 Brattle St	Cambridge	1857
CAM.47		138 Brattle St	Cambridge	1930
CAM.48		140 Brattle St	Cambridge	1930
CAM.49		142 Brattle St	Cambridge	1915
CAM.50	Cambridge Armenian Church	143 Brattle St	Cambridge	1959
CAM.51		144 Brattle St	Cambridge	1915
CAM.52	Brewster, William House	145 Brattle St	Cambridge	1887
CAM.53		146 Brattle St	Cambridge	1939
CAM.54		147 Brattle St	Cambridge	1887
CAM.55		148 Brattle St	Cambridge	1914
CAM.56	Lechmere, Richard House	149 Brattle St	Cambridge	1762
CAM.57		150 Brattle St	Cambridge	1908
CAM.58		152 Brattle St	Cambridge	1887
CAM.59	Lee, Thomas House	153 Brattle St	Cambridge	1803
CAM.60		154 Brattle St	Cambridge	1865
CAM.1236		155 Brattle St	Cambridge	1889
CAM.61		156 Brattle St	Cambridge	1867
CAM.62		158 Brattle St	Cambridge	1884
CAM.63	Hooper - Lee - Nichols House	159 Brattle St	Cambridge	1685
CAM.64		160 Brattle St	Cambridge	1884
CAM.65		164 Brattle St	Cambridge	1868
CAM.1237	Bartlett, John House	165 Brattle St	Cambridge	1873
CAM.66	Van Brunt, Henry House	167 Brattle St	Cambridge	1883
CAM.67		168 Brattle St	Cambridge	1888
CAM.68	Wells, Judge Daniel House	170 Brattle St	Cambridge	1852
CAM.69		174 Brattle St	Cambridge	1885
CAM.70	Marrett - Ruggles - Fayerweather House	175 Brattle St	Cambridge	1765
CAM.1238	Fayerweather House Squash Court and Garage	177 Brattle St	Cambridge	1915

Inv. No.	Property Name	Street	Town	Year
CAM.71		180 Brattle St	Cambridge	1888
CAM.72	Richards, R. A. House	182 Brattle St	Cambridge	1895
CAM.73		190 Brattle St	Cambridge	1898
CAM.74	Frankfurter, Justice Felix House	192 Brattle St	Cambridge	1907
CAM.75		193 Brattle St	Cambridge	1893
CAM.76		194 Brattle St	Cambridge	1917
CAM.77		195 Brattle St	Cambridge	1896
CAM.78		198 Brattle St	Cambridge	1912
CAM.79	Stubbins, Hugh House	199 Brattle St	Cambridge	1966
CAM.80		200 Brattle St	Cambridge	1901
CAM.81		202 Brattle St	Cambridge	1903
CAM.82		205 Brattle St	Cambridge	1925
CAM.83		209 Brattle St	Cambridge	1925
CAM.84		213-215 Brattle St	Cambridge	1896
CAM.85	Frost, Robert House	29-35 Brewster St	Cambridge	1884
CAM.86	Cambridge Public Library	449 Broadway	Cambridge	1888
CAM.515		301 Brookline Ave	Cambridge	1869
CAM.516		302 Brookline Ave	Cambridge	1887
CAM.517		308 Brookline Ave	Cambridge	1870
CAM.623	Southwick Block	11-19 Brookline St	Cambridge	
CAM.88	Brown, Daniel House	7 Brown St	Cambridge	1845
CAM.89	Hill, Aaron House	17 Brown St	Cambridge	1754
CAM.708		1 Bryant St	Cambridge	1911
CAM.709		5 Bryant St	Cambridge	1916
CAM.710		7 Bryant St	Cambridge	1915
CAM.711		20-24 Bryant St	Cambridge	1916
CAM.712		21 Bryant St	Cambridge	1932
CAM.90	Bridgman, Percy House	10 Buckingham Pl	Cambridge	1920
CAM.91	Koch, Carl House	4 Buckingham St	Cambridge	1939
CAM.92	Higginson, Col. Thomas Wentworth House	29 Buckingham St	Cambridge	1880
CAM.941	Bridge, John Statue	Cambridge Common	Cambridge	1882
CAM.942	Memorial Gateway	Cambridge Common	Cambridge	1906
CAM.943	Revolutionary War Cannons	Cambridge Common	Cambridge	1770
CAM.944	Soldiers Monument	Cambridge Common	Cambridge	1869
CAM.906	Cambridge Parkway Bridge over Broad Canal	Cambridge Pkwy	Cambridge	1957
CAM.931	Cambridge Parkway	Cambridge Pkwy	Cambridge	1900
CAM.97	Memorial Hall	Cambridge St	Cambridge	1875
CAM.379	Middlesex County Registry of Deeds Building	Cambridge St	Cambridge	1896

Inv. No.	Property Name	Street	Town	Year
CAM.380	Middlesex County Clerk of Courts Building	Cambridge St	Cambridge	1889
CAM.912	Longfellow Bridge - West Boston Bridge	Cambridge St	Cambridge	1907
CAM.914	Lechmere Square Streetcar Station	Cambridge St	Cambridge	1922
CAM.372		82-84 Cambridge St	Cambridge	1937
CAM.373	Davenport, A. H. - Irving and Casson Company	88-134 Cambridge St	Cambridge	1866
CAM.378		160 Cambridge St	Cambridge	1965
CAM.93	East Cambridge Savings Bank	292 Cambridge St	Cambridge	1931
CAM.94	Union Railway Car Barn	613-621 Cambridge St	Cambridge	1869
CAM.535		1353-1369 Cambridge St	Cambridge	1894
CAM.532	Waite Building	1368 Cambridge St	Cambridge	1855
CAM.533	Middlesex Bank Building	1374-1385 Cambridge St	Cambridge	1874
CAM.95		1707-1709 Cambridge St	Cambridge	1845
CAM.96		1715-1717 Cambridge St	Cambridge	1845
CAM.637	Church Corner Apartments	Central Sq	Cambridge	1986
CAM.636	Home Realty Building	14 Central Sq	Cambridge	1970
CAM.639	Southwick Building I	15-16 Central Sq	Cambridge	1896
CAM.640	Southwick Building II	17-24 Central Sq	Cambridge	1860
CAM.641	White Tower Restaurant	25 Central Sq	Cambridge	1932
CAM.98	Melvin, Isaac House	19 Centre St	Cambridge	1842
CAM.99	Boston and Maine Railroad Signal Tower A	Charles River	Cambridge	1931
CAM.911	Charles River Railroad Draw Bridge #1	Charles River	Cambridge	1931
CAM.920	Charles River Dam	Charles River	Cambridge	1905
CAM.925	Weeks, John Wingate Foot Bridge	Charles River	Cambridge	1927
CAM.928	Lechmere Canal	Charles River	Cambridge	1909
CAM.929	Broad Canal	Charles River	Cambridge	1805
CAM.932	Charles River Basin Granite Seawall and Iron Fence	Charles River	Cambridge	
CAM.935	Metropolitan District Commission Swimming Pool	Charles River	Cambridge	
CAM.1320	Metropolitan District Commission Chlorination Plant	Charles River	Cambridge	
CAM.1325	M. I. T. - Pierce, Harold Whitworth Boat House	Charles River	Cambridge	1965
CAM.1326	M. I. T. - Wood, Walter C. Sailing Pavillion	Charles River	Cambridge	1976
CAM.1328	Riverside Boat Club	Charles River	Cambridge	1910
CAM.543	Boardman, James Double House	Cherry St	Cambridge	1843
CAM.100	Fuller, Margaret House	71 Cherry St	Cambridge	1806
CAM.546		87 Cherry St	Cambridge	1845
CAM.545		116-120 Cherry St	Cambridge	1845
CAM.544	Eaton, Jacob House	128 Cherry St	Cambridge	1844

Inv. No.	Property Name	Street	Town	Year
CAM.542		137-139 Cherry St	Cambridge	1840
CAM.537		149-151 Cherry St	Cambridge	1830
CAM.538		159-161 Cherry St	Cambridge	1830
CAM.547		167 Cherry St	Cambridge	1850
CAM.548		169 Cherry St	Cambridge	1850
CAM.101	Kingsley, Chester House	10 Chester St	Cambridge	1866
CAM.518		105 Chestnut St	Cambridge	1875
CAM.519		111 Chestnut St	Cambridge	1875
CAM.102	First Parish Church, Unitarian	1-3 Church St	Cambridge	1833
CAM.103		23-25 Church St	Cambridge	1936
CAM.1085		26-28 Church St	Cambridge	1857
CAM.104		27-29 Church St	Cambridge	1922
CAM.105	Cambridge Police Station	31-33 Church St	Cambridge	1864
CAM.1086	Oxford Grill	32-42 Church St	Cambridge	1931
CAM.1087	Hancock - Torrey House	53 Church St	Cambridge	1827
CAM.1088		54-56 Church St	Cambridge	1925
CAM.1089		59-63 Church St	Cambridge	1949
CAM.1377	Cambridge Almshouse Caretaker's House	36 Churchill Ave	Cambridge	1886
CAM.106	Gale, George House	14-16 Clinton St	Cambridge	1853
CAM.107	Beth Israel Synagogue	238 Columbia St	Cambridge	1901
CAM.908	Commercial Avenue Bridge over Lechmere Canal	Commercial Ave	Cambridge	1907
CAM.1318	Metropolitan District Commission Stables	Commercial Ave	Cambridge	
CAM.336		3 Concord Ave	Cambridge	1915
CAM.337		5 Concord Ave	Cambridge	1917
CAM.108	Howells, William Dean House	37 Concord Ave	Cambridge	1873
CAM.1365	Cambridge Home for the Aged and Infirm	650 Concord Ave	Cambridge	1928
CAM.109	Orne, Sarah House	10 Coolidge Hill Rd	Cambridge	1807
CAM.110	Coolidge, Josiah House	24 Coolidge Hill Rd	Cambridge	1822
CAM.111	Holmes, Joseph House	144 Coolidge Hill St	Cambridge	1801
CAM.600	Coolidge, Flavel House	2 Coolidge Pl	Cambridge	1834
CAM.1369	Blessed Sacrament Roman Catholic Parish School	12 Corporal McTernan St	Cambridge	1924
CAM.112	Valentine Soap Workers' Cottage	5-7 Cottage St	Cambridge	1835
CAM.1212	Mather House - Harvard University	Cowperthwaite St	Cambridge	1967
CAM.113	Birkhoff, George D. House	22 Craigie St	Cambridge	1870
CAM.114	Ross, Denman House	24-26 Craigie St	Cambridge	1869
CAM.115		25 Craigie St	Cambridge	1856

Inv. No.	Property Name	Street	Town	Year
CAM.116	Horsford, Eben House	27 Craigie St	Cambridge	1854
CAM.333	Day, Anna House	139 Cushing St	Cambridge	1856
CAM.117	Colburn, Sara Foster House	7 Dana St	Cambridge	1841
CAM.118	University Museum	11-25 Divinity Ave	Cambridge	1859
CAM.119	Divinity Hall	12 Divinity Ave	Cambridge	1825
CAM.120	Biological Laboratory	16 Divinity Ave	Cambridge	1930
CAM.121	Second Cambridge Savings Bank Building	11-21 Dunster St	Cambridge	1897
CAM.1090	Union Railway Car barn	25-33 Dunster St	Cambridge	1860
CAM.1091	Second D. U. Club	45 Dunster St	Cambridge	1930
CAM.1092	Metcalf, Eliab Wight House	46 Dunster St	Cambridge	1820
CAM.1093	Edwards, Abraham - Moore, Mary House	53 Dunster St	Cambridge	1841
CAM.1094	Alpha Sigma Phi Club	54 Dunster St	Cambridge	1900
CAM.122	Wyeth, Augustus House	69 Dunster St	Cambridge	1829
CAM.1095		71-77 Dunster St	Cambridge	1894
CAM.123		42 Edward J. Lopez Ave	Cambridge	1830
CAM.1096	Hotel Packard	10-14 Eliot St	Cambridge	1869
CAM.1097		14A Eliot St	Cambridge	1900
CAM.1098		16-18 Eliot St	Cambridge	1898
CAM.124	Sands, Ivory House	145 Elm St	Cambridge	1839
CAM.125	Foster, Dr. House	8 Elmwood Ave	Cambridge	1893
CAM.126	Greenough, J. J. House	9 Elmwood Ave	Cambridge	1903
CAM.127	Smyth, Herbert House	11-15 Elmwood Ave	Cambridge	1903
CAM.128	Kempton, John House	14 Elmwood Ave	Cambridge	1895
CAM.129		20 Elmwood Ave	Cambridge	1892
CAM.130	Benson, Ruth House	26 Elmwood Ave	Cambridge	1899
CAM.131	Watson House	30 Elmwood Ave	Cambridge	1750
CAM.132	Elmwood - Lowell, James Russell House	33 Elmwood Ave	Cambridge	1767
CAM.133	Reardon, Edmund House	195 Erie St	Cambridge	1884
CAM.1371	Blessed Sacrament Roman Catholic Church Convent	203 Erie St	Cambridge	1954
CAM.134	Harvard Graduate Center	10-26 Everett St	Cambridge	1949
CAM.135	Jarvis, The	27 Everett St	Cambridge	1890
CAM.136	Newman, Andrew House	23 Fairmont St	Cambridge	1823
CAM.713		2-4 Farrar St	Cambridge	1927
CAM.714		9 Farrar St	Cambridge	1890
CAM.715		15 Farrar St	Cambridge	1898
CAM.716		16 Farrar St	Cambridge	1931
CAM.717		17 Farrar St	Cambridge	1897

Inv. No.	Property Name	Street	Town	Year
CAM.718		18-20 Farrar St	Cambridge	1923
CAM.719		22 Farrar St	Cambridge	1928
CAM.720		26 Farrar St	Cambridge	1928
CAM.137		10-12 Farwell Pl	Cambridge	1870
CAM.138	Nichols House	11 Farwell Pl	Cambridge	1827
CAM.139		14-16 Farwell Pl	Cambridge	1855
CAM.140	Read, James House	15 Farwell Pl	Cambridge	1772
CAM.141	Child, N. K. House	17 Farwell Pl	Cambridge	1835
CAM.142		18-20 Farwell Pl	Cambridge	1855
CAM.143	Christ Church Parish House	19 Farwell Pl	Cambridge	1948
CAM.144	Toppan House	22-24 Farwell Pl	Cambridge	1900
CAM.145	Deane, Ezra - Williams, George House	21-23 Fayette St	Cambridge	1848
CAM.146		26-28 Fayette St	Cambridge	1857
CAM.430	Cambridge Public Library - O'Connell Branch	Fifth St	Cambridge	1938
CAM.441		69-71 Fifth St	Cambridge	
CAM.452	Hall, Jesse House	75 Fifth St	Cambridge	1837
CAM.428		82 Fifth St	Cambridge	
CAM.429		83 Fifth St	Cambridge	
CAM.907	First Street Bridge over Broad Canal	First St	Cambridge	1924
CAM.147	Athenaeum Press Building	215 First St	Cambridge	1895
CAM.910	Fitchburg Railroad Signal Bridge	Fitchburg Railroad	Cambridge	1930
CAM.148	Abbot, Edwin House	1 Follen St	Cambridge	1889
CAM.1271		5 Follen St	Cambridge	1853
CAM.1273		6 Follen St	Cambridge	1868
CAM.1338		8 Follen St	Cambridge	1871
CAM.149	Second Waterhouse House	9 Follen St	Cambridge	1844
CAM.150		10 Follen St	Cambridge	1875
CAM.1274		13 Follen St	Cambridge	1900
CAM.151	Richards, Theodore W. House	15 Follen St	Cambridge	1900
CAM.1275		19 Follen St	Cambridge	1844
CAM.1276		20 Follen St	Cambridge	1949
CAM.1277		21 Follen St	Cambridge	1841
CAM.1278		22 Follen St	Cambridge	1951
CAM.1279		25 Follen St	Cambridge	1889
CAM.152	Clover Den - Mann, Mary House	29 Follen St	Cambridge	1837
CAM.1280		34 Follen St	Cambridge	1946
CAM.1281		36 Follen St	Cambridge	1847
CAM.1282		44 Follen St	Cambridge	1862

Inv. No.	Property Name	Street	Town	Year
CAM.338	Puritan Arms	46-50 Follen St	Cambridge	1940
CAM.1331	Homer - Lovell House	11 Forest St	Cambridge	1867
CAM.153	Francis, Ebenezer Houuse	1 Francis Ave	Cambridge	1836
CAM.721		6 Francis Ave	Cambridge	1940
CAM.722		7 Francis Ave	Cambridge	1894
CAM.723		8 Francis Ave	Cambridge	1940
CAM.724		9 Francis Ave	Cambridge	1875
CAM.725		10 Francis Ave	Cambridge	1894
CAM.726		11 Francis Ave	Cambridge	1894
CAM.1337		12-14 Francis Ave	Cambridge	1895
CAM.727		16 Francis Ave	Cambridge	1906
CAM.154	Davis, William Morris House	17 Francis Ave	Cambridge	1895
CAM.728		18 Francis Ave	Cambridge	1911
CAM.155	Hyatt, Prof. Alpheus - Durant, Prof. Will B. House	19 Francis Ave	Cambridge	1889
CAM.729		21 Francis Ave	Cambridge	1925
CAM.730		22 Francis Ave	Cambridge	1912
CAM.731		23 Francis Ave	Cambridge	1902
CAM.732		24 Francis Ave	Cambridge	1906
CAM.733		30 Francis Ave	Cambridge	1905
CAM.734		32 Francis Ave	Cambridge	1903
CAM.735	Center for the Study of World Religions	42 Francis Ave	Cambridge	1959
CAM.736		44 Francis Ave	Cambridge	1913
CAM.737		53 Francis Ave	Cambridge	1913
CAM.738		56 Francis Ave	Cambridge	1914
CAM.739		57 Francis Ave	Cambridge	1913
CAM.740		59 Francis Ave	Cambridge	1916
CAM.741		60 Francis Ave	Cambridge	1961
CAM.742		63 Francis Ave	Cambridge	1913
CAM.743	Sert, Jose Luis House	64 Francis Ave	Cambridge	1957
CAM.744		65 Francis Ave	Cambridge	1916
CAM.745		67 Francis Ave	Cambridge	1926
CAM.746		68 Francis Ave	Cambridge	1921
CAM.747		70 Francis Ave	Cambridge	1879
CAM.748		73 Francis Ave	Cambridge	1926
CAM.749		75-77 Francis Ave	Cambridge	1925
CAM.1329	Kennedy, F. A. Steam Bakery	129 Franklin St	Cambridge	1875
CAM.919	Fresh Pond Lane over B & M Railroad	Fresh Pond Ln	Cambridge	1926
CAM.9014	Fresh Pond Parkway	Fresh Pond Pkwy	Cambridge	1899

Inv. No.	Property Name	Street	Town	Year
CAM.9015	Fresh Pond Parkway - Concord Avenue Rotary Islands	Fresh Pond Pkwy	Cambridge	1928
CAM.9016	Fresh Pond Parkway - New Street Rotary	Fresh Pond Pkwy	Cambridge	1928
CAM.9017	Fresh Pond Parkway Tree Canopy	Fresh Pond Pkwy	Cambridge	1920
CAM.9018	Fresh Pond Parkway Median System	Fresh Pond Pkwy	Cambridge	1958
CAM.156	Wyeth - Eliot, Charles House	17 Fresh Pond Pkwy	Cambridge	1838
CAM.157	Frost, Walter House	10 Frost St	Cambridge	1807
CAM.800	Old Burying Ground	Garden St	Cambridge	1750
CAM.940	Milestone, 1767	Garden St	Cambridge	1734
CAM.158	Christ Church	0 Garden St	Cambridge	1760
CAM.159	Saunders, William House	1 Garden St	Cambridge	1821
CAM.339		2 Garden St	Cambridge	1835
CAM.340	Howe, Sarah House	3 Garden St	Cambridge	1851
CAM.160	First Church in Cambridge Congregational	11 Garden St	Cambridge	1870
CAM.341		17-19 Garden St	Cambridge	1926
CAM.161	Sears Tower - Harvard Observatory	60 Garden St	Cambridge	1843
CAM.162	Warner House	63 Garden St	Cambridge	1855
CAM.163	Gray, Asa House	88 Garden St	Cambridge	1810
CAM.1240		91 Garden St	Cambridge	1922
CAM.164	Taylor Square Firehouse	113 Garden St	Cambridge	1904
CAM.165	Warren, H. Langford House	6 Garden Terr	Cambridge	1904
CAM.671	Rollins, John House	16 Garfield St	Cambridge	1891
CAM.672	Wood, Edward House	18 Garfield St	Cambridge	1886
CAM.1336	Shepherd, Herbert House	31-33 Garfield St	Cambridge	1886
CAM.673	Farquhar, Robert House	34 Garfield St	Cambridge	1890
CAM.674	Coon, Sarah House	36 Garfield St	Cambridge	1887
CAM.666	Shepherd, Edward House	39 Garfield St	Cambridge	1885
CAM.675	Thayer, Bertha House	44 Garfield St	Cambridge	1888
CAM.667	Estabrook, J. W. House	45 Garfield St	Cambridge	1886
CAM.668	Bartlett, A. S. House	49 Garfield St	Cambridge	1888
CAM.676	Green, Roscoe House	54 Garfield St	Cambridge	1890
CAM.669	Dewey House	55 Garfield St	Cambridge	1889
CAM.677	Worcester, George House	58 Garfield St	Cambridge	1890
CAM.678	Allen, Frank House	64 Garfield St	Cambridge	1891
CAM.670	Sullivan, Cornelius House	67 Garfield St	Cambridge	1889
CAM.679	Farnsworth, Charles House	74 Garfield St	Cambridge	1897
CAM.680	Ball, Elijah House	80 Garfield St	Cambridge	1887
CAM.502	Lechmere Point Corporation Row House	47 Gore St	Cambridge	1821

Inv. No.	Property Name	Street	Town	Year
CAM.503	Lechmere Point Corporation Row House	49 Gore St	Cambridge	1821
CAM.504	Lechmere Point Corporation Row House	51 Gore St	Cambridge	1821
CAM.1241		1 Gray Gardens East	Cambridge	1925
CAM.1242		2 Gray Gardens East	Cambridge	1930
CAM.1243		3 Gray Gardens East	Cambridge	1923
CAM.1244		8 Gray Gardens East	Cambridge	1923
CAM.1245		9 Gray Gardens East	Cambridge	1922
CAM.1246		11 Gray Gardens East	Cambridge	1924
CAM.1247		12 Gray Gardens East	Cambridge	1922
CAM.1248		13 Gray Gardens East	Cambridge	1925
CAM.1249		16 Gray Gardens East	Cambridge	1922
CAM.1250		17 Gray Gardens East	Cambridge	1958
CAM.1251		19 Gray Gardens East	Cambridge	1927
CAM.1252		22 Gray Gardens East	Cambridge	1962
CAM.1253		25 Gray Gardens East	Cambridge	1926
CAM.1254		26 Gray Gardens East	Cambridge	1922
CAM.1255		27 Gray Gardens East	Cambridge	1923
CAM.1256		30 Gray Gardens East	Cambridge	1928
CAM.1257		31 Gray Gardens East	Cambridge	1924
CAM.1258		37 Gray Gardens East	Cambridge	1923
CAM.1259		3 Gray Gardens West	Cambridge	1923
CAM.1260		4 Gray Gardens West	Cambridge	1922
CAM.1261		11 Gray Gardens West	Cambridge	1923
CAM.1262		14 Gray Gardens West	Cambridge	1924
CAM.1263		15 Gray Gardens West	Cambridge	1929
CAM.1264		16 Gray Gardens West	Cambridge	1925
CAM.167	Hall Tavern	20 Gray Gardens West	Cambridge	1800
CAM.1265		24 Gray Gardens West	Cambridge	1928
CAM.166	Frost, David House	26 Gray St	Cambridge	1815
CAM.618		133 Green St	Cambridge	1894
CAM.624		175 Green St	Cambridge	
CAM.534	Inman Square Fire Station	Hampshire St	Cambridge	1912
CAM.168	Lamson, Rufus House	72-74 Hampshire St	Cambridge	1854
CAM.1367	Massachusetts Avenue Baptist Church	146 Hampshire St	Cambridge	1902
CAM.169	Opposition House	2-4 Hancock Pl	Cambridge	1807
CAM.170		104-106 Hancock St	Cambridge	1839
CAM.171	Atwood, Ephraim House	110 Hancock St	Cambridge	1839
CAM.536	Fay, Samuel P. P. House	172 Harvard St	Cambridge	1805

Inv. No.	Property Name	Street	Town	Year
CAM.549	Allen Block	177-183 Harvard St	Cambridge	1875
CAM.1354	Courtney, Benjamin House	273 Harvard St	Cambridge	1867
CAM.172	Jones, William R. House	307 Harvard St	Cambridge	1865
CAM.173	Vinal, Albert House	325 Harvard St	Cambridge	1853
CAM.681	Melledge, James P. House	335 Harvard St	Cambridge	1850
CAM.684	Warner, Caleb House	336 Harvard St	Cambridge	1858
CAM.682		337 Harvard St	Cambridge	1887
CAM.685	Frothingham, Amos House	338 Harvard St	Cambridge	1859
CAM.686	Goepper, William House	340 Harvard St	Cambridge	1897
CAM.683		341-343 Harvard St	Cambridge	1855
CAM.687	Rindge, Samuel Baker House	342-344 Harvard St	Cambridge	1857
CAM.174	Bradbury, William F. House	369 Harvard St	Cambridge	1877
CAM.175	Hapgood, Richard House	382-392 Harvard St	Cambridge	1889
CAM.176	Ware Hall	383 Harvard St	Cambridge	1893
CAM.1099	Delta Upsilon Club	396 Harvard St	Cambridge	1914
CAM.177	Old Cambridge Baptist Church	398 Harvard St	Cambridge	1867
CAM.193	Austin Hall	Harvard University	Cambridge	1881
CAM.178	Holden Chapel - Harvard University	Harvard Yard	Cambridge	1764
CAM.179	Sever Hall	Harvard Yard	Cambridge	1880
CAM.180	University Hall	Harvard Yard	Cambridge	1812
CAM.181	Harvard Hall - Harvard University	Harvard Yard	Cambridge	1764
CAM.182	Hollis Hall - Harvard University	Harvard Yard	Cambridge	1762
CAM.183	Massachusetts Hall	Harvard Yard	Cambridge	1718
CAM.184	Weld Hall - Harvard University	Harvard Yard	Cambridge	1870
CAM.185	Boylston Hall - Harvard University	Harvard Yard	Cambridge	1857
CAM.186	Holworthy Hall - Harvard University	Harvard Yard	Cambridge	1811
CAM.187	Grays Hall - Harvard University	Harvard Yard	Cambridge	1862
CAM.188	Lehman Hall - Harvard University	Harvard Yard	Cambridge	1924
CAM.189	Matthews House - Harvard University	Harvard Yard	Cambridge	1871
CAM.190	Straus Hall - Harvard University	Harvard Yard	Cambridge	1926
CAM.191	Thayer Hall - Harvard University	Harvard Yard	Cambridge	1869
CAM.192	Wigglesworth Hall - Harvard University	Harvard Yard	Cambridge	1930
CAM.953	Harvard University - 1857 Gate	Harvard Yard	Cambridge	1901
CAM.954	Harvard University - 1870 Gate	Harvard Yard	Cambridge	1901
CAM.955	Harvard University - 1873 Tablet	Harvard Yard	Cambridge	1901
CAM.956	Harvard University - 1874 Gate	Harvard Yard	Cambridge	1901
CAM.957	Harvard University - 1875 Gate	Harvard Yard	Cambridge	1901
CAM.958	Harvard University - 1881 Gate	Harvard Yard	Cambridge	1906

Inv. No.	Property Name	Street	Town	Year
CAM.959	Harvard University - 1885 Gate	Harvard Yard	Cambridge	1904
CAM.960	Harvard University - 1886 Gate	Harvard Yard	Cambridge	1901
CAM.961	Harvard University - 1887 Gate	Harvard Yard	Cambridge	1906
CAM.962	Harvard University - 1888 Gate	Harvard Yard	Cambridge	1906
CAM.963	Harvard University - 1889 Gate	Harvard Yard	Cambridge	1901
CAM.964	Harvard University - 1890 Gate	Harvard Yard	Cambridge	1901
CAM.965	Harvard University - 1880 Gate	Harvard Yard	Cambridge	1902
CAM.966	Harvard University - Bradley Fountain	Harvard Yard	Cambridge	1910
CAM.967	Harvard University - Chinese Steel	Harvard Yard	Cambridge	1810
CAM.968	Harvard University - Delivery Gate	Harvard Yard	Cambridge	1948
CAM.969	Harvard University - Driveway Gate	Harvard Yard	Cambridge	1948
CAM.970	Harvard University - 1908 Gate	Harvard Yard	Cambridge	1936
CAM.971	Harvard University - Emerson Gate	Harvard Yard	Cambridge	1936
CAM.972	Harvard University - Fire Station Gate	Harvard Yard	Cambridge	1970
CAM.973	Harvard University - Hollis Pump	Harvard Yard	Cambridge	1936
CAM.974	Harvard University - 1876 Gate	Harvard Yard	Cambridge	1901
CAM.975	Harvard University - Harvard, John Statue	Harvard Yard	Cambridge	1884
CAM.976	Harvard University - Johnston Gate	Harvard Yard	Cambridge	1889
CAM.977	Harvard University - Lamont Gate	Harvard Yard	Cambridge	1948
CAM.978	Harvard University - Gatehouse	Harvard Yard	Cambridge	1983
CAM.979	Harvard University - 1879 Gate	Harvard Yard	Cambridge	1891
CAM.980	Harvard University - Onion	Harvard Yard	Cambridge	1965
CAM.981	Harvard University - Porcellian Gate	Harvard Yard	Cambridge	1901
CAM.982	Harvard University - Reclining Figure	Harvard Yard	Cambridge	1972
CAM.983	Harvard University - Robinson Gate	Harvard Yard	Cambridge	1936
CAM.984	Harvard University - 1870 Sundial	Harvard Yard	Cambridge	1901
CAM.985	Harvard University - 1877 Gate	Harvard Yard	Cambridge	1901
CAM.1214	Harvard University - Canaday Hall	Harvard Yard	Cambridge	1973
CAM.1215	Harvard University - Emerson Hall	Harvard Yard	Cambridge	1904
CAM.1216	Harvard University - Houghton Library	Harvard Yard	Cambridge	1941
CAM.1217	Harvard University - Lamont Library	Harvard Yard	Cambridge	1947
CAM.1218	Harvard University - Lionel Hall	Harvard Yard	Cambridge	1924
CAM.1219	Harvard University - Memorial Church	Harvard Yard	Cambridge	1931
CAM.1220	Harvard University - Mower Hall	Harvard Yard	Cambridge	1924
CAM.1221	Brooks, Phillips House - Harvard Univsersity	Harvard Yard	Cambridge	1898
CAM.1222	Harvard University - Pusey Library	Harvard Yard	Cambridge	1973
CAM.1223	Harvard University - Robinson Hall	Harvard Yard	Cambridge	1900
CAM.1224	Harvard University - Stoughton Hall	Harvard Yard	Cambridge	1804

Inv. No.	Property Name	Street	Town	Year
CAM.1227	Harvard University - Widener Library	Harvard Yard	Cambridge	1913
CAM.520		6 Hastings Sq	Cambridge	1884
CAM.1231	Bates, Jacob H. House	11 Hawthorn St	Cambridge	1813
CAM.194	Daly, Reginald A. House	23 Hawthorn St	Cambridge	1885
CAM.195	Wadsworth House	31 Hawthorn St	Cambridge	1935
CAM.196		35 Hawthorn St	Cambridge	1935
CAM.197	Glaser, Dorothy Merriless House	37 Hawthorn St	Cambridge	1937
CAM.198	Maynardier, G. B. House	41 Hawthorn St	Cambridge	1911
CAM.199		43 Hawthorn St	Cambridge	1900
CAM.1232		49 Hawthorn St	Cambridge	1900
CAM.521		75 Henry St	Cambridge	1892
CAM.1343	Noyes, J. A. House	82-84 Henry St	Cambridge	
CAM.200		1 Highland St	Cambridge	1894
CAM.796	Usher, Samuel House	11 Hillside Ave	Cambridge	1887
CAM.750		11 Holden St	Cambridge	1928
CAM.751		41 Holden St	Cambridge	1840
CAM.752		45 Holden St	Cambridge	1928
CAM.1100	Fly Club	2 Holyoke Pl	Cambridge	1899
CAM.1101		9 Holyoke Pl	Cambridge	1930
CAM.1197	Lowell House - Harvard University	10 Holyoke Pl	Cambridge	1929
CAM.1198	Indoor Athletic Building - Harvard University	35-41 Holyoke Pl	Cambridge	1929
CAM.1102		8-10 Holyoke St	Cambridge	1927
CAM.201	Hasty Pudding Club	12 Holyoke St	Cambridge	1887
CAM.1103	Apley Court	16 Holyoke St	Cambridge	1897
CAM.1104	Sawyer, Samuel F. House	20 Holyoke St	Cambridge	1818
CAM.1105		22 Holyoke St	Cambridge	1956
CAM.1106		24 Holyoke St	Cambridge	1963
CAM.1107		30 Holyoke St	Cambridge	1905
CAM.1302	Owl Club	2 Hubbard Pk	Cambridge	1909
CAM.1293		3 Hubbard Pk	Cambridge	1887
CAM.1306	Warren, John L. House	5 Hubbard Pk	Cambridge	1922
CAM.1305	Paine, George House	6 Hubbard Pk	Cambridge	1918
CAM.1295		8 Hubbard Pk	Cambridge	1888
CAM.1301	Nutting, Lillian House	12 Hubbard Pk	Cambridge	1908
CAM.1297		14 Hubbard Pk	Cambridge	1892
CAM.1304		15 Hubbard Pk	Cambridge	1914
CAM.1303	Beach, Revel W. House	19 Hubbard Pk	Cambridge	1913
CAM.1298		20 Hubbard Pk	Cambridge	1892

Inv. No.	Property Name	Street	Town	Year
CAM.1299		26 Hubbard Pk	Cambridge	1894
CAM.1296		32 Hubbard Pk	Cambridge	1890
CAM.1346		15 Humboldt St	Cambridge	
CAM.904	Huron Avenue Bridge over B & M Railroad	Huron Ave	Cambridge	1892
CAM.202	Syrian Orthodox Catholic Church of Saint Mary	8 Inman St	Cambridge	1822
CAM.576	Matthews Apartments	12 Inman St	Cambridge	1966
CAM.1364	Bennett, James House	17 Inman St	Cambridge	1871
CAM.1349	Luke Rowhouse	19 Inman St	Cambridge	1877
CAM.1350	Luke Rowhouse	21 Inman St	Cambridge	1877
CAM.1351	Luke Rowhouse	21 1/2 Inman St	Cambridge	1877
CAM.203		102-104 Inman St	Cambridge	1845
CAM.204		106-108 Inman St	Cambridge	1845
CAM.205		110-112 Inman St	Cambridge	1845
CAM.753		80-82 Irving St	Cambridge	1927
CAM.754		81 Irving St	Cambridge	1916
CAM.755		84-86 Irving St	Cambridge	1927
CAM.756		89 Irving St	Cambridge	1916
CAM.206	James, William House	95 Irving St	Cambridge	1889
CAM.757		99 Irving St	Cambridge	1889
CAM.758		103-103A Irving St	Cambridge	1889
CAM.207	cummings, e. e. House	104 Irving St	Cambridge	1893
CAM.759	Van Dael - DeSola Pool House	105 Irving St	Cambridge	1890
CAM.760		107 Irving St	Cambridge	1891
CAM.761		109 Irving St	Cambridge	1893
CAM.762	Davis, Robert House	110 Irving St	Cambridge	1889
CAM.763		114 Irving St	Cambridge	1911
CAM.764		133 Irving St	Cambridge	1963
CAM.765	American Academy of Arts and Sciences	136 Irving St	Cambridge	1980
CAM.766		138 Irving St	Cambridge	1912
CAM.297	Radcliffe College - Schlesinger Library	James St	Cambridge	1907
CAM.950	Winthrop Square Park	Kennedy St	Cambridge	1631
CAM.1108	Abbott Building	5 Kennedy St	Cambridge	1908
CAM.1109		9-25 Kennedy St	Cambridge	1887
CAM.1110	Farwell, Levi Tenant House	10-14 Kennedy St	Cambridge	1820
CAM.1111	Read Block	18-28 Kennedy St	Cambridge	1885
CAM.1112		29-41 Kennedy St	Cambridge	1971
CAM.1113		30 Kennedy St	Cambridge	1936
CAM.1114	Garage, The	34-42 Kennedy St	Cambridge	1924

Inv. No.	Property Name	Street	Town	Year
CAM.1115	Fox Club	44 Kennedy St	Cambridge	1906
CAM.1116	Drayton Hall	48 Kennedy St	Cambridge	1901
CAM.1117		50 Kennedy St	Cambridge	1892
CAM.1118		52-54 Kennedy St	Cambridge	1884
CAM.1119	Galeria	55-57 Kennedy St	Cambridge	1974
CAM.1120		56 Kennedy St	Cambridge	1903
CAM.1121	S. A. E. Club	60 Kennedy St	Cambridge	1929
CAM.1122		63-65 Kennedy St	Cambridge	1984
CAM.1200	Hicks, John House - Harvard University	64 Kennedy St	Cambridge	1762
CAM.1199	Smith Hall - Harvard University	70-78 Kennedy St	Cambridge	1913
CAM.208	Loring, Judge Edward - Peirce, Benjamin House	4 Kirkland Pl	Cambridge	1856
CAM.688	Merrill, John House	9 Kirkland Pl	Cambridge	1855
CAM.689	Shaw, Southworth House	10 Kirkland Pl	Cambridge	1856
CAM.690	Green, Louise House	11 Kirkland Pl	Cambridge	1921
CAM.691	Cutler, Isaac House	12 Kirkland Pl	Cambridge	1857
CAM.692	Cutler, George House	13 Kirkland Pl	Cambridge	1857
CAM.693	Ware House	14 Kirkland Pl	Cambridge	1839
CAM.209	Treadwell - Sparks House	21 Kirkland St	Cambridge	1838
CAM.210	Brooks, Luther House	34 Kirkland St	Cambridge	1840
CAM.211	Lovering, Joseph House	38 Kirkland St	Cambridge	1839
CAM.767		49 Kirkland St	Cambridge	1886
CAM.768		55 Kirkland St	Cambridge	1927
CAM.769		57-59 Kirkland St	Cambridge	1927
CAM.212	Eliot, Charles W. House	61 Kirkland St	Cambridge	1858
CAM.213	Child, Francis J. House	67 Kirkland St	Cambridge	1861
CAM.214	Fresh Pond Hotel	234 Lakeview Ave	Cambridge	1796
CAM.1013		13 Lancaster St	Cambridge	1880
CAM.1005		16 Lancaster St	Cambridge	1892
CAM.1006		18 Lancaster St	Cambridge	1885
CAM.1007		24 Lancaster St	Cambridge	1883
CAM.1014	Sawyer, Chester House	27 Lancaster St	Cambridge	1886
CAM.1015	Hovey, William B. House	29 Lancaster St	Cambridge	1887
CAM.1008		36 Lancaster St	Cambridge	1886
CAM.215	Yerxa House and Carriage House	37 Lancaster St	Cambridge	1887
CAM.216	Larches, The	22 Larch Rd	Cambridge	1808
CAM.1317	Metropolitan District Commission Boat House	Lechmere Canal	Cambridge	1910
CAM.217		15-17 Lee St	Cambridge	1856
CAM.218	Lowell, The	33 Lexington Ave	Cambridge	1900

Inv. No.	Property Name	Street	Town	Year
CAM.1123		5-7 Linden St	Cambridge	1867
CAM.1124	Harvard Square Squash Court	8-10 Linden St	Cambridge	1908
CAM.1125	Delphic Club	9 Linden St	Cambridge	1902
CAM.219	Apthorp, Rev. East House	10 Linden St	Cambridge	1760
CAM.220	Cooper - Frost - Austin House	21 Linnaean St	Cambridge	1681
CAM.221	Peabody Court Apartments	41-43 Linnaean St	Cambridge	1922
CAM.1234	Cambridge Friends Meetinghouse and Center	5 Longfellow Pk	Cambridge	1914
CAM.1233		6 Longfellow Pk	Cambridge	1901
CAM.222	Lowell School	25 Lowell St	Cambridge	1883
CAM.1319	Magazine Beach Bath House	Magazine Beach	Cambridge	1899
CAM.223	First Baptist Church, Cambridge	5 Magazine St	Cambridge	1881
CAM.510	Pilgrim Congregational Church	35 Magazine St	Cambridge	1871
CAM.511	Hinman, Joseph House	48 Magazine St	Cambridge	1875
CAM.512	Brewer, Isaac D. - Pulsifer, William Double House	50-52 Magazine St	Cambridge	1852
CAM.513	Grace Methodist Church	56 Magazine St	Cambridge	1886
CAM.224	Flentje, Ernst House	129 Magazine St	Cambridge	1866
CAM.991	Shell Sign	187 Magazine St	Cambridge	1933
CAM.87	Kendall Square Subway Station	Main St	Cambridge	1912
CAM.225	Kendall Square Substation	Main St	Cambridge	1911
CAM.1308	Davenport - Allen and Endicott Factory Headhouse	Main St	Cambridge	1882
CAM.1309	Davenport - Allen and Endicott Factory East Wing	Main St	Cambridge	1848
CAM.1335	Luke Building	135-145 Main St	Cambridge	1874
CAM.612	Lamson, The	351-355 Main St	Cambridge	1907
CAM.328	Union #2 Engine House	787-789 Main St	Cambridge	1852
CAM.609	Bright Building	853 Main St	Cambridge	1898
CAM.608	Wentworth Building	859-863 Main St	Cambridge	1897
CAM.610	Union Baptist Church	872 Main St	Cambridge	1882
CAM.607	Mellen Building	875 Main St	Cambridge	1897
CAM.611	Sawyer, Charles Tenement	882-884 Main St	Cambridge	1873
CAM.605	Whitney, Lucretia and Henry Building	893-907 Main St	Cambridge	1870
CAM.703		6 Maple Ave	Cambridge	
CAM.694	Stevens, Charles B. House	8 Maple Ave	Cambridge	1873
CAM.704		12 Maple Ave	Cambridge	
CAM.705		14-16 Maple Ave	Cambridge	
CAM.702		15 Maple Ave	Cambridge	
CAM.701		19 Maple Ave	Cambridge	

Inv. No.	Property Name	Street	Town	Year
CAM.697	Webster, Francis B. House	20 Maple Ave	Cambridge	1861
CAM.695	Hall, Lewis House	23 Maple Ave	Cambridge	1867
CAM.706		24 Maple Ave	Cambridge	
CAM.700		25 Maple Ave	Cambridge	1920
CAM.707		26 Maple Ave	Cambridge	
CAM.699		27 Maple Ave	Cambridge	
CAM.698		29 Maple Ave	Cambridge	
CAM.696	Munroe, Philip House	31 Maple Ave	Cambridge	1887
CAM.226	Mason, Josiah Jr. House	11 Market St	Cambridge	1831
CAM.295	Radcliffe College Gymnasium	Mason St	Cambridge	1898
CAM.296	Radcliffe College - Agassiz House	Mason St	Cambridge	1904
CAM.227	Norton House Ell	4 Mason St	Cambridge	1847
CAM.228		6-12 Mason St	Cambridge	
CAM.260	M. I. T. Alumni Swimming Pool Building	Massachusetts Ave	Cambridge	1940
CAM.261	Kresge Auditorium	Massachusetts Ave	Cambridge	1953
CAM.262	M. I. T. Chapel	Massachusetts Ave	Cambridge	1954
CAM.901	Harvard Square Subway Kiosk	Massachusetts Ave	Cambridge	1928
CAM.905	Massachusetts Avenue Bridge over Conrail	Massachusetts Ave	Cambridge	1900
CAM.916	Central Square Subway Station	Massachusetts Ave	Cambridge	1912
CAM.921	Harvard Bridge	Massachusetts Ave	Cambridge	1890
CAM.938	Cambridge Common	Massachusetts Ave	Cambridge	1631
CAM.939	Cambridge Common South Traffic Island	Massachusetts Ave	Cambridge	1976
CAM.945	Burying Ground Fence	Massachusetts Ave	Cambridge	1891
CAM.946	Flagstaff Park	Massachusetts Ave	Cambridge	1913
CAM.947	North Little Common	Massachusetts Ave	Cambridge	1858
CAM.949	Central Square Street Pattern	Massachusetts Ave	Cambridge	1630
CAM.334	Cambridge Armory	120 Massachusetts Ave	Cambridge	1902
CAM.332	Metropolitan Storage Warehouse	134 Massachusetts Ave	Cambridge	1895
CAM.1366	New England Confectionery Company Factory	250 Massachusetts Ave	Cambridge	1927
CAM.614	Lafayette Square Fire Station	378 Massachusetts Ave	Cambridge	1893
CAM.613	Shell Gas Station	385 Massachusetts Ave	Cambridge	1948
CAM.615	Salvation Army - Cambridge Citadel	400-402 Massachusetts Ave	Cambridge	1968
CAM.604		401-409 Massachusetts Ave	Cambridge	
CAM.603	Taylor, William A. House and Shop	411-413 Massachusetts Ave	Cambridge	1887
CAM.602	Barkin and Gorfinkle Building	415-429 Massachusetts Ave	Cambridge	1925
CAM.616	Cambridge Furniture Store	424 Massachusetts Ave	Cambridge	1903
CAM.617	Cambridge Furniture Store	428 Massachusetts Ave	Cambridge	1925
CAM.229	Kennedy, The	430-442 Massachusetts Ave	Cambridge	1890

Inv. No.	Property Name	Street	Town	Year
CAM.601	Robbins Building	433-447 Massachusetts Ave	Cambridge	1923
CAM.619	Blanchard Building	448-450 Massachusetts Ave	Cambridge	1886
CAM.324	South Row	452-458 Massachusetts Ave	Cambridge	1807
CAM.599	Rogers, F. W. and G. M. Building	453-457 Massachusetts Ave	Cambridge	1885
CAM.620	Freedman Building	460-464 Massachusetts Ave	Cambridge	1933
CAM.598	McDonald's Restaurant	463-467 Massachusetts Ave	Cambridge	1974
CAM.621	Central Square Realty Trust Building	468-480 Massachusetts Ave	Cambridge	1929
CAM.597	Moller's Furniture Store	485 Massachusetts Ave	Cambridge	1926
CAM.622	Longfellow, The	492-498 Massachusetts Ave	Cambridge	1893
CAM.596	Kane's Furniture Store	493-507 Massachusetts Ave	Cambridge	1916
CAM.625	Burger King Restaraunt	502-510 Massachusetts Ave	Cambridge	1970
CAM.595	Central Trust Building	515-527 Massachusetts Ave	Cambridge	1927
CAM.627	Miller Store	520 Massachusetts Ave	Cambridge	1924
CAM.628	Rosenwald Realty Corporation Building	522-526 Massachusetts Ave	Cambridge	1928
CAM.230	Odd Fellows Hall	534-538 Massachusetts Ave	Cambridge	1884
CAM.594	Powers, Hannah J. Building	541-563 Massachusetts Ave	Cambridge	1935
CAM.629	Clark - Lamb Building	546-550 Massachusetts Ave	Cambridge	1873
CAM.630	Albani Building	552-566 Massachusetts Ave	Cambridge	1925
CAM.592	Bullock, Charles Building	567-569 Massachusetts Ave	Cambridge	1859
CAM.591	Central Square Theater	571-577 Massachusetts Ave	Cambridge	1917
CAM.631	Ginsberg Building - Harvard Bazar	572-590 Massachusetts Ave	Cambridge	1913
CAM.590	Morse, Asa P. Building	579-587 Massachusetts Ave	Cambridge	1893
CAM.589	Cambridgeport National Bank Building	593-597 Massachusetts Ave	Cambridge	1869
CAM.632	Manhattan Market - Purity Supreme Super Market	596-610 Massachusetts Ave	Cambridge	1899
CAM.588	Morse, Asa Second Building	599-601 Massachusetts Ave	Cambridge	1905
CAM.587	Fisk and Coleman Building	603-605 Massachusetts Ave	Cambridge	1892
CAM.633	Prospect House	614-620 Massachusetts Ave	Cambridge	1869
CAM.586	Corcoran, John H. Building	615-627 Massachusetts Ave	Cambridge	1927
CAM.634	Holmes Block I	624-634 Massachusetts Ave	Cambridge	1915
CAM.585	Woolworth, F. W. Building	633 Massachusetts Ave	Cambridge	1950
CAM.635	Holmes Block II - Green Block	636-638 Massachusetts Ave	Cambridge	1798
CAM.584	Watriss Building	643-649 Massachusetts Ave	Cambridge	1880
CAM.583	Dowse, Thomas House	653-655 Massachusetts Ave	Cambridge	1814
CAM.581	New England Gas and Electric Association II Bldg	671-675 Massachusetts Ave	Cambridge	1966
CAM.642	Central Square Building	674 Massachusetts Ave	Cambridge	1926
CAM.643	Chamberlain - Hyde Building	684-688 Massachusetts Ave	Cambridge	1869

Inv. No.	Property Name	Street	Town	Year
CAM.580	Cambridgeport Savings Bank	689 Massachusetts Ave	Cambridge	1904
CAM.644	Dana Building	692-698 Massachusetts Ave	Cambridge	1886
CAM.645	Southwick Building	700-706 Massachusetts Ave	Cambridge	1908
CAM.646	Norris Building	710-720 Massachusetts Ave	Cambridge	1915
CAM.579	Cambridge Electric Light Building	719 Massachusetts Ave	Cambridge	1912
CAM.647	Thayer Building	722-724 Massachusetts Ave	Cambridge	1863
CAM.648	Thayer Building II	728-730 Massachusetts Ave	Cambridge	1868
CAM.578	Southwick Building	731-751 Massachusetts Ave	Cambridge	1896
CAM.649		736-740 Massachusetts Ave	Cambridge	
CAM.650		746-750 Massachusetts Ave	Cambridge	
CAM.231	Cambridge Mutual Fire Insurance Company Building	763-765 Massachusetts Ave	Cambridge	1888
CAM.232	Central Square Post Office	770 Massachusetts Ave	Cambridge	1933
CAM.233	Cambridge City Hall	795 Massachusetts Ave	Cambridge	1889
CAM.651		800-806 Massachusetts Ave	Cambridge	
CAM.652	Young Men's Christian Association Building	820-830 Massachusetts Ave	Cambridge	1896
CAM.653	Saint Peter's Episcopal Church	836 Massachusetts Ave	Cambridge	1867
CAM.654	Modern Manor Apartments	844-864 Massachusetts Ave	Cambridge	1925
CAM.606		877-881 Massachusetts Ave	Cambridge	1980
CAM.900	Houghton Beech Tree	1000 Massachusetts Ave	Cambridge	
CAM.1127	Brentford Hall	1137 Massachusetts Ave	Cambridge	1899
CAM.1128	Dunham, Israel Houses	1156-1166 Massachusetts Ave	Cambridge	1858
CAM.1129		1168 Massachusetts Ave	Cambridge	1892
CAM.1130		1170-1174 Massachusetts Ave	Cambridge	1849
CAM.1131	Longfellow Court	1200 Massachusetts Ave	Cambridge	1916
CAM.1132	Gulf Gas Station	1201 Massachusetts Ave	Cambridge	1940
CAM.1133		1206 Massachusetts Ave	Cambridge	1965
CAM.1134		1208-1210 Massachusetts Ave	Cambridge	1842
CAM.1135	Quincy Hall	1218 Massachusetts Ave	Cambridge	1891
CAM.1136		1230 Massachusetts Ave	Cambridge	1907
CAM.1137		1234-1238 Massachusetts Ave	Cambridge	1894
CAM.1138	Hamden Hall	1246-1260 Massachusetts Ave	Cambridge	1902
CAM.1139	A. D. Club	1268-1270 Massachusetts Ave	Cambridge	1899
CAM.1140	Niles Building	1280 Massachusetts Ave	Cambridge	1984
CAM.234	Fairfax, The	1300-1306 Massachusetts Ave	Cambridge	1869
CAM.1141	Fairfax - Hilton Block	1310-1312 Massachusetts Ave	Cambridge	1883
CAM.1142	Fairfax - Hilton Block	1316 Massachusetts Ave	Cambridge	1885
CAM.235	Porcellian Club	1320-1324 Massachusetts Ave	Cambridge	1890

Inv. No.	Property Name	Street	Town	Year
CAM.1143	Manter Hall	1325 Massachusetts Ave	Cambridge	1885
CAM.236	Wadsworth House	1341 Massachusetts Ave	Cambridge	1726
CAM.237	Holyoke Center	1350 Massachusetts Ave	Cambridge	1961
CAM.1144	Cambridge Savings Bank	1372-1376 Massachusetts Ave	Cambridge	1923
CAM.1145	Read, Joseph Stacey House	1380-1382 Massachusetts Ave	Cambridge	1783
CAM.1146	Bartlett, Joseph House	1384-1392 Massachusetts Ave	Cambridge	1800
CAM.1147	Harvard Coop Society	1400 Massachusetts Ave	Cambridge	1924
CAM.1148	Harvard Coop Society	1408-1410 Massachusetts Ave	Cambridge	1956
CAM.1149	Harvard Trust Company	1414 Massachusetts Ave	Cambridge	1923
CAM.1150	College House	1420-1442 Massachusetts Ave	Cambridge	1832
CAM.342	Gannet House	1511 Massachusetts Ave	Cambridge	1838
CAM.343	Hemenway Gymnasium	1517 Massachusetts Ave	Cambridge	1938
CAM.344	Hastings Hall	1519 Massachusetts Ave	Cambridge	1888
CAM.345	Harvard Epworth Methodist Church	1555 Massachusetts Ave	Cambridge	1891
CAM.1334	Francis - Allyn House	1564 Massachusetts Ave	Cambridge	1831
CAM.1333	Sawin - Cobb - Wilson House	1626 Massachusetts Ave	Cambridge	1868
CAM.238	Saunders, Charles Hicks House	1627 Massachusetts Ave	Cambridge	1862
CAM.239	Montrose, The	1648 Massachusetts Ave	Cambridge	1898
CAM.240	Dunvegan, The	1654 Massachusetts Ave	Cambridge	1898
CAM.241	Worcester, Frederick House	1734 Massachusetts Ave	Cambridge	1886
CAM.242	North Avenue Congregational Church	1803 Massachusetts Ave	Cambridge	1845
CAM.243	Lovell Block	1853 Massachusetts Ave	Cambridge	1882
CAM.244	Saint James Episcopal Church	1991 Massachusetts Ave	Cambridge	1888
CAM.245	Henderson Carriage Repository	2067-2089 Massachusetts Ave	Cambridge	1892
CAM.246	Cornerstone Baptist Church	2114 Massachusetts Ave	Cambridge	1854
CAM.247	Mead, Alpheus House	2200 Massachusetts Ave	Cambridge	1867
CAM.248	Snow, Daniel House	2210 Massachusetts Ave	Cambridge	1868
CAM.249	McLean, Isaac House	2218 Massachusetts Ave	Cambridge	1894
CAM.250	Farwell, R. H. Double House	2222-2224 Massachusetts Ave	Cambridge	1891
CAM.251	Saint John's Roman Catholic Church	2270 Massachusetts Ave	Cambridge	1904
CAM.1376	Matignon Central Catholic High School	1 Matignon Rd	Cambridge	1946
CAM.1375	Immaculate Conception Catholic Church Convent	33 Matignon Rd	Cambridge	1954
CAM.252	Cambridge Almshouse	45 Matignon Rd	Cambridge	1850
CAM.1374	Cambridge Almshouse Dormitory	45 Matignon Rd	Cambridge	1887
CAM.566	M. I. T. - Pierce, Henry L. Engineering Laboratory	Memorial Dr	Cambridge	1913
CAM.567	M. I. T. - Buildings #2 and #8	Memorial Dr	Cambridge	1913
CAM.568	M. I. T. - Pratt School of Naval Architecture	Memorial Dr	Cambridge	1919

Inv. No.	Property Name	Street	Town	Year
CAM.569	M. I. T. - Homburg Infirmary	Memorial Dr	Cambridge	1927
CAM.570	M. I. T. - Eastman, George Research Laboratories	Memorial Dr	Cambridge	1931
CAM.571	M. I. T. - Rogers, William Barton Building	Memorial Dr	Cambridge	1937
CAM.572	M. I. T. - Walker Memorial	Memorial Dr	Cambridge	1913
CAM.573	M. I. T. - President's House	Memorial Dr	Cambridge	1913
CAM.574	M. I. T. - Senior House	Memorial Dr	Cambridge	1913
CAM.575	M. I. T. - Hayden Library	Memorial Dr	Cambridge	1949
CAM.930	Memorial Drive	Memorial Dr	Cambridge	1896
CAM.933	M. I. T. Memorial Underpass	Memorial Dr	Cambridge	1931
CAM.934	Feid, William J. Overpass	Memorial Dr	Cambridge	1939
CAM.1332	Little, Arthur D. Inc. Building	Memorial Dr	Cambridge	1917
CAM.253		100 Memorial Dr	Cambridge	1950
CAM.254	M. I. T. Main Courtyard	182-226 Memorial Dr	Cambridge	1913
CAM.255	Riverbank Court Hotel	305 Memorial Dr	Cambridge	1900
CAM.256	Baker House	362 Memorial Dr	Cambridge	1947
CAM.1327	Boston University Boat House	619 Memorial Dr	Cambridge	1913
CAM.257	B & B Chemical Company	780 Memorial Dr	Cambridge	1937
CAM.258	Peabody Terrace	900 Memorial Dr	Cambridge	1958
CAM.1201	Dunster House - Harvard University	945 Memorial Dr	Cambridge	1929
CAM.1202	Gore Hall - Harvard University	960 Memorial Dr	Cambridge	1913
CAM.1203	Standish Hall - Harvard University	966 Memorial Dr	Cambridge	1913
CAM.1204	Eliot House - Harvard University	967 Memorial Dr	Cambridge	1930
CAM.1324	Harvard University - Weld Boat House	971 Memorial Dr	Cambridge	1906
CAM.259	Conventual Church of Saint Mary and Saint John	980 Memorial Dr	Cambridge	1936
CAM.1267	Radnor Hall	983-984 Memorial Dr	Cambridge	1916
CAM.1268	Hampstead Hall	985-986 Memorial Dr	Cambridge	1916
CAM.1269	Barrington Court	987-989 Memorial Dr	Cambridge	1924
CAM.1270	Strathcona-on-the-Charles	992-993 Memorial Dr	Cambridge	1914
CAM.1290		1 Mercer Cir	Cambridge	1886
CAM.1300		2 Mercer Cir	Cambridge	1894
CAM.1287		3 Mercer Cir	Cambridge	1885
CAM.1288		4 Mercer Cir	Cambridge	1885
CAM.1294		5 Mercer Cir	Cambridge	1887
CAM.1291		6 Mercer Cir	Cambridge	1886
CAM.1307	Harris, William F. House	7 Mercer Cir	Cambridge	1922
CAM.1289		8 Mercer Cir	Cambridge	1885
CAM.1292		9 Mercer Cir	Cambridge	1886

Inv. No.	Property Name	Street	Town	Year
CAM.1151		11-15 Mifflin Pl	Cambridge	1901
CAM.1152		12-14 Mifflin Pl	Cambridge	1913
CAM.1153		17-19 Mifflin Pl	Cambridge	1972
CAM.1205	McKinlock Hall - Harvard University	8 Mill St	Cambridge	1926
CAM.1206	Leverett House Library and Towers - Harvard Univ.	14-18 Mill St	Cambridge	1958
CAM.263	Cambridge Neighborhood House	79 Moore St	Cambridge	1821
CAM.264	Reversible Collar Company Building	25-27 Mount Auburn St	Cambridge	1860
CAM.1154	Saint Paul's Rectory	32-36 Mount Auburn St	Cambridge	1924
CAM.1155	Speakers Club	43-45 Mount Auburn St	Cambridge	1845
CAM.1156		45 1/2 Mount Auburn St	Cambridge	1971
CAM.1157		47-49 Mount Auburn St	Cambridge	1926
CAM.1158	Claverly Hall	63 Mount Auburn St	Cambridge	1892
CAM.1159		65R Mount Auburn St	Cambridge	1957
CAM.1160	Ridgely Hall	65 Mount Auburn St	Cambridge	1904
CAM.1161	Manter Hall School	71-77 Mount Auburn St	Cambridge	1927
CAM.1162	Phoenix - S. K. Club	72 Mount Auburn St	Cambridge	1915
CAM.1163	Iroquois Club	74 Mount Auburn St	Cambridge	1916
CAM.1164	Spee Club	76 Mount Auburn St	Cambridge	1931
CAM.1165	Willard, Lucy House	78 Mount Auburn St	Cambridge	1839
CAM.1166		90 Mount Auburn St	Cambridge	1971
CAM.1167		92-96 Mount Auburn St	Cambridge	1895
CAM.1168		95-97 Mount Auburn St	Cambridge	1920
CAM.1169		99 Mount Auburn St	Cambridge	1919
CAM.1170	Cantabrigia Club	100 Mount Auburn St	Cambridge	1919
CAM.1171		102 Mount Auburn St	Cambridge	1869
CAM.1172		104 Mount Auburn St	Cambridge	1983
CAM.1173		110 Mount Auburn St	Cambridge	1959
CAM.9	Boston Elevated Railway Division 7 Headquarters	112 Mount Auburn St	Cambridge	1911
CAM.1175	Trinity Hall	114-120 Mount Auburn St	Cambridge	1892
CAM.1177	Waverly Hall	115 Mount Auburn St	Cambridge	1902
CAM.1178		119-123 Mount Auburn St	Cambridge	1988
CAM.1176		120R Mount Auburn St	Cambridge	1982
CAM.1126	U. S. Post Office - Cambridge Branch	125 Mount Auburn St	Cambridge	1953
CAM.791		151 Mount Auburn St	Cambridge	1853
CAM.792		153 Mount Auburn St	Cambridge	1874
CAM.789		154 Mount Auburn St	Cambridge	1852

Inv. No.	Property Name	Street	Town	Year
CAM.790		156-158 Mount Auburn St	Cambridge	1856
CAM.265		173 Mount Auburn St	Cambridge	1905
CAM.266		175 Mount Auburn St	Cambridge	1895
CAM.267		259 Mount Auburn St	Cambridge	1850
CAM.268	Mount Auburn Hospital - Surgical Building	330 Mount Auburn St	Cambridge	1897
CAM.269	Mount Auburn Hospital - Main Building	330 Mount Auburn St	Cambridge	1886
CAM.801	Mount Auburn Cemetery	580 Mount Auburn St	Cambridge	1831
CAM.936	Mount Auburn Cemetery Fence and Gates	580 Mount Auburn St	Cambridge	1843
CAM.992	Mount Auburn Cemetery - Copenhagen, Maria Angel	580 Mount Auburn St	Cambridge	1872
CAM.270	Mount Auburn Cemetery Reception House	583 Mount Auburn St	Cambridge	1870
CAM.1330	DeRosay - McNamee House	50 Mount Vernon St	Cambridge	1896
CAM.557		1-2 Norfolk Pl	Cambridge	1844
CAM.558		3 Norfolk Pl	Cambridge	1846
CAM.593	Ginsberg, Harris Building	7-15 Norfolk St	Cambridge	1894
CAM.562	Hotel Norfolk	30 Norfolk St	Cambridge	1886
CAM.560		51 Norfolk St	Cambridge	1885
CAM.561		59 Norfolk St	Cambridge	1886
CAM.554		65-67 Norfolk St	Cambridge	1844
CAM.559	Pollard, John House	68-72 Norfolk St	Cambridge	1859
CAM.552		69 Norfolk St	Cambridge	1843
CAM.555		71-73 Norfolk St	Cambridge	1844
CAM.556		75-77 Norfolk St	Cambridge	1844
CAM.551	Fuller, Robert House	79 Norfolk St	Cambridge	1843
CAM.553		87 Norfolk St	Cambridge	1843
CAM.563	Hotel Franklin	90 Norfolk St	Cambridge	1886
CAM.550		1-2 Norfolk Terr	Cambridge	1839
CAM.913	East Cambridge Viaduct - Lechmere Viaduct	O'Brien Hwy	Cambridge	1910
CAM.349	Lockhart, William L. Coffin Factory Warehouse	195-199 O'Brien Hwy	Cambridge	1873
CAM.271	Barnes, James B. House	200 O'Brien Hwy	Cambridge	1824
CAM.348	Lockhart, William L. Coffin Factory Main Building	201 O'Brien Hwy	Cambridge	1870
CAM.272	Lockart, William L. Company Building	209 O'Brien Hwy	Cambridge	1859
CAM.273	Aborn, John House	41 Orchard St	Cambridge	1846
CAM.274	Billings, Frederick House	45 Orchard St	Cambridge	1846
CAM.1310	Davenport - Allen and Endicott Factory West Wing	Osborn St	Cambridge	1848
CAM.1311	Davenport - Allen Factory West Wing Extension	Osborn St	Cambridge	1848
CAM.1312	Allen and Endicott Factory Extension	Osborn St	Cambridge	1896

Inv. No.	Property Name	Street	Town	Year
CAM.1313	Allen and Endicott Factory Extension	Osborn St	Cambridge	1896
CAM.461	Putnam School	Otis St	Cambridge	1889
CAM.465	Saint Hedwig's Parish Church	Otis St	Cambridge	1939
CAM.468	Otis Hospital	Otis St	Cambridge	
CAM.371	Woodbury, James A. - Geldowsky, Ferdinand Building	2-28 Otis St	Cambridge	1869
CAM.374		31 Otis St	Cambridge	1900
CAM.473	Hall, Lewis and William A. Rowhouse	55 Otis St	Cambridge	1851
CAM.474	Hall, Lewis and William A. Rowhouse	57 Otis St	Cambridge	1851
CAM.475	Hall, Lewis and William A. Rowhouse	59 Otis St	Cambridge	1851
CAM.485	Hazard, Samuel L. House	60 Otis St	Cambridge	1871
CAM.476	Hall, Lewis and William A. Rowhouse	61 Otis St	Cambridge	1851
CAM.484		62 Otis St	Cambridge	
CAM.472	Sortwell, Daniel R. Double House	63-65 Otis St	Cambridge	1871
CAM.483		64 Otis St	Cambridge	
CAM.471		65 1/2 Otis St	Cambridge	
CAM.482	Jones, Andrew - Hall, William A. Double House	66-68 Otis St	Cambridge	1846
CAM.470	Goss, Abiel Double House	67-69 Otis St	Cambridge	1839
CAM.481		70 Otis St	Cambridge	
CAM.469		73-75 Otis St	Cambridge	
CAM.480		74 Otis St	Cambridge	
CAM.479		78 Otis St	Cambridge	
CAM.477	Clark, Josias - Cummings, Daniel P. Rowhouse	80 Otis St	Cambridge	1861
CAM.478	Clark, Josias - Cummings, Daniel P. Rowhouse	82 Otis St	Cambridge	1861
CAM.467	Deshon, Royal P. House	93 Otis St	Cambridge	1842
CAM.460		94 Otis St	Cambridge	
CAM.466		95-97 Otis St	Cambridge	
CAM.459		96 Otis St	Cambridge	
CAM.458		98 Otis St	Cambridge	
CAM.457	Taylor, Oliver House	100 Otis St	Cambridge	1848
CAM.455	Adams, Jabez F. - Atwood, Samuel S. Rowhouse	102 Otis St	Cambridge	1848
CAM.464	Bridgeman, John L. Double House	103-105 Otis St	Cambridge	1843
CAM.456	Adams, Jabez F. - Atwood, Samuel S. Rowhouse	104 Otis St	Cambridge	1848
CAM.454		106-108 Otis St	Cambridge	
CAM.463		107-109 Otis St	Cambridge	
CAM.453		110 Otis St	Cambridge	
CAM.462		113 Otis St	Cambridge	

Inv. No.	Property Name	Street	Town	Year
CAM.439		117 1/2 Otis St	Cambridge	
CAM.440		117-119 Otis St	Cambridge	
CAM.451		118 Otis St	Cambridge	
CAM.450		120 Otis St	Cambridge	
CAM.448	Dennison, James Double House	122-124 Otis St	Cambridge	1870
CAM.449		122 1/2-124 1/2 Otis St	Cambridge	
CAM.438		123 Otis St	Cambridge	
CAM.437		125-127 Otis St	Cambridge	
CAM.447		126-128 Otis St	Cambridge	
CAM.436		129-131 Otis St	Cambridge	
CAM.446		130 Otis St	Cambridge	
CAM.445		132 Otis St	Cambridge	
CAM.435		133-135 Otis St	Cambridge	
CAM.275	Hoyt, Benjamin House	134 Otis St	Cambridge	1868
CAM.443		136-138 Otis St	Cambridge	
CAM.434	Warren, Moses - Smith, Benjamin G. Rowhouse	137 Otis St	Cambridge	1852
CAM.1339	Warren, Moses - Smith, Benjamin G. Rowhouse	139 Otis St	Cambridge	1852
CAM.442		140 Otis St	Cambridge	1895
CAM.1340	Warren, Moses - Smith, Benjamin G. Rowhouse	141 Otis St	Cambridge	1852
CAM.1341	Warren, Moses - Smith, Benjamin G. Rowhouse	143 Otis St	Cambridge	1852
CAM.1342	Warren, Moses - Smith, Benjamin G. Rowhouse	145 Otis St	Cambridge	1852
CAM.433	Fraser, John B. Double House	147-149 Otis St	Cambridge	1846
CAM.432		151 Otis St	Cambridge	
CAM.1179	Coop Annex	18 Palmer St	Cambridge	1964
CAM.276	Urban Rowhouse	30-38 Pearl St	Cambridge	1874
CAM.277	Urban Rowhouse	40-50 Pearl St	Cambridge	1875
CAM.278	Valentine Soap Workers' Cottage	101 Pearl St	Cambridge	1835
CAM.1368	Blessed Sacrament Roman Catholic Church	175 Pearl St	Cambridge	1907
CAM.1370	Blessed Sacrament Roman Catholic Church Rectory	189 Pearl St	Cambridge	1868
CAM.279		3 Phillips Pl	Cambridge	
CAM.280		5 Phillips Pl	Cambridge	1845
CAM.281		7 Phillips Pl	Cambridge	1898
CAM.282		9 Phillips Pl	Cambridge	1870
CAM.1180	Harvard Crimson Newspaper Office	14-18 Plympton St	Cambridge	1915
CAM.1181	Crimson Building Annex	22 Plympton St	Cambridge	1961
CAM.1182	Adams House Dining Hall	28 Plympton St	Cambridge	1930
CAM.1183	Russell Hall	28 Plympton St	Cambridge	1931

Inv. No.	Property Name	Street	Town	Year
CAM.1184	Russell Hall	30-30A Plympton St	Cambridge	1887
CAM.1207	Quincy House - Harvard University	58 Plympton St	Cambridge	1958
CAM.1208	Mather Hall - Harvard University	68-88 Plympton St	Cambridge	1930
CAM.1209		101-103 Plympton St	Cambridge	1870
CAM.1382	Brooks Apartments - Winthrop, John Chambers	78-80 Porter Rd	Cambridge	1915
CAM.283	Willis, Stillman House	1 Potter Pk	Cambridge	1839
CAM.284	Saunders, William House	6 Prentiss St	Cambridge	1843
CAM.1352	Beck - Warren House	1 Prescott St	Cambridge	1833
CAM.285		16 Prescott St	Cambridge	1873
CAM.291	Carpenter Center for the Visual Arts	19 Prescott St	Cambridge	1963
CAM.582	New England Gas and Electric Association I Bldg	45 Prospect St	Cambridge	1960
CAM.286	Prospect Congregational Church	99 Prospect St	Cambridge	1851
CAM.287	Baldwin, Maria House	196 Prospect St	Cambridge	1845
CAM.288	Sands, Hiram House	22 Putnam Ave	Cambridge	1848
CAM.293	Harvard Union	Quincy St	Cambridge	1900
CAM.986	Harvard University - Hallowell Gate	10 Quincy St	Cambridge	1928
CAM.289	Dana, Richard Henry - Palmer, George Herbert House	12-16 Quincy St	Cambridge	1822
CAM.952	Harvard University - Quincy Street Gate	17 Quincy St	Cambridge	1936
CAM.1213	Harvard University - President's House	17 Quincy St	Cambridge	1911
CAM.290	Fogg Art Museum	26-32 Quincy St	Cambridge	1925
CAM.292	Church of the New Jerusalem	50 Quincy St	Cambridge	1903
CAM.1266		60 Raymond St	Cambridge	1927
CAM.298	Mason, W. A. House	87 Raymond St	Cambridge	1846
CAM.299	Stickney, N. U. - Shepard, S. P. Double House	11-13 Remington St	Cambridge	1846
CAM.300	Hooper, Edward W. - Eliot, Rev. Samuel A. House	25-27 Reservoir Rd	Cambridge	1872
CAM.301		59 Rice St	Cambridge	1847
CAM.327	Hews Pottery Company Carriage House	202 Richdale Ave	Cambridge	1897
CAM.302	Kidder - Sargent - McCrehan House	146 Rindge Ave	Cambridge	1792
CAM.303	Wyeth Brickyard Superintendent's House	336 Rindge Ave	Cambridge	1848
CAM.923	River Street Bridge	River St	Cambridge	1926
CAM.304	Urban Rowhouse	26-32 River St	Cambridge	1860
CAM.330	Ricker, George and Jerediah House	109-113 River St	Cambridge	1844
CAM.305	River Street Firehouse	176 River St	Cambridge	1890
CAM.1211		11 Riverview Ave	Cambridge	1899
CAM.922	Boston University Bridge	Rt 2	Cambridge	1928
CAM.306	Soule, Lawrence Porter House	11 Russell St	Cambridge	1879

Inv. No.	Property Name	Street	Town	Year
CAM.307	Wood, James A. House	3 Sacramento St	Cambridge	1888
CAM.1239	Winthrop Hall - Episcopal Theological School	Saint John's Rd	Cambridge	1892
CAM.529		6-8 Salem St	Cambridge	1829
CAM.530		10 Salem St	Cambridge	1840
CAM.531		15 Salem St	Cambridge	1841
CAM.415	Hastings, Deborah House	72 Sciarappa St	Cambridge	1823
CAM.416		74 Sciarappa St	Cambridge	
CAM.401	Pendexter, Charles House	80-82 Sciarappa St	Cambridge	1847
CAM.1321	Boston Museum of Science	Science Park	Cambridge	1951
CAM.1322	Hayden Planetarium	Science Park	Cambridge	1958
CAM.770		2 Scott St	Cambridge	1889
CAM.771	Thaxter, Roland House	7 Scott St	Cambridge	1891
CAM.772		8 Scott St	Cambridge	1889
CAM.773		11 Scott St	Cambridge	1893
CAM.774		12 Scott St	Cambridge	1894
CAM.775		14 Scott St	Cambridge	1927
CAM.776		18 Scott St	Cambridge	1928
CAM.375	Roby, Ebenezer Rowhouse	30 Second St	Cambridge	1836
CAM.376	Roby, Ebenezer Rowhouse	32 Second St	Cambridge	1836
CAM.377	Roby, Ebenezer Rowhouse	34 Second St	Cambridge	1836
CAM.364	Hall, Jesse Rowhouse	36 Second St	Cambridge	1842
CAM.365	Hall, Jesse Rowhouse	38 Second St	Cambridge	1842
CAM.366	Hall, Jesse Rowhouse	40 Second St	Cambridge	1842
CAM.367	Hall, Jesse Rowhouse	42 Second St	Cambridge	1842
CAM.368	Hall, Jesse Rowhouse	44 Second St	Cambridge	1842
CAM.369	Hall, Jesse Rowhouse	46 Second St	Cambridge	1842
CAM.370		50 Second St	Cambridge	
CAM.308	American Net and Twine Company Factory	155R Second St	Cambridge	1875
CAM.777		1 Shady Hill Sq	Cambridge	1915
CAM.778		2-3 Shady Hill Sq	Cambridge	1915
CAM.779		4-5 Shady Hill Sq	Cambridge	1915
CAM.780		6-7 Shady Hill Sq	Cambridge	1915
CAM.781		8-9 Shady Hill Sq	Cambridge	1915
CAM.782		10-11 Shady Hill Sq	Cambridge	1915
CAM.783		12 Shady Hill Sq	Cambridge	1915
CAM.309	Eliot Hall	51 Shepard St	Cambridge	1907
CAM.310	Bertram Hall	53 Shepard St	Cambridge	1901
CAM.311	Watson, Abraham Jr. House	181-183 Sherman St	Cambridge	1750

Inv. No.	Property Name	Street	Town	Year
CAM.506	Sacred Heart Roman Catholic Church	39 Sixth St	Cambridge	1874
CAM.431		40 Sixth St	Cambridge	
CAM.508	Sacred Heart Roman Catholic Church Rectory	49 Sixth St	Cambridge	1885
CAM.927	Eliot Bridge	Soldier's Field Rd	Cambridge	1950
CAM.1210	Bryan Hall - Harvard University	14-24 South St	Cambridge	1930
CAM.312	Stedman, Samuel House	17 South St	Cambridge	1826
CAM.1185	Harvard Advocate Building	21 South St	Cambridge	1956
CAM.313	Dodge, Edward House	70 Sparks St	Cambridge	1878
CAM.325	Harugari Hall	154 Spring St	Cambridge	1873
CAM.1186		4-6 Story St	Cambridge	1966
CAM.1187		8-12 Story St	Cambridge	1969
CAM.1188		14-16 Story St	Cambridge	1970
CAM.577	Young Women's Christian Association Building	7 Temple St	Cambridge	1910
CAM.353	Blake and Knowles Core Shop #1	Third St	Cambridge	1889
CAM.354	Blake and Knowles Core Shop #2	Third St	Cambridge	1890
CAM.505	Lechmere Point Corporation Row House	25 Third St	Cambridge	1821
CAM.381	Rollins, John W. Rowhouse	83 Third St	Cambridge	1860
CAM.382	Rollins, John W. Rowhouse	85 Third St	Cambridge	1860
CAM.383	Rollins, John W. Rowhouse	87 Third St	Cambridge	1860
CAM.384	Rollins, John W. Rowhouse	89 Third St	Cambridge	1860
CAM.331	Old Middlesex County Superior Courthouse	90 Third St	Cambridge	1814
CAM.385	Rollins, John W. Rowhouse	91 Third St	Cambridge	1860
CAM.386	Rollins, John W. Rowhouse	93 Third St	Cambridge	1860
CAM.387	Rollins, John W. Rowhouse	95 Third St	Cambridge	1860
CAM.314	Holy Cross Polish National Catholic Church	99 Third St	Cambridge	1827
CAM.315	Bottle House Block	204-214 Third St	Cambridge	1826
CAM.350	Blake and Knowles Machine Shop #1	265 Third St	Cambridge	1889
CAM.351	Blake and Knowles Office Headhouse	265 Third St	Cambridge	1892
CAM.355	Blake and Knowles Smith Shop and Brass Foundry	275 Third St	Cambridge	1890
CAM.326	Cambridge Gas Light Company Purifying Plant	354 Third St	Cambridge	1908
CAM.388	Stevens, Atherton H. Rowhouse	59 Thorndike St	Cambridge	1827
CAM.395	Smallidge, Samuel House	66 Thorndike St	Cambridge	1827
CAM.389	Bates, Moses Jr. House	69 Thorndike St	Cambridge	1844
CAM.396	Buck, Silas B. House	70 Thorndike St	Cambridge	1845
CAM.390	Tufts, Sophia Kimball Double House	71-73 Thorndike St	Cambridge	1857
CAM.397	Wellington, Peter House	74 Thorndike St	Cambridge	1843
CAM.391		75 Thorndike St	Cambridge	

Inv. No.	Property Name	Street	Town	Year
CAM.398		76 Thorndike St	Cambridge	
CAM.392		77 Thorndike St	Cambridge	
CAM.399		78 Thorndike St	Cambridge	
CAM.393		79-81 Thorndike St	Cambridge	
CAM.400		80 Thorndike St	Cambridge	
CAM.394		83 Thorndike St	Cambridge	
CAM.402	Stickney, Francis H. - Davies, Benjamin Rowhouse	84 Thorndike St	Cambridge	1867
CAM.417	Clark, Cornelius - Kneeland, W. W. House	85 Thorndike St	Cambridge	1822
CAM.403	Stickney, Francis H. - Davies, Benjamin Rowhouse	86 Thorndike St	Cambridge	1867
CAM.404	Stickney, Francis H. - Davies, Benjamin Rowhouse	88 Thorndike St	Cambridge	1867
CAM.418		89-91 Thorndike St	Cambridge	
CAM.405	Stickney, Francis H. - Davies, Benjamin Rowhouse	90 Thorndike St	Cambridge	1867
CAM.406	Stickney, Francis H. - Davies, Benjamin Rowhouse	92 Thorndike St	Cambridge	1867
CAM.419	Whitacre, Celeste I. Rowhouse	93 Thorndike St	Cambridge	1885
CAM.407	Stickney, Francis H. - Davies, Benjamin Rowhouse	94 Thorndike St	Cambridge	1867
CAM.420	Whitacre, Celeste I. Rowhouse	95 Thorndike St	Cambridge	1885
CAM.408	Train, Isaac House	96 Thorndike St	Cambridge	1826
CAM.421	Whitacre, Celeste I. Rowhouse	97 Thorndike St	Cambridge	1885
CAM.422	Davies, Daniel House	97 1/2 Thorndike St	Cambridge	1843
CAM.409		98 Thorndike St	Cambridge	
CAM.423		99 Thorndike St	Cambridge	
CAM.424	Daniels, Granville W. House	101 Thorndike St	Cambridge	1868
CAM.410		102 Thorndike St	Cambridge	
CAM.411	Spare, Elijah Jr. Double House	104-106 Thorndike St	Cambridge	1846
CAM.425	Eaton, Charles House	109 Thorndike St	Cambridge	1857
CAM.412	Quimby, Amos House	110 Thorndike St	Cambridge	1857
CAM.426		111-113 Thorndike St	Cambridge	
CAM.413	Stickney, Francis H. Double House	112-114 Thorndike St	Cambridge	1863
CAM.427		113 1/2 Thorndike St	Cambridge	
CAM.414	Bacon, Henry A. House	116 Thorndike St	Cambridge	1865
CAM.507	Sacred Heart Roman Catholic School and Convent	163 Thorndike St	Cambridge	1902
CAM.316	Craigie Arms	2-6 University Rd	Cambridge	1897
CAM.317	Wyeth, Jacob - Smith, Ebenezer House	152 Vassal Ln	Cambridge	1820

Inv. No.	Property Name	Street	Town	Year
CAM.360	Metropolitan Supply Company Warehouse	269 Vassar St	Cambridge	1948
CAM.361	Hovey, F. A. and Company Warehouse	271-275 Vassar St	Cambridge	1940
CAM.362	Metropolitan Supply Company Warehouse	277-287 Vassar St	Cambridge	1939
CAM.363	Metropolitan Supply Company Warehouse	289-293 Vassar St	Cambridge	1939
CAM.989	Walden Street Cattle Pass	Walden St	Cambridge	1857
CAM.1283	Bennink - Douglas Double Cottage	35-37 Walker St	Cambridge	1874
CAM.1284	Bennink - Douglas Double Cottage	39-41 Walker St	Cambridge	1874
CAM.1285	Bennink - Douglas Double Cottage	43-45 Walker St	Cambridge	1874
CAM.1286	Bennink - Douglas Double Cottage	49-51 Walker St	Cambridge	1874
CAM.1034	Sands, Orrin E. House	2 Walnut Ave	Cambridge	1911
CAM.1032		4 Walnut Ave	Cambridge	1878
CAM.1033	Niles, Jacob Harris House	6 Walnut Ave	Cambridge	1884
CAM.1031	Niles, Eugene M. House	9 Walnut Ave	Cambridge	1887
CAM.318	Stanstead, The	19 Ware St	Cambridge	1887
CAM.799	Ritchie, David House	26 Washington Ave	Cambridge	1889
CAM.793	Brown, Laura House	27 Washington Ave	Cambridge	1908
CAM.794	Mellen, James House	33 Washington Ave	Cambridge	1887
CAM.795	Kelley, Stillman F. House	49 Washington Ave	Cambridge	1887
CAM.1000	Boardman, Charles House	58 Washington Ave	Cambridge	1880
CAM.797	Mansfield, Gardiner House	63 Washington Ave	Cambridge	1873
CAM.798	Green, Charles G. House	71 Washington Ave	Cambridge	1877
CAM.1001	Boynton, Morris House	78 Washington Ave	Cambridge	1874
CAM.1002		86-88 Washington Ave	Cambridge	1870
CAM.1003		92 Washington Ave	Cambridge	1876
CAM.1004	Hutchins, Elizabeth House	108 Washington Ave	Cambridge	1924
CAM.319	Melendy, Henry J. House	81 Washington St	Cambridge	1871
CAM.541	Whittemore, Rev. Thomas Double House	271-273 Washington St	Cambridge	1837
CAM.540	Whittemore, Rev. Thomas Double House	288 Washington St	Cambridge	1837
CAM.539	Paige, Rev. Lucius R. House	296 Washington St	Cambridge	1837
CAM.346		1 Waterhouse St	Cambridge	1916
CAM.320	Vassall - Waterhouse - Ware House	7 Waterhouse St	Cambridge	1753
CAM.347		9 Waterhouse St	Cambridge	1887
CAM.335	Christian Science Church	13 Waterhouse St	Cambridge	1923
CAM.988	Fort Washington	95 Waverly St	Cambridge	
CAM.924	Western Avenue Bridge	Western Ave	Cambridge	1924
CAM.638	Cambridge Police Headquarters	5 Western Ave	Cambridge	1933
CAM.948	Central Square Park	22 Western Ave	Cambridge	1987
CAM.322	Eastern Massachusetts Company Car Barn	85 Western Ave	Cambridge	1930

Inv. No.	Property Name	Street	Town	Year
CAM.321	Read, Cheney House	135 Western Ave	Cambridge	1846
CAM.323	Hasey, Abraham - Wheat, Dr. Samuel House	8 Willard St	Cambridge	1730
CAM.514	Hixon, Edward House	3 William St	Cambridge	1857
CAM.1378	Immaculate Conception (Lithuanian) Catholic Church	432 Windsor St	Cambridge	1910
CAM.1379	Immaculate Conception (Lithuanian) Church Rectory	432 Windsor St	Cambridge	1972
CAM.1380	Immaculate Conception Church Rectory Metal Garage	432 Windsor St	Cambridge	1941
CAM.1381	Immaculate Conception Church Rectory Wood Garage	432 Windsor St	Cambridge	1948
CAM.500	Leighton, Thomas H. House	19 Winter St	Cambridge	1855
CAM.492		21 Winter St	Cambridge	1854
CAM.486		22 Winter St	Cambridge	1833
CAM.491		24 Winter St	Cambridge	1854
CAM.493		25 Winter St	Cambridge	1854
CAM.494		27 Winter St	Cambridge	1854
CAM.496		28-30 Winter St	Cambridge	1854
CAM.495		29 Winter St	Cambridge	1854
CAM.497		31-33 Winter St	Cambridge	1854
CAM.501		34-42 Winter St	Cambridge	1875
CAM.498		61 Winter St	Cambridge	1854
CAM.499		65 Winter St	Cambridge	1854
CAM.489		67 Winter St	Cambridge	1843
CAM.490		71 Winter St	Cambridge	1843
CAM.487		74 Winter St	Cambridge	1838
CAM.1344	Stevens, Atherton Haugh House	75 Winter St	Cambridge	
CAM.1345		77 Winter St	Cambridge	1838
CAM.488		79 Winter St	Cambridge	1838
CAM.1189	Metcalf, Lydia House	41 Winthrop St	Cambridge	1845
CAM.1190	University Lutheran Church	65-67 Winthrop St	Cambridge	1887
CAM.1191		66 Winthrop St	Cambridge	1950
CAM.1192		69 Winthrop St	Cambridge	1835
CAM.1193	Pi Eta Club	89 Winthrop St	Cambridge	1908
CAM.1194	Pi Eta Hall	95 Winthrop St	Cambridge	1896
CAM.1195	Hyde, Isaac - Taylor House	96 Winthrop St	Cambridge	1845
CAM.329	Cox - Hicks House	98 Winthrop St	Cambridge	1806
CAM.951	Winthrop Street Retaining Wall	98 Winthrop St	Cambridge	1725
CAM.1196	Dame School	106 Winthrop St	Cambridge	1800

Inv. No.	Property Name	Street	Town	Year
CAM.909	Yerxa Street Pedestrian Subway	Yerxa St	Cambridge	1904

APPENDIX D

Endangered Species Act Documentation



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

January 3, 2011

To Whom It May Concern:

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>)

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN

November 2010

Total Approximate Acreage: 268,000 acres

Approximate acreage and designation date follow ACEC names below.

Bourne Back River

(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp

(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley

(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed

(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor

(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog

(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills

(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)

(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed

(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed

(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp

(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay

(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin

(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed

(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds

(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary

(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag

(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay

(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River

(160 acres, 1980) Bourne

Rumney Marshes

(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System

(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin

(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit

(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed

(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River

(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay

(2,580 acres, 1979) Falmouth and Mashpee

Weir River

(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor

(12,480 acres, 1989) Eastham, Truro, and Wellfleet

Weymouth Back River

(800 acres, 1982) Hingham and Weymouth

Towns with ACECs within their Boundaries**November 2010**

TOWN	ACEC	TOWN	ACEC
Ashby	Squannassit	Mt. Washington	Karner Brook Watershed
Ayer	Petapawag		Schenob Brook
	Squannassit	Newbury	Great Marsh
Barnstable	Sandy Neck Barrier Beach System	Norton	Hockomock Swamp
Bolton	Central Nashua River Valley		Canoe River Aquifer
Boston	Rumney Marshes		Three Mile River Watershed
	Fowl Meadow and Ponkapoag Bog	Norwood	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary	Orleans	Inner Cape Cod Bay
Bourne	Pocasset River		Pleasant Bay
	Bourne Back River	Pepperell	Petapawag
	Herring River Watershed		Squannassit
Braintree	Cranberry Brook Watershed	Peru	Hinsdale Flats Watershed
Brewster	Pleasant Bay	Pittsfield	Upper Housatonic River
	Inner Cape Cod Bay	Plymouth	Herring River Watershed
Bridgewater	Hockomock Swamp		Ellisville Harbor
Canton	Fowl Meadow and Ponkapoag Bog	Quincy	Neponset River Estuary
Chatham	Pleasant Bay	Randolph	Fowl Meadow and Ponkapoag Bog
Cohasset	Weir River	Raynham	Hockomock Swamp
Dalton	Hinsdale Flats Watershed	Revere	Rumney Marshes
Dedham	Fowl Meadow and Ponkapoag Bog	Rowley	Great Marsh
Dighton	Three Mile River Watershed	Sandwich	Sandy Neck Barrier Beach System
Dunstable	Petapawag	Saugus	Rumney Marshes
Eastham	Inner Cape Cod Bay		Golden Hills
	Wellfleet Harbor	Sharon	Canoe River Aquifer
Easton	Canoe River Aquifer		Fowl Meadow and Ponkapoag Bog
	Hockomock Swamp	Sheffield	Schenob Brook
Egremont	Karner Brook Watershed	Shirley	Squannassit
Essex	Great Marsh	Stockbridge	Kampoosa Bog Drainage Basin
Falmouth	Waquoit Bay	Taunton	Hockomock Swamp
Foxborough	Canoe River Aquifer		Canoe River Aquifer
Gloucester	Great Marsh		Three Mile River Watershed
Grafton	Miscoe-Warren-Whitehall Watersheds	Truro	Wellfleet Harbor
		Townsend	Squannassit
Groton	Petapawag	Tyngsborough	Petapawag
	Squannassit	Upton	Miscoe-Warren-Whitehall Watersheds
Harvard	Central Nashua River Valley		
	Squannassit	Wakefield	Golden Hills
Harwich	Pleasant Bay	Washington	Hinsdale Flats Watershed
Hingham	Weir River		Upper Housatonic River
	Weymouth Back River	Wellfleet	Wellfleet Harbor
Hinsdale	Hinsdale Flats Watershed	W Bridgewater	Hockomock Swamp
Holbrook	Cranberry Brook Watershed	Westborough	Cedar Swamp
Hopkinton	Miscoe-Warren-Whitehall Watersheds	Westwood	Fowl Meadow and Ponkapoag Bog
		Weymouth	Weymouth Back River
	Cedar Swamp	Winthrop	Rumney Marshes
Hull	Weir River		
Ipswich	Great Marsh		
Lancaster	Central Nashua River Valley		
	Squannassit		
Lee	Kampoosa Bog Drainage Basin		
	Upper Housatonic River		
Lenox	Upper Housatonic River		
Leominster	Central Nashua River Valley		
Lunenburg	Squannassit		
Lynn	Rumney Marshes		
Mansfield	Canoe River Aquifer		
Mashpee	Waquoit Bay		
Melrose	Golden Hills		
Milton	Fowl Meadow and Ponkapoag Bog		
	Neponset River Estuary		

MassDEP - Bureau of Waste Site Cleanup

MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

Site Name:

NIBRI Campus Expansion Project
181 Massachusetts Avenue
Cambridge, MA

RTN:

NAD83 MA Coordinates:

233281mE, 901300mN

July 28, 2011

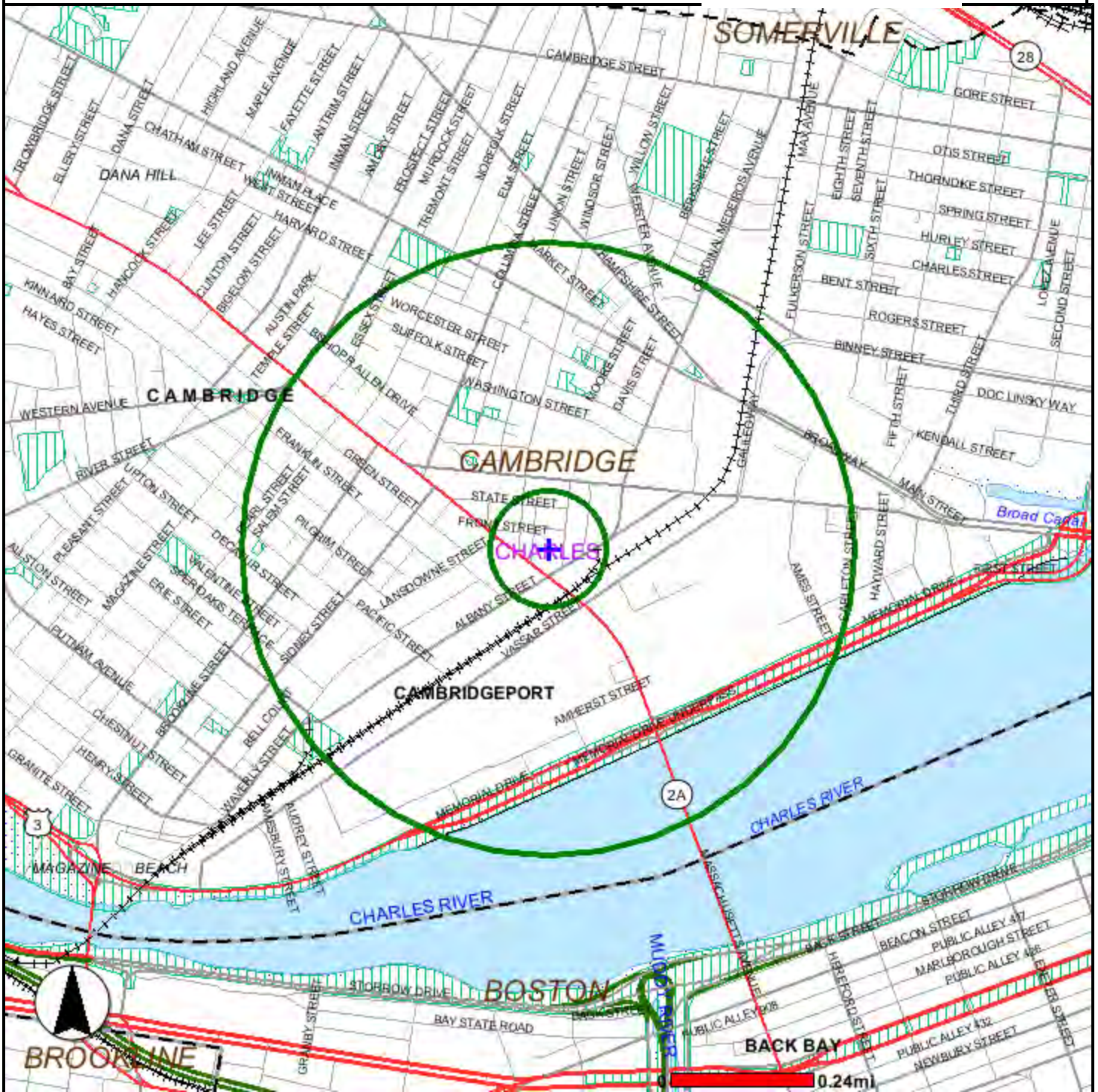


The information shown on this map is the best available at the date of printing. For more information please refer to www.mass.gov/mgis/massgis.htm



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



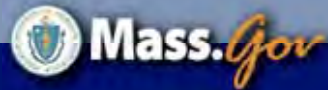
Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A	  
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat	  
Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog	  
Aquifers: Medium Yield, High Yield, EPA Sole Source.....	FEMA 100yr Floodplain; Protected Open Space; ACEC	  
Non Potential Drinking Water Source Area: Medium, High (Yield)...	NHESP: Est Rare Weland Habitat, Certified Vernal Pool ...	 
	DEP Permitted Solid Waste Landfill.....	 

The Official Website of the Department of Fish and Game (DFG)

Department of Fish and Game

Commissioner Mary B. Griffin

DFG Home Mass.Gov Home State Agencies State Online Services



MassWildlife

Massachusetts Division of Fisheries & Wildlife

Wayne F. MacCallum, Director



Natural Heritage & Endangered Species

Home Recreation Wildlife Fisheries Natural Heritage Habitat Education



Rare Species by Town

MESA (Massachusetts Endangered Species Act) and Federal Status

Quick Links

- » Town Index
- » MESA List
- » Contact Us

E = Endangered T = Threatened SC = Special Concern

Most Recent Observation

This field represents the most recent observation of that species in a town. However, because they are rare, many MESA-listed species are difficult to detect even when they are present. Natural Heritage does not have the resources to be able to conduct methodical species surveys in each town on a regular basis. Therefore, the fact that the 'Most Recent Observation' recorded for a species may be several years old should not be interpreted as meaning that the species no longer occurs in a town. However, Natural Heritage regards records older than twenty-five years historic.

Click on a town below to view MESA-listed species for that town. To print the species for a particular town, highlight the species using your mouse, go to Print under the File Menu, click on 'Selection' under 'Print Range' and click OK.

For more information about a particular species, view the list of [Natural Heritage Fact Sheets](#).

These data were extracted from the database of the Natural Heritage and Endangered Species Program in September 2009.

[Barnstable](#) | [Barre](#) | [Becket](#) | [Bedford](#) | [Belchertown](#) | [Bellingham](#) | [Belmont](#) | [Berkley](#) | [Berlin](#) | [Bernardston](#) | [Beverly](#) | [Billerica](#) | [Blackstone](#) | [Blandford](#) | [Bolton](#) | [Boston](#) | [Bourne](#) | [Boxborough](#) | [Boxford](#) | [Boylston](#) | [Braintree](#) | [Brewster](#) | [Bridgewater](#) | [Brimfield](#) | [Brockton](#) | [Brookfield](#) | [Brookline](#) | [Buckland](#) | [Burlington](#)

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BARNSTABLE	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	T		2009
BARNSTABLE	Bird	Ammodramus savannarum	Grasshopper Sparrow	T		1993
BARNSTABLE	Bird	Asio flammeus	Short-eared Owl	E		Historic

BARNSTABLE	Bird	Asio otus	Long-eared Owl	SC		1978
BARNSTABLE	Bird	Charadrius melodus	Piping Plover	T	T	2006
BARNSTABLE	Bird	Parula americana	Northern Parula	T		1989
BARNSTABLE	Bird	Sterna dougallii	Roseate Tern	E	E	2008
BARNSTABLE	Bird	Sterna hirundo	Common Tern	SC		2008
BARNSTABLE	Bird	Sterna paradisaea	Arctic Tern	SC		1901
BARNSTABLE	Bird	Sternula antillarum	Least Tern	SC		2007
BARNSTABLE	Butterfly/Moth	Abagrotis nefascia	Coastal Heathland Cutworm	SC		1982
BARNSTABLE	Butterfly/Moth	Bagisara rectifascia	Straight Lined Mallow Moth	SC		1951
BARNSTABLE	Butterfly/Moth	Cingilia catenaria	Chain Dot Geometer	SC		1954
BARNSTABLE	Butterfly/Moth	Hemileuca maia	Barrens Buckmoth	SC		1994
BARNSTABLE	Butterfly/Moth	Itame sp. 1 nr. inextricata	Pine Barrens Itame	SC		1968
BARNSTABLE	Butterfly/Moth	Papaipema stenocelis	Chain Fern Borer Moth	T		1950
BARNSTABLE	Butterfly/Moth	Papaipema sulphurata	Water-willow Stem Borer	T		2004
BARNSTABLE	Butterfly/Moth	Pieris oleracea	Mustard White	T		1949
BARNSTABLE	Butterfly/Moth	Satyrium favonius	Oak Hairstreak	SC		1982
BARNSTABLE	Butterfly/Moth	Zale sp. 1 nr. lunifera	Pine Barrens Zale	SC		1951
BARNSTABLE	Crustacean	Eulimnadia agassizii	Agassiz's Clam Shrimp	E		2009
BARNSTABLE	Dragonfly/Damselfly	Anax longipes	Comet Darner	SC		2004
BARNSTABLE	Dragonfly/Damselfly	Enallagma carunculatum	Tule Bluet	SC		1941
BARNSTABLE	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC		1989
BARNSTABLE	Dragonfly/Damselfly	Enallagma pictum	Scarlet Bluet	T		2005
BARNSTABLE	Dragonfly/Damselfly	Enallagma recurvatum	Pine Barrens Bluet	T		2004
BARNSTABLE	Fish	Notropis bifrenatus	Bridle Shiner	SC		1993
BARNSTABLE	Mussel	Alasmidonta undulata	Triangle Floater	SC		2007
BARNSTABLE	Mussel	Leptodea ochracea	Tidewater Mucket	SC		2007
BARNSTABLE	Mussel	Ligumia nasuta	Eastern Pondmussel	SC		2007
BARNSTABLE	Reptile	Malaclemys terrapin	Diamond-backed Terrapin	T		2007
BARNSTABLE	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2007
BARNSTABLE	Snail	Ferrissia walkeri	Walker's Limpet	SC		2006

BARNSTABLE	Vascular Plant	Amelanchier nantucketensis	Nantucket Shadbush	SC	1993
BARNSTABLE	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T	1916
BARNSTABLE	Vascular Plant	Carex mitchelliana	Mitchell's Sedge	T	1988
BARNSTABLE	Vascular Plant	Corema conradii	Broom Crowberry	SC	1916
BARNSTABLE	Vascular Plant	Crocianthemum dumosum	Bushy Rockrose	SC	1999
BARNSTABLE	Vascular Plant	Dichanthelium ovale ssp. pseudopubescens	Commons's Panic-grass	SC	1986
BARNSTABLE	Vascular Plant	Dichanthelium wrightianum	Wright's Panic- grass	SC	2004
BARNSTABLE	Vascular Plant	Lachnanthes caroliana	Redroot	SC	2004
BARNSTABLE	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC	2006
BARNSTABLE	Vascular Plant	Linum intercursum	Sandplain Flax	SC	1989
BARNSTABLE	Vascular Plant	Linum medium var. texanum	Rigid Flax	T	1983
BARNSTABLE	Vascular Plant	Lipocarpa micrantha	Dwarf Bulrush	T	1898
BARNSTABLE	Vascular Plant	Listera cordata	Heartleaf Twayblade	E	1916
BARNSTABLE	Vascular Plant	Malaxis bayardii	Bayard's Green Adder's-mouth	E	1989
BARNSTABLE	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T	1960s
BARNSTABLE	Vascular Plant	Panicum philadelphicum ssp. philadelphicum	Philadelphia Panic-grass	SC	1989
BARNSTABLE	Vascular Plant	Polygonum puritanorum	Pondshore Knotweed	SC	2003
BARNSTABLE	Vascular Plant	Rhexia mariana	Maryland Meadow Beauty	E	1967
BARNSTABLE	Vascular Plant	Rhynchospora nitens	Short-beaked Bald-sedge	T	2002
BARNSTABLE	Vascular Plant	Rhynchospora scirpoides	Long-beaked Bald-sedge	SC	1995
BARNSTABLE	Vascular Plant	Rhynchospora torreyana	Torrey's Beak- sedge	E	2007
BARNSTABLE	Vascular Plant	Sabatia campanulata	Slender Marsh Pink	E	2008
BARNSTABLE	Vascular Plant	Sabatia kennedyana	Plymouth Gentian	SC	2008
BARNSTABLE	Vascular Plant	Sagittaria teres	Terete Arrowhead	SC	2004
BARNSTABLE	Vascular Plant	Scleria pauciflora	Papillose Nut Sedge	E	1986
BARNSTABLE	Vascular Plant	Setaria parviflora	Bristly Foxtail	SC	1919
BARNSTABLE	Vascular Plant	Sphenopholis pennsylvanica	Swamp Oats	T	1988

BARNSTABLE	Vascular Plant	Spiranthes vernalis	Grass-leaved Ladies'-tresses	T	1986
BARNSTABLE	Vascular Plant	Tipularia discolor	Crane-fly Orchid	E	1983
BARNSTABLE	Vascular Plant	Utricularia subulata	Subulate Bladderwort	SC	1918

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BARRE	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		2007
BARRE	Bird	Botaurus lentiginosus	American Bittern	E		1930
BARRE	Bird	Ixobrychus exilis	Least Bittern	E		2005
BARRE	Butterfly/Moth	Psectraglaea carnosae	Pink Sallow	SC		2007
BARRE	Dragonfly/Damselfly	Neurocordulia yamaskanensis	Stygian Shadowdragon	SC		2004
BARRE	Fish	Notropis bifrenatus	Bridle Shiner	SC		2005
BARRE	Mussel	Alasmidonta undulata	Triangle Floater	SC		1999
BARRE	Mussel	Strophitus undulatus	Creeper	SC		1999
BARRE	Reptile	Glyptemys insculpta	Wood Turtle	SC		2006
BARRE	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2005
BARRE	Vascular Plant	Asclepias purpurascens	Purple Milkweed	E		1865
BARRE	Vascular Plant	Clematis occidentalis	Purple Clematis	SC		2008
BARRE	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1950
BARRE	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1870
BARRE	Vascular Plant	Viola adunca	Sand Violet	SC		2006

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BECKET	Bird	Botaurus lentiginosus	American Bittern	E		1991
BECKET	Butterfly/Moth	Erora laeta	Early Hairstreak	T		2005
BECKET	Dragonfly/Damselfly	Boyeria grafiana	Ocellated Darner	SC		2004
BECKET	Dragonfly/Damselfly	Somatochlora forcipata	Forcipate Emerald	SC		1973
BECKET	Fish	Catostomus catostomus	Longnose Sucker	SC		1979
BECKET	Fish	Notropis bifrenatus	Bridle Shiner	SC		1994
BECKET	Reptile	Glyptemys insculpta	Wood Turtle	SC		2006
BECKET	Vascular Plant	Arceuthobium pusillum	Dwarf Mistletoe	SC		1904
BECKET	Vascular Plant	Carex livida	Glaucous Sedge	E		Historic
BECKET	Vascular Plant	Carex pauciflora	Few-flowered Sedge	E		Historic
BECKET	Vascular Plant	Lygodium palmatum	Climbing Fern	SC		Historic
BECKET	Vascular Plant	Sisyrinchium mucronatum	Slender Blue-eyed Grass	E		2001

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BEDFORD	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2009
BEDFORD	Bird	Accipiter striatus	Sharp-shinned Hawk	SC		1902
BEDFORD	Bird	Bartramia longicauda	Upland Sandpiper	E		2000
BEDFORD	Fish	Notropis bifrenatus	Bridle Shiner	SC		1998
BEDFORD	Reptile	Emydoidea blandingii	Blanding's Turtle	T		2008
BEDFORD	Reptile	Glyptemys insculpta	Wood Turtle	SC		1995
BEDFORD	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2004
BEDFORD	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T		1884
BEDFORD	Vascular Plant	Bolboschoenus fluviatilis	River Bulrush	SC		2002
BEDFORD	Vascular Plant	Carex oligosperma	Few-fruited Sedge	E		2007
BEDFORD	Vascular Plant	Gentiana andrewsii	Andrews' Bottle Gentian	E		1882
BEDFORD	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1899
BEDFORD	Vascular Plant	Ludwigia sphaerocarpa	Round-fruited False-loosestrife	E		1885
BEDFORD	Vascular Plant	Nabalus serpentarius	Lion's Foot	E		1883
BEDFORD	Vascular Plant	Nuphar microphylla	Tiny Cow-lily	E		1883
BEDFORD	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1900
BEDFORD	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T		1888
BEDFORD	Vascular Plant	Scirpus longii	Long's Bulrush	T		2007
BEDFORD	Vascular Plant	Senna hebecarpa	Wild Senna	E		1883
BEDFORD	Vascular Plant	Viola brittoniana	Britton's Violet	T		2007

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BELCHERTOWN	Amphibian	Ambystoma opacum	Marbled Salamander	T		2006
BELCHERTOWN	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1941
BELCHERTOWN	Bird	Botaurus lentiginosus	American Bittern	E		2008
BELCHERTOWN	Bird	Gallinula chloropus	Common Moorhen	SC		1932
BELCHERTOWN	Bird	Haliaeetus leucocephalus	Bald Eagle	E		2008
BELCHERTOWN	Bird	Ixobrychus exilis	Least Bittern	E		2007
BELCHERTOWN	Bird	Podilymbus podiceps	Pied-billed Grebe	E		1932

BELCHERTOWN	Bird	Tyto alba	Barn Owl	SC	1951
BELCHERTOWN	Crustacean	Eubbranchipus intricatus	Intricate Fairy Shrimp	SC	1970s
BELCHERTOWN	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC	2008
BELCHERTOWN	Fish	Notropis bifrenatus	Bridle Shiner	SC	1998
BELCHERTOWN	Mammal	Synaptomys cooperi	Southern Bog Lemming	SC	1974
BELCHERTOWN	Reptile	Glyptemys insculpta	Wood Turtle	SC	2007
BELCHERTOWN	Reptile	Terrapene carolina	Eastern Box Turtle	SC	2006
BELCHERTOWN	Vascular Plant	Acer nigrum	Black Maple	SC	1891
BELCHERTOWN	Vascular Plant	Asclepias purpurascens	Purple Milkweed	E	1875
BELCHERTOWN	Vascular Plant	Blephilia ciliata	Downy Wood-mint	E	1891
BELCHERTOWN	Vascular Plant	Lygodium palmatum	Climbing Fern	SC	2000
BELCHERTOWN	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T	1883
BELCHERTOWN	Vascular Plant	Podostemum ceratophyllum	Threadfoot	SC	1925
BELCHERTOWN	Vascular Plant	Ranunculus pensylvanicus	Bristly Buttercup	SC	1871
BELCHERTOWN	Vascular Plant	Scheuchzeria palustris	Pod-grass	E	1872
BELCHERTOWN	Vascular Plant	Utricularia resupinata	Resupinate Bladderwort	T	1873

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BELLINGHAM	Amphibian	Ambystoma opacum	Marbled Salamander	T		2007
BELLINGHAM	Fish	Lampetra appendix	American Brook Lamprey	T		2001
BELLINGHAM	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T		1894
BELLINGHAM	Vascular Plant	Goodyera repens	Dwarf Rattlesnake-plantain	E		1886
BELLINGHAM	Vascular Plant	Panicum philadelphicum ssp. philadelphicum	Philadelphia Panic-grass	SC		1986

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BELMONT	Amphibian	Ambystoma	Jefferson Salamander	SC		1800s

		jeffersonianum			
BELMONT	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC	Historic
BELMONT	Bird	Tyto alba	Barn Owl	SC	1952
BELMONT	Bird	Gallinula chloropus	Common Moorhen	SC	Historic
BELMONT	Bird	Cistothorus platensis	Sedge Wren	E	1868
BELMONT	Dragonfly/Damselfly	Somatochlora linearis	Mocha Emerald	SC	2005
BELMONT	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T	1852
BELMONT	Vascular Plant	Carex gracilescens	Slender Woodland Sedge	E	1932

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BERKLEY	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		1913
BERKLEY	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1912
BERKLEY	Reptile	Glyptemys insculpta	Wood Turtle	SC		1991
BERKLEY	Reptile	Malaclemys terrapin	Diamond-backed Terrapin	T		1982
BERKLEY	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2007
BERKLEY	Vascular Plant	Bidens eatonii	Eaton's Beggar-ticks	E		1923
BERKLEY	Vascular Plant	Cardamine longii	Long's Bitter-cress	E		1997
BERKLEY	Vascular Plant	Carex polymorpha	Variable Sedge	E		1908

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BERLIN	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		1800s
BERLIN	Amphibian	Ambystoma opacum	Marbled Salamander	T		2000
BERLIN	Bird	Accipiter striatus	Sharp-shinned Hawk	SC		1936
BERLIN	Bird	Ammodramus henslowii	Henslow's Sparrow	E		Historic
BERLIN	Mussel	Alasmodonta varicosa	Brook Floater (Swollen Wedgemussel)	E		1859
BERLIN	Reptile	Glyptemys insculpta	Wood Turtle	SC		1993
BERLIN	Reptile	Terrapene carolina	Eastern Box Turtle	SC		1991
BERLIN	Vascular Plant	Asclepias purpurascens	Purple Milkweed	E		1915
BERLIN	Vascular Plant	Panicum philadelphicum ssp. philadelphicum	Philadelphia Panic-grass	SC		1944

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
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BERNARDSTON	Butterfly/Moth	Erora laeta	Early Hairstreak	T	1988
BERNARDSTON	Vascular Plant	Actaea racemosa	Black Cohosh	E	1998

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BEVERLY	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1925
BEVERLY	Bird	Vermivora chrysoptera	Golden-winged Warbler	E		1987
BEVERLY	Vascular Plant	Magnolia virginiana	Sweetbay Magnolia	E		1995
BEVERLY	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1874
BEVERLY	Vascular Plant	Potamogeton vaseyi	Vasey's Pondweed	E		1878
BEVERLY	Vascular Plant	Suaeda calceoliformis	American Sea-blite	SC		1902

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BILLERICA	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2008
BILLERICA	Fish	Notropis bifrenatus	Bridle Shiner	SC		1961
BILLERICA	Reptile	Emydoidea blandingii	Blanding's Turtle	T		1992
BILLERICA	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1917
BILLERICA	Vascular Plant	Ludwigia sphaerocarpa	Round-fruited False-loosestrife	E		1889
BILLERICA	Vascular Plant	Nabalus serpentarius	Lion's Foot	E		1871
BILLERICA	Vascular Plant	Nuphar microphylla	Tiny Cow-lily	E		1869
BILLERICA	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1900
BILLERICA	Vascular Plant	Viola brittoniana	Britton's Violet	T		1915

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BLACKSTONE	Fish	Lampetra appendix	American Brook Lamprey	T		2001
BLACKSTONE	Mussel	Alasmodonta undulata	Triangle Floater	SC		1999
BLACKSTONE	Mussel	Strophitus undulatus	Creeper	SC		1999

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BLANDFORD	Bird	Bartramia longicauda	Upland Sandpiper	E		Historic
BLANDFORD	Bird	Botaurus lentiginosus	American Bittern	E		2005

BLANDFORD	Bird	Circus cyaneus	Northern Harrier	T	1923
BLANDFORD	Bird	Cistothorus platensis	Sedge Wren	E	1982
BLANDFORD	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC	2008
BLANDFORD	Reptile	Glyptemys insculpta	Wood Turtle	SC	1995
BLANDFORD	Vascular Plant	Rhododendron maximum	Great Laurel	T	1946
BLANDFORD	Vascular Plant	Sisyrinchium mucronatum	Slender Blue-eyed Grass	E	1919

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOLTON	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2006
BOLTON	Amphibian	Ambystoma opacum	Marbled Salamander	T		2008
BOLTON	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		2007
BOLTON	Bird	Botaurus lentiginosus	American Bittern	E		1990
BOLTON	Bird	Ixobrychus exilis	Least Bittern	E		1985
BOLTON	Bird	Podilymbus podiceps	Pied-billed Grebe	E		1984
BOLTON	Bird	Rallus elegans	King Rail	T		1999
BOLTON	Reptile	Emydoidea blandingii	Blanding's Turtle	T		2009
BOLTON	Reptile	Glyptemys insculpta	Wood Turtle	SC		1999
BOLTON	Reptile	Terrapene carolina	Eastern Box Turtle	SC		1989
BOLTON	Vascular Plant	Carex typhina	Cat-tail Sedge	T		1999
BOLTON	Vascular Plant	Corallorhiza odontorhiza	Autumn Coralroot	SC		2006

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOSTON	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2003
BOSTON	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	T		1932
BOSTON	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		1910
BOSTON	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1928
BOSTON	Beetle	Cicindela rufiventris hentzii	Hentz's Redbelly Tiger Beetle	T		1927
BOSTON	Bird	Accipiter striatus	Sharp-shinned Hawk	SC		1898
BOSTON	Bird	Ammodramus savannarum	Grasshopper Sparrow	T		1993

BOSTON	Bird	Bartramia longicauda	Upland Sandpiper	E	1993
BOSTON	Bird	Falco peregrinus	Peregrine Falcon	E	2007
BOSTON	Bird	Gavia immer	Common Loon	SC	1824
BOSTON	Bird	Poocetes gramineus	Vesper Sparrow	T	1985
BOSTON	Bird	Sterna hirundo	Common Tern	SC	2008
BOSTON	Bird	Sternula antillarum	Least Tern	SC	2007
BOSTON	Bird	Tyto alba	Barn Owl	SC	1989
BOSTON	Bird	Vermivora chrysoptera	Golden-winged Warbler	E	Historic
BOSTON	Butterfly/Moth	Apodrepanulatrix liberaria	New Jersey Tea Inchworm	E	Historic
BOSTON	Butterfly/Moth	Abagrotis nefascia	Coastal Heathland Cutworm	SC	2001
BOSTON	Butterfly/Moth	Metarranthis apiciaria	Barrens Metarranthis Moth	E	1934
BOSTON	Butterfly/Moth	Rhodoecia aurantiago	Orange Sallow Moth	T	1988
BOSTON	Dragonfly/Damselfly	Somatochlora linearis	Mocha Emerald	SC	2009
BOSTON	Fish	Gasterosteus aculeatus	Threespine Stickleback	T	2000
BOSTON	Mussel	Alasmidonta undulata	Triangle Floater	SC	2005
BOSTON	Mussel	Ligumia nasuta	Eastern Pondmussel	SC	1841
BOSTON	Reptile	Terrapene carolina	Eastern Box Turtle	SC	1939
BOSTON	Vascular Plant	Ageratina aromatica	Lesser Snakeroot	E	1896
BOSTON	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T	1800s
BOSTON	Vascular Plant	Aristida tuberculosa	Seabeach Needlegrass	T	1877
BOSTON	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T	1878
BOSTON	Vascular Plant	Boechera missouriensis	Green Rock-cress	T	1930
BOSTON	Vascular Plant	Carex striata	Walter's Sedge	E	Historic
BOSTON	Vascular Plant	Desmodium cuspidatum	Large-bracted Tick-trefoil	T	1896
BOSTON	Vascular Plant	Eriophorum gracile	Slender Cottongrass	T	1885
BOSTON	Vascular Plant	Houstonia longifolia	Long-leaved Bluet	E	1918
BOSTON	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC	1933
BOSTON	Vascular Plant	Linum medium var. texanum	Rigid Flax	T	1909
BOSTON	Vascular Plant	Lycopus rubellus	Gypsywort	E	1896
BOSTON	Vascular Plant	Myriophyllum alterniflorum	Alternate-flowered Water-milfoil	E	Historic
BOSTON	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T	1884
BOSTON	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T	1908

BOSTON	Vascular Plant	Ranunculus micranthus	Tiny-flowered Buttercup	E	1891
BOSTON	Vascular Plant	Rumex pallidus	Seabeach Dock	T	1984
BOSTON	Vascular Plant	Sanicula odorata	Long-styled Sanicle	T	Historic
BOSTON	Vascular Plant	Scirpus longii	Long's Bulrush	T	1907
BOSTON	Vascular Plant	Setaria parviflora	Bristly Foxtail	SC	2001
BOSTON	Vascular Plant	Suaeda calceoliformis	American Sea-blite	SC	1909
BOSTON	Vascular Plant	Viola brittoniana	Britton's Violet	T	1909

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOURNE	Amphibian	Ambystoma opacum	Marbled Salamander	T		1936
BOURNE	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	T		2003
BOURNE	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1935
BOURNE	Bird	Accipiter striatus	Sharp-shinned Hawk	SC		2001
BOURNE	Bird	Ammodramus savannarum	Grasshopper Sparrow	T		2007
BOURNE	Bird	Charadrius melodus	Piping Plover	T	T	2006
BOURNE	Bird	Circus cyaneus	Northern Harrier	T		2007
BOURNE	Bird	Poocetes gramineus	Vesper Sparrow	T		2006
BOURNE	Bird	Sterna dougallii	Roseate Tern	E	E	2008
BOURNE	Bird	Sterna hirundo	Common Tern	SC		2008
BOURNE	Bird	Sternula antillarum	Least Tern	SC		2007
BOURNE	Bird	Tyto alba	Barn Owl	SC		1974
BOURNE	Butterfly/Moth	Abagrotis nefascia	Coastal Heathland Cutworm	SC		1996
BOURNE	Butterfly/Moth	Acronicta albarufa	Barrens Daggermoth	T		1998
BOURNE	Butterfly/Moth	Bagisara rectifascia	Straight Lined Mallow Moth	SC		1998
BOURNE	Butterfly/Moth	Catocala herodias gerhardi	Gerhard's Underwing Moth	SC		1999
BOURNE	Butterfly/Moth	Cicinnus melsheimeri	Melsheimer's Sack Bearer	T		1998
BOURNE	Butterfly/Moth	Cingilia catenaria	Chain Dot Geometer	SC		2006
BOURNE	Butterfly/Moth	Hemileuca maia	Barrens Buckmoth	SC		2006
BOURNE	Butterfly/Moth	Itame sp. 1 nr. inextricata	Pine Barrens Itame	SC		1998
BOURNE	Butterfly/Moth	Metarranthis pilosaria	Coastal Swamp Metarranthis Moth	SC		1998
BOURNE	Butterfly/Moth	Papaipema sulphurata	Water-willow Stem Borer	T		1994
BOURNE	Butterfly/Moth	Zale sp. 1 nr. lunifera	Pine Barrens Zale	SC		1997
BOURNE	Dragonfly/Damselfly	Anax longipes	Comet Darner	SC		2007
BOURNE	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC		2004
BOURNE	Dragonfly/Damselfly	Enallagma	Pine Barrens Bluet	T		1998

		recurvatum				
BOURNE	Dragonfly/Damselfly	Rhionaeschna mutata	Spatterdock Darner	SC		2007
BOURNE	Fish	Notropis bifrenatus	Bridle Shiner	SC		1993
BOURNE	Mussel	Leptodea ochracea	Tidewater Mucket	SC		1996
BOURNE	Mussel	Ligumia nasuta	Eastern Pondmussel	SC		1997
BOURNE	Reptile	Malaclemys terrapin	Diamond-backed Terrapin	T		2004
BOURNE	Reptile	Pseudemys rubriventris pop. 1	Northern Red-bellied Cooter	E	E	2003
BOURNE	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2009
BOURNE	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T		1901
BOURNE	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T		1915
BOURNE	Vascular Plant	Crocanthemum dumosum	Bushy Rockrose	SC		2000
BOURNE	Vascular Plant	Eleocharis ovata	Ovate Spike-sedge	E		1992
BOURNE	Vascular Plant	Hypericum adpressum	Creeping St. John's-wort	T		2007
BOURNE	Vascular Plant	Juncus debilis	Weak Rush	E		1993
BOURNE	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		2005
BOURNE	Vascular Plant	Lygodium palmatum	Climbing Fern	SC		1992
BOURNE	Vascular Plant	Malaxis bayardii	Bayard's Green Adder's-mouth	E		1919
BOURNE	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		2006
BOURNE	Vascular Plant	Polygonum glaucum	Sea-beach Knotweed	SC		1913
BOURNE	Vascular Plant	Polygonum puritanorum	Pondshore Knotweed	SC		1994
BOURNE	Vascular Plant	Rhynchospora scirpoides	Long-beaked Bald-sedge	SC		1986
BOURNE	Vascular Plant	Sabatia kennedyana	Plymouth Gentian	SC		1996
BOURNE	Vascular Plant	Sagittaria teres	Terete Arrowhead	SC		1994
BOURNE	Vascular Plant	Setaria parviflora	Bristly Foxtail	SC		1913
BOURNE	Vascular Plant	Spiranthes vernalis	Grass-leaved Ladies'-tresses	T		1896
BOURNE	Vascular Plant	Suaeda calceoliformis	American Sea-blite	SC		1995
BOURNE	Vascular Plant	Triosteum perfoliatum	Broad Tinker's-weed	E		2004

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOXBOROUGH	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2007
BOXBOROUGH	Reptile	Emydoidea blandingii	Blanding's Turtle	T		2003
BOXBOROUGH	Reptile	Glyptemys insculpta	Wood Turtle	SC		2002
BOXBOROUGH	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2001

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOXFORD	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		2008
BOXFORD	Amphibian	Ambystoma opacum	Marbled Salamander	T		1983
BOXFORD	Bird	Tyto alba	Barn Owl	SC		1957
BOXFORD	Fish	Notropis bifrenatus	Bridle Shiner	SC		1999
BOXFORD	Mussel	Ligumia nasuta	Eastern Pondmussel	SC		Historic
BOXFORD	Reptile	Emydoidea blandingii	Blanding's Turtle	T		2008
BOXFORD	Reptile	Glyptemys insculpta	Wood Turtle	SC		2000
BOXFORD	Vascular Plant	Asclepias purpurascens	Purple Milkweed	E		1883
BOXFORD	Vascular Plant	Carex livida	Glaucous Sedge	E		1890
BOXFORD	Vascular Plant	Eriophorum gracile	Slender Cottongrass	T		1909
BOXFORD	Vascular Plant	Gentiana andrewsii	Andrews' Bottle Gentian	E		1881
BOXFORD	Vascular Plant	Houstonia longifolia	Long-leaved Bluet	E		1882
BOXFORD	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		2004
BOXFORD	Vascular Plant	Myriophyllum alterniflorum	Alternate-flowered Water-milfoil	E		2004
BOXFORD	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1905
BOXFORD	Vascular Plant	Panicum philadelphicum ssp. philadelphicum	Philadelphia Panic-grass	SC		1953
BOXFORD	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T		1881
BOXFORD	Vascular Plant	Potamogeton vaseyi	Vasey's Pondweed	E		2004
BOXFORD	Vascular Plant	Senna hebecarpa	Wild Senna	E		1882
BOXFORD	Vascular Plant	Sparganium natans	Small Bur-reed	E		1997
BOXFORD	Vascular Plant	Viola adunca	Sand Violet	SC		2004

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BOYLSTON	Amphibian	Ambystoma opacum	Marbled Salamander	T		1995
BOYLSTON	Bird	Gavia immer	Common Loon	SC		2008
BOYLSTON	Bird	Haliaeetus leucocephalus	Bald Eagle	E		2009
BOYLSTON	Bird	Podilymbus podiceps	Pied-billed Grebe	E		1978
BOYLSTON	Butterfly/Moth	Rhodoecia aurantiago	Orange Sallow Moth	T		2008
BOYLSTON	Fish	Notropis bifrenatus	Bridle Shiner	SC		1951
BOYLSTON	Reptile	Glyptemys insculpta	Wood Turtle	SC		1983
BOYLSTON	Vascular Plant	Hydrophyllum canadense	Broad Waterleaf	E		1943

BOYLSTON	Vascular Plant	<i>Liatris scariosa</i> var. <i>novae-angliae</i>	New England Blazing Star	SC	1932
BOYLSTON	Vascular Plant	<i>Ophioglossum pusillum</i>	Adder's-tongue Fern	T	2000

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BRAINTREE	Dragonfly/Damselfly	<i>Anax longipes</i>	Comet Darner	SC		1970
BRAINTREE	Dragonfly/Damselfly	<i>Enallagma laterale</i>	New England Bluet	SC		1969
BRAINTREE	Dragonfly/Damselfly	<i>Somatochlora linearis</i>	Mocha Emerald	SC		1989
BRAINTREE	Mussel	<i>Ligumia nasuta</i>	Eastern Pondmussel	SC		2000
BRAINTREE	Reptile	<i>Terrapene carolina</i>	Eastern Box Turtle	SC		1997
BRAINTREE	Vascular Plant	<i>Asclepias purpurascens</i>	Purple Milkweed	E		1922
BRAINTREE	Vascular Plant	<i>Houstonia longifolia</i>	Long-leaved Bluet	E		1886

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BREWSTER	Bird	<i>Charadrius melodus</i>	Piping Plover	T	T	2006
BREWSTER	Bird	<i>Parula americana</i>	Northern Parula	T		2006
BREWSTER	Bird	<i>Sterna dougallii</i>	Roseate Tern	E	E	2008
BREWSTER	Bird	<i>Sterna hirundo</i>	Common Tern	SC		2008
BREWSTER	Butterfly/Moth	<i>Abagrotis nefascia</i>	Coastal Heathland Cutworm	SC		1981
BREWSTER	Butterfly/Moth	<i>Apamea inebriata</i>	Drunk Apamea Moth	SC		1981
BREWSTER	Butterfly/Moth	<i>Bagisara rectifascia</i>	Straight Lined Mallow Moth	SC		1982
BREWSTER	Butterfly/Moth	<i>Papaipema sulphurata</i>	Water-willow Stem Borer	T		1994
BREWSTER	Dragonfly/Damselfly	<i>Enallagma laterale</i>	New England Bluet	SC		2000
BREWSTER	Dragonfly/Damselfly	<i>Enallagma pictum</i>	Scarlet Bluet	T		2003
BREWSTER	Dragonfly/Damselfly	<i>Enallagma recurvatum</i>	Pine Barrens Bluet	T		2005
BREWSTER	Dragonfly/Damselfly	<i>Rhionaeschna mutata</i>	Spatterdock Darner	SC		1987
BREWSTER	Fish	<i>Notropis bifrenatus</i>	Bridle Shiner	SC		1961
BREWSTER	Reptile	<i>Malaclemys terrapin</i>	Diamond-backed Terrapin	T		2002
BREWSTER	Reptile	<i>Terrapene carolina</i>	Eastern Box Turtle	SC		2008
BREWSTER	Vascular Plant	<i>Carex mitchelliana</i>	Mitchell's Sedge	T		2006
BREWSTER	Vascular Plant	<i>Corema conradii</i>	Broom Crowberry	SC		1994
BREWSTER	Vascular Plant	<i>Crocianthemum dumosum</i>	Bushy Rockrose	SC		2006

BREWSTER	Vascular Plant	Dichanthelium dichotomum ssp. mattamuskeetense	Mattamuskeet Panic-grass	E	1918
BREWSTER	Vascular Plant	Dichanthelium ovale ssp. pseudopubescens	Commons's Panic-grass	SC	2006
BREWSTER	Vascular Plant	Gamochaeta purpurea	Purple Cudweed	E	1924
BREWSTER	Vascular Plant	Isoetes acadiensis	Acadian Quillwort	E	1989
BREWSTER	Vascular Plant	Lachnanthes caroliana	Redroot	SC	2002
BREWSTER	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC	1931
BREWSTER	Vascular Plant	Lipocarpa micrantha	Dwarf Bulrush	T	2006
BREWSTER	Vascular Plant	Mertensia maritima	Oysterleaf	E	2001
BREWSTER	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T	1992
BREWSTER	Vascular Plant	Opuntia humifusa	Prickly Pear	E	1989
BREWSTER	Vascular Plant	Polygonum puritanorum	Pondshore Knotweed	SC	2003
BREWSTER	Vascular Plant	Rhexia mariana	Maryland Meadow Beauty	E	2008
BREWSTER	Vascular Plant	Rhynchospora scirpoides	Long-beaked Bald-sedge	SC	1986
BREWSTER	Vascular Plant	Rumex pallidus	Seabeach Dock	T	1994
BREWSTER	Vascular Plant	Sabatia kennedyana	Plymouth Gentian	SC	2004
BREWSTER	Vascular Plant	Sagittaria teres	Terete Arrowhead	SC	2008
BREWSTER	Vascular Plant	Spartina cynosuroides	Salt Reedgrass	T	2004
BREWSTER	Vascular Plant	Utricularia resupinata	Resupinate Bladderwort	T	2002

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BRIDGEWATER	Bird	Ammodramus savannarum	Grasshopper Sparrow	T		1997
BRIDGEWATER	Bird	Asio otus	Long-eared Owl	SC		1978
BRIDGEWATER	Bird	Bartramia longicauda	Upland Sandpiper	E		1980
BRIDGEWATER	Bird	Tyto alba	Barn Owl	SC		1981
BRIDGEWATER	Butterfly/Moth	Papaipema sulphurata	Water-willow Stem Borer	T		1994
BRIDGEWATER	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC		1994
BRIDGEWATER	Dragonfly/Damselfly	Enallagma	Scarlet Bluet	T		2004

BRIDGEWATER	Mussel	<i>Alasmidonta pictum undulata</i>	Triangle Floater	SC		1999
BRIDGEWATER	Mussel	<i>Leptodea ochracea</i>	Tidewater Mucket	SC		1997
BRIDGEWATER	Mussel	<i>Ligumia nasuta</i>	Eastern Pondmussel	SC		1997
BRIDGEWATER	Reptile	<i>Glyptemys insculpta</i>	Wood Turtle	SC		2004
BRIDGEWATER	Reptile	<i>Pseudemys rubriventris</i> pop. 1	Northern Red-bellied Cooter	E	E	2005
BRIDGEWATER	Reptile	<i>Terrapene carolina</i>	Eastern Box Turtle	SC		2009
BRIDGEWATER	Vascular Plant	<i>Ludwigia sphaerocarpa</i>	Round-fruited False-loosestrife	E		2005
BRIDGEWATER	Vascular Plant	<i>Platanthera flava</i> var. <i>herbiola</i>	Pale Green Orchis	T		1912
BRIDGEWATER	Vascular Plant	<i>Sabatia kennedyana</i>	Plymouth Gentian	SC		2005
BRIDGEWATER	Vascular Plant	<i>Scirpus longii</i>	Long's Bulrush	T		1988

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BRIMFIELD	Amphibian	<i>Ambystoma laterale</i>	Blue-spotted Salamander	SC		2000
BRIMFIELD	Bird	<i>Botaurus lentiginosus</i>	American Bittern	E		1997
BRIMFIELD	Bird	<i>Ixobrychus exilis</i>	Least Bittern	E		2007
BRIMFIELD	Dragonfly/Damselfly	<i>Ophiogomphus aspersus</i>	Brook Snaketail	SC		2004
BRIMFIELD	Fish	<i>Notropis bifrenatus</i>	Bridle Shiner	SC		1999
BRIMFIELD	Mussel	<i>Alasmidonta undulata</i>	Triangle Floater	SC		1982
BRIMFIELD	Mussel	<i>Strophitus undulatus</i>	Creeper	SC		1982
BRIMFIELD	Reptile	<i>Glyptemys insculpta</i>	Wood Turtle	SC		2006
BRIMFIELD	Vascular Plant	<i>Isoetes lacustris</i>	Lake Quillwort	E		1930

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BROCKTON	Butterfly/Moth	<i>Metarranthis apiciaria</i>	Barrens Metarranthis Moth	E		1909
BROCKTON	Dragonfly/Damselfly	<i>Enallagma laterale</i>	New England Bluet	SC		2003
BROCKTON	Vascular Plant	<i>Liatris scariosa</i> var. <i>novae-angliae</i>	New England Blazing Star	SC		1900

BROCKTON	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T	1902
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Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BROOKFIELD	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		1990
BROOKFIELD	Amphibian	Ambystoma opacum	Marbled Salamander	T		1996
BROOKFIELD	Bird	Bartramia longicauda	Upland Sandpiper	E		Historic
BROOKFIELD	Bird	Botaurus lentiginosus	American Bittern	E		2008
BROOKFIELD	Bird	Cistothorus platensis	Sedge Wren	E		1992
BROOKFIELD	Bird	Haliaeetus leucocephalus	Bald Eagle	E		2008
BROOKFIELD	Bird	Ixobrychus exilis	Least Bittern	E		2007
BROOKFIELD	Bird	Podilymbus podiceps	Pied-billed Grebe	E		1993
BROOKFIELD	Bird	Rallus elegans	King Rail	T		2007
BROOKFIELD	Dragonfly/Damselfly	Rhionaeschna mutata	Spatterdock Darner	SC		2003
BROOKFIELD	Fish	Notropis bifrenatus	Bridle Shiner	SC		2003
BROOKFIELD	Mussel	Alasmidonta undulata	Triangle Floater	SC		1999
BROOKFIELD	Vascular Plant	Carex polymorpha	Variable Sedge	E		2004
BROOKFIELD	Vascular Plant	Clematis occidentalis	Purple Clematis	SC		2007
BROOKFIELD	Vascular Plant	Lipocarpa micrantha	Dwarf Bulrush	T		2007
BROOKFIELD	Vascular Plant	Myriophyllum alterniflorum	Alternate-flowered Water-milfoil	E		1898
BROOKFIELD	Vascular Plant	Poa saltuensis ssp. languida	Drooping Speargrass	E		2000
BROOKFIELD	Vascular Plant	Potamogeton vaseyi	Vasey's Pondweed	E		1998
BROOKFIELD	Vascular Plant	Ranunculus pennsylvanicus	Bristly Buttercup	SC		2007
BROOKFIELD	Vascular Plant	Scirpus longii	Long's Bulrush	T		2000

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BROOKLINE	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		Historic

BROOKLINE	Beetle	Cicindela rufiventris hentzii	Hentz's Redbelly Tiger Beetle	T	Historic
BROOKLINE	Bird	Accipiter striatus	Sharp-shinned Hawk	SC	1905
BROOKLINE	Bird	Vermivora chrysoptera	Golden-winged Warbler	E	1932
BROOKLINE	Vascular Plant	Houstonia longifolia	Long-leaved Bluet	E	1897
BROOKLINE	Vascular Plant	Linum medium var. texanum	Rigid Flax	T	1903
BROOKLINE	Vascular Plant	Lipocarpa micrantha	Dwarf Bulrush	T	1902
BROOKLINE	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T	1912
BROOKLINE	Vascular Plant	Viola brittoniana	Britton's Violet	T	1913

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
BUCKLAND	Amphibian	Ambystoma jeffersonianum	Jefferson Salamander	SC		1989
BUCKLAND	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		2001
BUCKLAND	Butterfly/Moth	Erora laeta	Early Hairstreak	T		1988
BUCKLAND	Dragonfly/Damselfly	Boyeria grafiana	Ocellated Darner	SC		2004
BUCKLAND	Dragonfly/Damselfly	Gomphus abbreviatus	Spine-crowned Clubtail	E		2004
BUCKLAND	Dragonfly/Damselfly	Neurocordulia yamaskanensis	Stygian Shadowdragon	SC		2004
BUCKLAND	Dragonfly/Damselfly	Rhionaeschna mutata	Spatterdock Darner	SC		2004
BUCKLAND	Fish	Catostomus catostomus	Longnose Sucker	SC		1989
BUCKLAND	Reptile	Glyptemys insculpta	Wood Turtle	SC		2007
BUCKLAND	Vascular Plant	Alnus viridis ssp. crispa	Mountain Alder	T		2004
BUCKLAND	Vascular Plant	Amelanchier sanguinea	Roundleaf Shadbush	SC		1911
BUCKLAND	Vascular Plant	Aplectrum hyemale	Putty-root	E		1904
BUCKLAND	Vascular Plant	Corallorhiza odontorhiza	Autumn Coralroot	SC		2006
BUCKLAND	Vascular Plant	Huperzia selago	Mountain Firmoss	E		1899
BUCKLAND	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1913
BUCKLAND	Vascular Plant	Platanthera dilatata	Leafy White Orchis	T		1932
BUCKLAND	Vascular Plant	Sanicula odorata	Long-styled Sanicle	T		1907
BUCKLAND	Vascular Plant	Symphyotrichum tradescantii	Tradescant's Aster	T		2002

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent
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					Observation
BURLINGTON	Fish	Notropis bifrenatus	Bridle Shiner	SC	1994
BURLINGTON	Reptile	Terrapene carolina	Eastern Box Turtle	SC	1998
BURLINGTON	Vascular Plant	Carex polymorpha	Variable Sedge	E	2008
BURLINGTON	Vascular Plant	Nabalus serpentarius	Lion's Foot	E	1906

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Updated: October 27, 2009

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Massachusetts Division of Fisheries and Wildlife, 1 Rabbit Hill Rd, Westborough, MA 01581
Tel: (508) 389-6300; Fax: (508) 389-7890
Natural Heritage & Endangered Species Program Tel: (508) 389-6360; Fax: (508) 389-7891

**Remediation General Permit
Appendix II**

**Endangered Species Act: List of Species by County
in Massachusetts and in New Hampshire**

The following is the U.S. Fish and Wildlife Service (FWS) listing of federally endangered and threatened species for counties in Massachusetts and New Hampshire. If you are located close to the border of a county or your site is located in one county and your discharge points are located in another, you must look under both counties.

The New Hampshire and Massachusetts lists were updated on 7/31/2008; however, please note that species are listed and de-listed periodically. To get the most current list at the time you are conducting your endangered species assessment, see the FWS Endangered Species Program website at <http://www.fws.gov/endangered/> and the U.S. FWS New England Field Office website at <http://www.fws.gov/newengland/index.htm>

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied cooter	Endangered	Inland Ponds and Rivers	Raynham and Taunton
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Glocester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague
	Dwarf wedgemussel	Endangered	Mill River	Whately
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hadley, Hatfield, Amherst and Northampton
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, and Wareham
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
Suffolk	Piping Plover	Threatened	Coastal Beaches	Winthrop
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster

- Eastern cougar and gray wolf are considered extirpated in Massachusetts.
- Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
- Critical habitat for the Northern Red-bellied cooter is present in Plymouth County.

7/31/2008

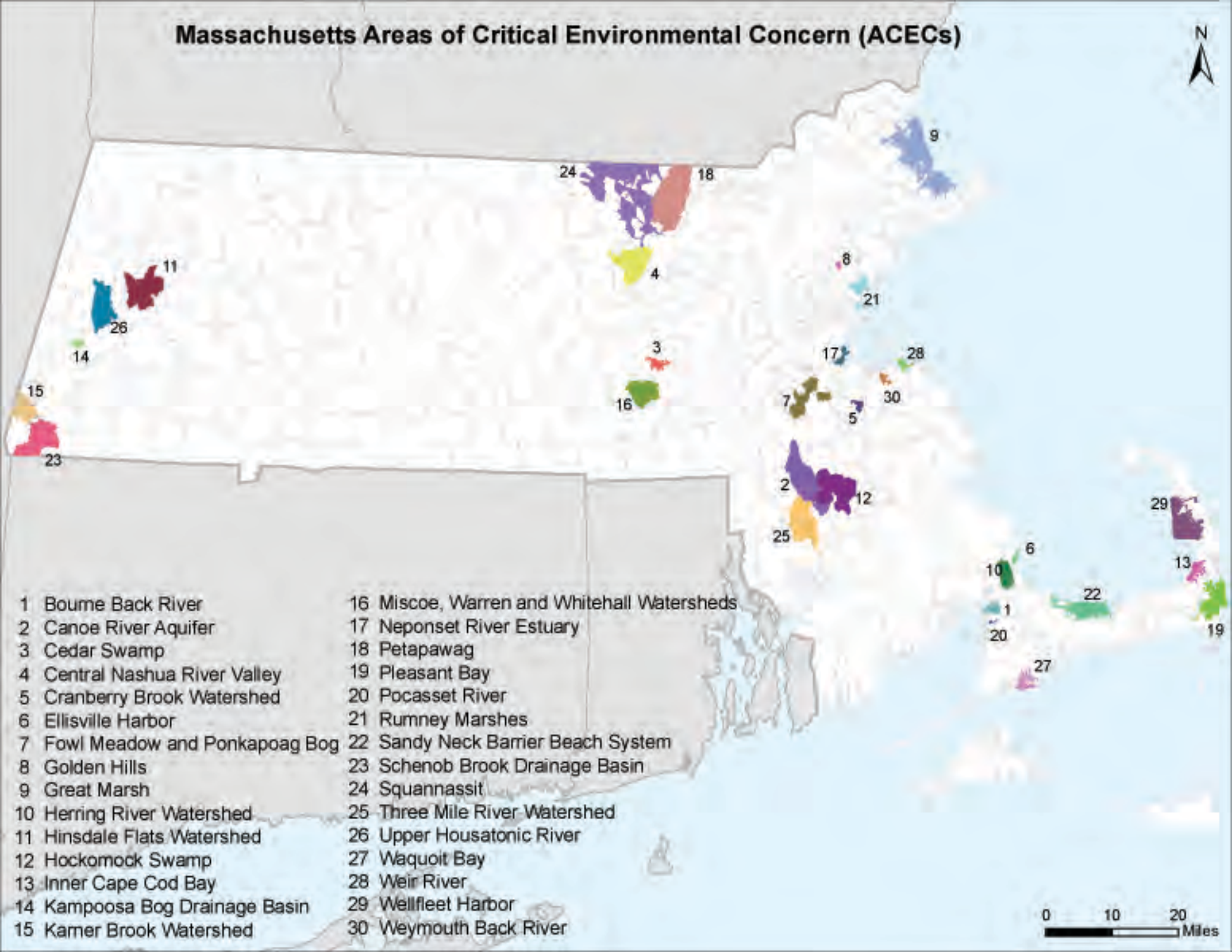
**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN NEW HAMPSHIRE**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Belknap	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Meredith, Alton and Laconia
Carroll	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Albany, Eaton, Madison Wolfeboro, Brookfield and Wakefield
Coos	Canada Lynx	Threatened	Regenerating softwood forest, usually with a high density of snowshoe hare.	All Towns
	Dwarf wedgemussel	Endangered	Connecticut River main channel and Johns River	Northumberland, Lancaster and Dalton
Cheshire	Dwarf wedgemussel	Endangered	S. Branch Ashuelot River and Ashuelot River	Swanzy, Keene and Surry
Grafton	Dwarf wedgemussel	Endangered	Connecticut River main channel	Haverhill, Piermont, Orford and Lyme
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Holderness
Hillsborough	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Weare
Merrimack	Karner Blue Butterfly	Endangered	Pine Barrens with wild blue lupine	Concord and Pembroke
	Small whorled Pogonia	Threatened	Forests	Danbury, Epsom, Warner and Allenstown
Rockingham	Piping Plover	Threatened	Coastal Beaches	Hampton and Seabrook
	Roseate Tern	Endangered	Atlantic Ocean and nesting at the Isle of Shoals	
	Small whorled Pogonia	Threatened	Forests	Northwood, Nottingham, and Epping
Strafford	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Middleton, New Durham, Milton, Farmington, Strafford, Barrington, and Madbury
Sullivan	Northeastern bulrush	Endangered	Wetlands	Acworth, Charlestown, Langdon and Walpole
	Dwarf wedgemussel	Endangered	Connecticut River main channel	Plainfield, Cornish, Claremont and Charlestown
	Jesup's milk-vetch	Endangered	Banks of the Connecticut River	Plainfield and Claremont

- Eastern cougar, gray wolf and Puritan tiger beetle are considered extirpated in New Hampshire.
- Endangered gray wolves are not known to be present in New Hampshire, but dispersing individuals from source populations in Canada may occur statewide.
- There is no federally-designated Critical Habitat in New Hampshire.

7/31/2008

Massachusetts Areas of Critical Environmental Concern (ACECs)



- 1 Bourns Back River
- 2 Canoe River Aquifer
- 3 Cedar Swamp
- 4 Central Nashua River Valley
- 5 Cranberry Brook Watershed
- 6 Ellisville Harbor
- 7 Fowl Meadow and Ponkapoag Bog
- 8 Golden Hills
- 9 Great Marsh
- 10 Herring River Watershed
- 11 Hinsdale Flats Watershed
- 12 Hockomock Swamp
- 13 Inner Cape Cod Bay
- 14 Kampoosa Bog Drainage Basin
- 15 Kame Brook Watershed

- 16 Miscoe, Warren and Whitehall Watersheds
- 17 Neponset River Estuary
- 18 Petapawag
- 19 Pleasant Bay
- 20 Pocasset River
- 21 Rumney Marshes
- 22 Sandy Neck Barrier Beach System
- 23 Schenob Brook Drainage Basin
- 24 Squannassit
- 25 Three Mile River Watershed
- 26 Upper Housatonic River
- 27 Waquoit Bay
- 28 Weir River
- 29 Wellfleet Harbor
- 30 Weymouth Back River

0 10 20 Miles

APPENDIX E

**City of Cambridge
Dewatering Permit Application**



PERMIT TO DEWATER

Location:

Temporary

Owner:

Permanent

Contractor:

The property owner, _____ agrees to hold harmless and indemnify the City of Cambridge for any liability on the part of the City directly or indirectly arising out of the dewatering operation.

The issuance of this permit is based in part in the submission packet of the applicant with documentation as follows:

In addition, the application has been reviewed by the City under third party agreement as documented in the following reports:

All activities conducted in conjunction with the issuance of this permit must be in accordance with the provisions of the aforementioned reports. Any deviations in conditions must be reported to and approved by the Commissioner of Public Works.

This permit is in addition to any other street permit issued by the Department in connection with any street excavation or obstruction; and all conditions as specified in the Discharge Permit for Dewatering.

For the entire period of time the groundwater is being discharged to a storm drain, the property owner shall provide copies of each Discharge Monitoring Report Form submitted to the EPA, pursuant to the owner's discharge permit.

If in the future the EPA requires the City of Cambridge to bring existing stormwater drainage into compliance with EPA quality standards, as a condition to the continuation of discharge of that stormwater (also including groundwater) into an EPA regulated system into which the _____ (property owner) drains, the owner will agree to maintain its water discharge with such EPA water quality standards.

The property owner and contractor shall at all times meet the conditions specified in the requisite legal agreement/affidavits.

All groundwater pumped from the work shall be disposed of without damage to pavements, other surfaces or property.

Where material or debris has washed or flowed into or has been placed in existing gutters, drains, pipes or structures, such material or debris shall be entirely removed and satisfactorily disposed of by the

Contractor during the progress of work as directed by the Public Works Department.

Any flooding or damage of property and possessions caused by siltation of existing gutters, pipes or structures shall be the responsibility of the Contractor.

Provisions shall be made to insure that no material, water or solid, will freeze on any pavement or in any location which will cause inconvenience or hazard to the general public.

Upon completion of the work, existing gutters, drains, pipes and structures shall be (bucket) cleaned and material disposed of satisfactorily prior to release by the Public Works Department.

Any permit issued by the City of Cambridge shall be revoked upon transfer of any ownership interest unless and until subsequent owner(s) or parties of interest agree to the foregoing terms.

This permit shall remain in effect for one year and shall be renewable thereafter at the agreement of the parties.

The following special conditions as set forth below are part of the permit.

City Manager

Property Manager: Corporate Entity
President, General Partner or Trustee
Trustee with Instrument of Authority

Date

Date

City Solicitor

Contractor

Date

Date

Commissioner of Public

Contractor

Date

Date

CC: Engineering
 Supervisor of Sewer Maintenance and Engineering
 Superintendent of Streets
 Commissioner of Inspectional Services

APPENDIX F

Laboratory Data Report



ANALYTICAL REPORT

Lab Number:	L1109310
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	181 MASS. AVE
Project Number:	4822
Report Date:	07/12/11

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

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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



Project Name: 181 MASS. AVE
Project Number: 4822

Lab Number: L1109310
Report Date: 07/12/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1109310-01	B-106 (OW)	CAMBRIDGE, MA	06/24/11 11:00
L1109310-02	B-105 (OW)	CAMBRIDGE, MA	06/24/11 13:00
L1109310-03	B-436 (OW)	CAMBRIDGE, MA	06/24/11 15:00
L1109310-04	TRIP BLANK	CAMBRIDGE, MA	06/24/11 00:00

Project Name: 181 MASS. AVE
Project Number: 4822

Lab Number: L1109310
Report Date: 07/12/11

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report replaces the report issued on July 6, 2011. The Volatile Organics compound list for L1109310-02 has been amended.

Sample Receipt

A Trip Blank was received in the laboratory but not listed on the Chain of Custody. At the client's request, the Trip Blank was not analyzed.

Volatile Organics

L1109310-01 was re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the

Project Name: 181 MASS. AVE
Project Number: 4822

Lab Number: L1109310
Report Date: 07/12/11

Case Narrative (continued)

calibration range.

Semivolatile Organics-SIM

L1109310-01 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Metals

L1109310-03 has elevated detection limits for all analytes, with the exception of Iron and Mercury, due to the dilution required by the high concentrations of non-target analytes. The requested reporting limits were not achieved.

Chloride

L1109310-01, -02 and -03 have elevated detection limits due to the dilutions required to quantitate the results within the calibration range.

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

Authorized Signature:

 Elizabeth Simmons

Title: Technical Director/Representative

Date: 07/12/11

ORGANICS

VOLATILES

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01
Client ID: B-106 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 07/06/11 07:56
Analyst: SH

Date Collected: 06/24/11 11:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Date: 07/05/11 23:30

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

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01
Client ID: B-106 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 5,624
Analytical Date: 06/27/11 12:55
Analyst: TT

Date Collected: 06/24/11 11:00
Date Received: 06/24/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Chloroform	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane ¹	ND		ug/l	3.5	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Tetrachloroethene	ND		ug/l	1.5	--	1
Chlorobenzene	ND		ug/l	3.5	--	1
Trichlorofluoromethane	ND		ug/l	5.0	--	1
1,2-Dichloroethane	2.4		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	--	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	--	1
Bromoform	ND		ug/l	1.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	97		ug/l	1.0	--	1
Toluene	5.2		ug/l	1.0	--	1
Ethylbenzene	130	E	ug/l	1.0	--	1
Chloromethane	ND		ug/l	10	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	2.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	--	1
cis-1,2-Dichloroethene ¹	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01
 Client ID: B-106 (OW)
 Sample Location: CAMBRIDGE, MA

Date Collected: 06/24/11 11:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene ¹	170		ug/l	2.0	--	1
o-xylene ¹	35		ug/l	1.0	--	1
Xylene (Total) ¹	210		ug/l	2.0	--	1
Styrene ¹	ND		ug/l	1.0	--	1
Acetone ¹	ND		ug/l	10	--	1
Carbon disulfide ¹	ND		ug/l	5.0	--	1
2-Butanone ¹	53		ug/l	10	--	1
Vinyl acetate ¹	ND		ug/l	20	--	1
4-Methyl-2-pentanone ¹	ND		ug/l	10	--	1
2-Hexanone ¹	ND		ug/l	10	--	1
Acrolein ¹	ND		ug/l	8.0	--	1
Acrylonitrile ¹	ND		ug/l	10	--	1
Methyl tert butyl ether ¹	ND		ug/l	20	--	1
Dibromomethane ¹	ND		ug/l	1.0	--	1
1,4-Dioxane ¹	ND		ug/l	2000	--	1
Tert-Butyl Alcohol ¹	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether ¹	ND		ug/l	20	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	116		80-120
Fluorobenzene	111		80-120
4-Bromofluorobenzene	100		80-120

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01 D
 Client ID: B-106 (OW)
 Sample Location: CAMBRIDGE, MA
 Matrix: Water
 Analytical Method: 5,624
 Analytical Date: 06/27/11 14:48
 Analyst: TT

Date Collected: 06/24/11 11:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethylbenzene	120		ug/l	5.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	115		80-120
Fluorobenzene	120		80-120
4-Bromofluorobenzene	99		80-120

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
Client ID: B-105 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 07/06/11 08:11
Analyst: SH

Date Collected: 06/24/11 13:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Date: 07/05/11 23:30

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

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
Client ID: B-105 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 5,624
Analytical Date: 06/27/11 11:10
Analyst: TT

Date Collected: 06/24/11 13:00
Date Received: 06/24/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Chloroform	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane ¹	ND		ug/l	3.5	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Tetrachloroethene	ND		ug/l	1.5	--	1
Chlorobenzene	ND		ug/l	3.5	--	1
Trichlorofluoromethane	ND		ug/l	5.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	--	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	--	1
Bromoform	ND		ug/l	1.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	10	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	2.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	--	1
cis-1,2-Dichloroethene ¹	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
 Client ID: B-105 (OW)
 Sample Location: CAMBRIDGE, MA

Date Collected: 06/24/11 13:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene ¹	ND		ug/l	2.0	--	1
o-xylene ¹	ND		ug/l	1.0	--	1
Xylene (Total) ¹	ND		ug/l	2.0	--	1
Styrene ¹	ND		ug/l	1.0	--	1
Acetone ¹	ND		ug/l	10	--	1
Carbon disulfide ¹	ND		ug/l	5.0	--	1
2-Butanone ¹	ND		ug/l	10	--	1
Vinyl acetate ¹	ND		ug/l	20	--	1
4-Methyl-2-pentanone ¹	ND		ug/l	10	--	1
2-Hexanone ¹	ND		ug/l	10	--	1
Acrolein ¹	ND		ug/l	8.0	--	1
Acrylonitrile ¹	ND		ug/l	10	--	1
Methyl tert butyl ether ¹	ND		ug/l	20	--	1
Dibromomethane ¹	ND		ug/l	1.0	--	1
1,4-Dioxane ¹	ND		ug/l	2000	--	1
Tert-Butyl Alcohol ¹	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether ¹	ND		ug/l	20	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	91		80-120
Fluorobenzene	98		80-120
4-Bromofluorobenzene	114		80-120

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
Client ID: B-436 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 07/06/11 08:26
Analyst: SH

Date Collected: 06/24/11 15:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Date: 07/05/11 23:30

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

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
Client ID: B-436 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 5,624
Analytical Date: 06/27/11 11:45
Analyst: TT

Date Collected: 06/24/11 15:00
Date Received: 06/24/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Chloroform	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane ¹	ND		ug/l	3.5	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Tetrachloroethene	ND		ug/l	1.5	--	1
Chlorobenzene	ND		ug/l	3.5	--	1
Trichlorofluoromethane	ND		ug/l	5.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	--	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	--	1
Bromoform	ND		ug/l	1.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	10	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	4.1		ug/l	2.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	--	1
cis-1,2-Dichloroethene ¹	47		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
 Client ID: B-436 (OW)
 Sample Location: CAMBRIDGE, MA

Date Collected: 06/24/11 15:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene ¹	ND		ug/l	2.0	--	1
o-xylene ¹	ND		ug/l	1.0	--	1
Xylene (Total) ¹	ND		ug/l	2.0	--	1
Styrene ¹	ND		ug/l	1.0	--	1
Acetone ¹	ND		ug/l	10	--	1
Carbon disulfide ¹	ND		ug/l	5.0	--	1
2-Butanone ¹	ND		ug/l	10	--	1
Vinyl acetate ¹	ND		ug/l	20	--	1
4-Methyl-2-pentanone ¹	ND		ug/l	10	--	1
2-Hexanone ¹	ND		ug/l	10	--	1
Acrolein ¹	ND		ug/l	8.0	--	1
Acrylonitrile ¹	ND		ug/l	10	--	1
Methyl tert butyl ether ¹	ND		ug/l	20	--	1
Dibromomethane ¹	ND		ug/l	1.0	--	1
1,4-Dioxane ¹	ND		ug/l	2000	--	1
Tert-Butyl Alcohol ¹	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether ¹	ND		ug/l	20	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	104		80-120
Fluorobenzene	97		80-120
4-Bromofluorobenzene	110		80-120

Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624

Analytical Date: 06/27/11 07:38

Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG475121-6					
Methylene chloride	ND		ug/l	5.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Chloroform	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane ¹	ND		ug/l	3.5	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
2-Chloroethylvinyl ether	ND		ug/l	10	--
Tetrachloroethene	ND		ug/l	1.5	--
Chlorobenzene	ND		ug/l	3.5	--
Trichlorofluoromethane	ND		ug/l	5.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	1.5	--
cis-1,3-Dichloropropene	ND		ug/l	1.5	--
Bromoform	ND		ug/l	1.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	10	--
Bromomethane	ND		ug/l	5.0	--
Vinyl chloride	ND		ug/l	2.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.5	--
cis-1,2-Dichloroethene ¹	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624

Analytical Date: 06/27/11 07:38

Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG475121-6					
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene ¹	ND		ug/l	2.0	--
o-xylene ¹	ND		ug/l	1.0	--
Xylene (Total) ¹	ND		ug/l	2.0	--
Styrene ¹	ND		ug/l	1.0	--
Acetone ¹	ND		ug/l	10	--
Carbon disulfide ¹	ND		ug/l	5.0	--
2-Butanone ¹	ND		ug/l	10	--
Vinyl acetate ¹	ND		ug/l	10	--
4-Methyl-2-pentanone ¹	ND		ug/l	10	--
2-Hexanone ¹	ND		ug/l	10	--
Acrolein ¹	ND		ug/l	8.0	--
Acrylonitrile ¹	ND		ug/l	10	--
Methyl tert butyl ether ¹	ND		ug/l	20	--
Dibromomethane ¹	ND		ug/l	1.0	--
1,4-Dioxane ¹	ND		ug/l	2000	--
Tert-Butyl Alcohol ¹	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether ¹	ND		ug/l	20	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	96		80-120
Fluorobenzene	100		80-120
4-Bromofluorobenzene	115		80-120

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**Method Blank Analysis**
Batch Quality Control**Analytical Method:** 14,504.1**Analytical Date:** 07/06/11 06:55**Analyst:** SH**Extraction Date:** 07/05/11 23:30

Parameter	Result	Qualifier	Units	RL	MDL
Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG477275-1					
1,2-Dibromoethane	ND		ug/l	0.010	--
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--

Lab Control Sample Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG475121-5								
Methylene chloride	93		-		1-221	-		30
1,1-Dichloroethane	113		-		59-155	-		30
Chloroform	120		-		51-138	-		30
Carbon tetrachloride	133		-		70-140	-		30
1,2-Dichloropropane ¹	109		-		1-210	-		30
Dibromochloromethane	119		-		53-149	-		30
1,1,2-Trichloroethane	108		-		52-150	-		30
2-Chloroethylvinyl ether	83		-		1-305	-		30
Tetrachloroethene	112		-		64-148	-		30
Chlorobenzene	108		-		37-160	-		30
Trichlorofluoromethane	119		-		17-181	-		30
1,2-Dichloroethane	120		-		49-155	-		30
1,1,1-Trichloroethane	123		-		52-162	-		30
Bromodichloromethane	119		-		35-155	-		30
trans-1,3-Dichloropropene	115		-		17-183	-		30
cis-1,3-Dichloropropene	117		-		1-227	-		30
Bromoform	116		-		45-169	-		30
1,1,2,2-Tetrachloroethane	105		-		46-157	-		30
Benzene	120		-		37-151	-		30
Toluene	117		-		47-150	-		30
Ethylbenzene	106		-		37-162	-		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG475121-5								
Chloromethane	60		-		1-273	-		30
Bromomethane	72		-		1-242	-		30
Vinyl chloride	79		-		1-251	-		30
Chloroethane	81		-		14-230	-		30
1,1-Dichloroethene	82		-		1-234	-		30
trans-1,2-Dichloroethene	117		-		54-156	-		30
cis-1,2-Dichloroethene ¹	108		-		60-140	-		30
Trichloroethene	113		-		71-157	-		30
1,2-Dichlorobenzene	101		-		18-190	-		30
1,3-Dichlorobenzene	98		-		59-156	-		30
1,4-Dichlorobenzene	107		-		18-190	-		30
p/m-Xylene ¹	105		-		40-160	-		30
o-Xylene ¹	100		-		40-160	-		30
XYLENE (TOTAL) ¹	103		-		40-160	-		30
Styrene ¹	156		-		40-160	-		30
Acetone ¹	65		-		40-160	-		30
Carbon disulfide ¹	116		-		40-160	-		30
2-Butanone ¹	75		-		40-160	-		30
Vinyl acetate ¹	113		-		40-160	-		30
4-Methyl-2-pentanone ¹	83		-		40-160	-		30
2-Hexanone ¹	83		-		40-160	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG475121-5								
Acrolein ¹	65		-		40-160	-		30
Acrylonitrile ¹	70		-		40-160	-		30
Dibromomethane ¹	97		-		70-130	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	103				80-120
Fluorobenzene	102				80-120
4-Bromofluorobenzene	101				80-120

Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG477275-2								
1,2-Dibromoethane	99		-		70-130	-		20
1,2-Dibromo-3-chloropropane	102		-		70-130	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475121-3 QC Sample: L1109187-01 Client ID: MS Sample												
Methylene chloride	ND	20	24	118		-	-		1-221	-		30
1,1-Dichloroethane	ND	20	22	113		-	-		59-155	-		30
Chloroform	ND	20	24	123		-	-		51-138	-		30
Carbon tetrachloride	ND	20	26	131		-	-		70-140	-		30
1,2-Dichloropropane ¹	ND	20	22	112		-	-		1-210	-		30
Dibromochloromethane	ND	20	23	116		-	-		53-149	-		30
1,1,2-Trichloroethane	ND	20	21	106		-	-		52-150	-		30
2-Chloroethylvinyl ether	ND	20	16	81		-	-		1-305	-		30
Tetrachloroethene	ND	20	22	108		-	-		64-148	-		30
Chlorobenzene	ND	20	21	107		-	-		37-160	-		30
Trichlorofluoromethane	ND	20	27	134		-	-		17-181	-		30
1,2-Dichloroethane	ND	20	24	118		-	-		49-155	-		30
1,1,1-Trichloroethane	ND	20	25	124		-	-		52-162	-		30
Bromodichloromethane	ND	20	24	118		-	-		35-155	-		30
trans-1,3-Dichloropropene	ND	20	22	110		-	-		17-183	-		30
cis-1,3-Dichloropropene	ND	20	21	105		-	-		1-227	-		30
Bromoform	ND	20	23	116		-	-		45-169	-		30
1,1,2,2-Tetrachloroethane	ND	20	22	108		-	-		46-157	-		30
Benzene	ND	20	24	120		-	-		35-151	-		30
Toluene	ND	20	23	115		-	-		47-150	-		30
Ethylbenzene	ND	20	21	105		-	-		37-162	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475121-3 QC Sample: L1109187-01 Client ID: MS Sample												
Chloromethane	ND	20	12	60		-	-		1-273	-		30
Bromomethane	ND	20	14	71		-	-		1-242	-		30
Vinyl chloride	ND	20	15	75		-	-		1-251	-		30
Chloroethane	ND	20	18	93		-	-		14-230	-		30
1,1-Dichloroethene	ND	20	22	109		-	-		1-234	-		30
trans-1,2-Dichloroethene	ND	20	22	113		-	-		54-156	-		30
cis-1,2-Dichloroethene ¹	ND	20	22	109		-	-		60-140	-		30
Trichloroethene	ND	20	22	109		-	-		71-157	-		30
1,2-Dichlorobenzene	ND	20	20	100		-	-		18-190	-		30
1,3-Dichlorobenzene	ND	20	19	95		-	-		59-156	-		30
1,4-Dichlorobenzene	ND	20	21	104		-	-		18-190	-		30
p/m-Xylene ¹	ND	40	42	104		-	-		40-160	-		30
o-Xylene ¹	ND	20	20	99		-	-		40-160	-		30
XYLENE (TOTAL) ¹	ND	60	61	102		-	-		40-160	-		30
Styrene ¹	ND	20	31	156		-	-		40-160	-		30
Acetone ¹	ND	50	46	91		-	-		40-160	-		30
Carbon disulfide ¹	ND	20	28	138		-	-		40-160	-		30
2-Butanone ¹	ND	50	44	88		-	-		40-160	-		30
Vinyl acetate ¹	ND	40	42	105		-	-		40-160	-		30
4-Methyl-2-pentanone ¹	ND	50	45	91		-	-		40-160	-		30
2-Hexanone ¹	ND	50	45	90		-	-		40-160	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475121-3 QC Sample: L1109187-01 Client ID: MS Sample

Acrolein ¹	ND	40	42	105		-	-		40-160	-		30
Acrylonitrile ¹	ND	40	37	93		-	-		40-160	-		30
Dibromomethane ¹	ND	20	18	93		-	-			-		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
4-Bromofluorobenzene	103				80-120
Fluorobenzene	104				80-120
Pentafluorobenzene	103				80-120

Pesticides by GC - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG477275-3 QC Sample: L1109308-01 Client ID: MS Sample

1,2-Dibromoethane	ND	0.26	0.254	98		-	-		70-130	-		20
1,2-Dibromo-3-chloropropane	ND	0.26	0.247	95		-	-		70-130	-		20

Project Name: 181 MASS. AVE
Project Number: 4822

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1109310
Report Date: 07/12/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475121-4 QC Sample: L1109187-01 Client ID: DUP Sample						
Methylene chloride	ND	ND	ug/l	NC		30
1,1-Dichloroethane	ND	ND	ug/l	NC		30
Chloroform	ND	ND	ug/l	NC		30
Carbon tetrachloride	ND	ND	ug/l	NC		30
1,2-Dichloropropane ¹	ND	ND	ug/l	NC		30
Dibromochloromethane	ND	ND	ug/l	NC		30
1,1,2-Trichloroethane	ND	ND	ug/l	NC		30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC		30
Tetrachloroethene	ND	ND	ug/l	NC		30
Chlorobenzene	ND	ND	ug/l	NC		30
Trichlorofluoromethane	ND	ND	ug/l	NC		30
1,2-Dichloroethane	ND	ND	ug/l	NC		30
1,1,1-Trichloroethane	ND	ND	ug/l	NC		30
Bromodichloromethane	ND	ND	ug/l	NC		30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC		30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC		30
Bromoform	ND	ND	ug/l	NC		30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC		30
Benzene	ND	ND	ug/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475121-4 QC Sample: L1109187-01 Client ID: DUP Sample					
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene ¹	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene ¹	ND	ND	ug/l	NC	30
o-Xylene ¹	ND	ND	ug/l	NC	30
XYLENE (TOTAL) ¹	ND	ND	ug/l	NC	30
Styrene ¹	ND	ND	ug/l	NC	30
Acetone ¹	ND	ND	ug/l	NC	30
Carbon disulfide ¹	ND	ND	ug/l	NC	30

Lab Duplicate Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475121-4 QC Sample: L1109187-01 Client ID: DUP Sample					
2-Butanone ¹	ND	ND	ug/l	NC	30
Vinyl acetate ¹	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone ¹	ND	ND	ug/l	NC	30
2-Hexanone ¹	ND	ND	ug/l	NC	30
Acrolein ¹	ND	ND	ug/l	NC	30
Acrylonitrile ¹	ND	ND	ug/l	NC	30
Dibromomethane ¹	ND	ND	ug/l	NC	30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	95		94		80-120
Fluorobenzene	100		101		80-120
4-Bromofluorobenzene	111		113		80-120

SEMIVOLATILES

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01
Client ID: B-106 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 07/05/11 11:52
Analyst: JB

Date Collected: 06/24/11 11:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/30/11 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/l	20	--	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--	1
1,2-Dichlorobenzene	ND		ug/l	2.0	--	1
1,3-Dichlorobenzene	ND		ug/l	2.0	--	1
1,4-Dichlorobenzene	ND		ug/l	2.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--	1
2,4-Dinitrotoluene	ND		ug/l	5.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	2.0	--	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Hexachlorocyclopentadiene	ND		ug/l	20	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	2.0	--	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1
Aniline	ND		ug/l	2.0	--	1
4-Chloroaniline	ND		ug/l	5.0	--	1
2-Nitroaniline	ND		ug/l	5.0	--	1
3-Nitroaniline	ND		ug/l	5.0	--	1
4-Nitroaniline	ND		ug/l	5.0	--	1
Dibenzofuran	ND		ug/l	2.0	--	1
n-Nitrosodimethylamine	ND		ug/l	2.0	--	1

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01
 Client ID: B-106 (OW)
 Sample Location: CAMBRIDGE, MA

Date Collected: 06/24/11 11:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
P-Chloro-M-Cresol	ND		ug/l	2.0	--	1
2-Chlorophenol	ND		ug/l	2.0	--	1
2,4-Dichlorophenol	ND		ug/l	5.0	--	1
2,4-Dimethylphenol	ND		ug/l	5.0	--	1
2-Nitrophenol	ND		ug/l	10	--	1
4-Nitrophenol	ND		ug/l	10	--	1
2,4-Dinitrophenol	ND		ug/l	20	--	1
4,6-Dinitro-o-cresol	ND		ug/l	10	--	1
Phenol	ND		ug/l	5.0	--	1
2-Methylphenol	ND		ug/l	5.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1
Benzoic Acid	ND		ug/l	50	--	1
Benzyl Alcohol	ND		ug/l	2.0	--	1
Carbazole	ND		ug/l	2.0	--	1
Pyridine	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	66		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	76		41-149

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01 D
Client ID: B-106 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 1,8270C-SIM
Analytical Date: 07/05/11 12:50
Analyst: AS

Date Collected: 06/24/11 11:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/30/11 10:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	1.0	--	5
2-Chloronaphthalene	ND		ug/l	1.0	--	5
Fluoranthene	ND		ug/l	1.0	--	5
Hexachlorobutadiene	ND		ug/l	2.5	--	5
Naphthalene	57		ug/l	1.0	--	5
Benzo(a)anthracene	ND		ug/l	1.0	--	5
Benzo(a)pyrene	ND		ug/l	1.0	--	5
Benzo(b)fluoranthene	ND		ug/l	1.0	--	5
Benzo(k)fluoranthene	ND		ug/l	1.0	--	5
Chrysene	ND		ug/l	1.0	--	5
Acenaphthylene	ND		ug/l	1.0	--	5
Anthracene	ND		ug/l	1.0	--	5
Benzo(ghi)perylene	ND		ug/l	1.0	--	5
Fluorene	ND		ug/l	1.0	--	5
Phenanthrene	ND		ug/l	1.0	--	5
Dibenzo(a,h)anthracene	ND		ug/l	1.0	--	5
Indeno(1,2,3-cd)Pyrene	ND		ug/l	1.0	--	5
Pyrene	ND		ug/l	1.0	--	5
1-Methylnaphthalene	12		ug/l	1.0	--	5
2-Methylnaphthalene	18		ug/l	1.0	--	5
Pentachlorophenol	ND		ug/l	4.0	--	5
Hexachlorobenzene	ND		ug/l	4.0	--	5
Hexachloroethane	ND		ug/l	4.0	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	91		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	97		41-149



Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
Client ID: B-105 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 07/05/11 12:15
Analyst: JB

Date Collected: 06/24/11 13:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/30/11 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/l	20	--	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--	1
1,2-Dichlorobenzene	ND		ug/l	2.0	--	1
1,3-Dichlorobenzene	ND		ug/l	2.0	--	1
1,4-Dichlorobenzene	ND		ug/l	2.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--	1
2,4-Dinitrotoluene	ND		ug/l	5.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	2.0	--	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Hexachlorocyclopentadiene	ND		ug/l	20	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	2.0	--	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1
Aniline	ND		ug/l	2.0	--	1
4-Chloroaniline	ND		ug/l	5.0	--	1
2-Nitroaniline	ND		ug/l	5.0	--	1
3-Nitroaniline	ND		ug/l	5.0	--	1
4-Nitroaniline	ND		ug/l	5.0	--	1
Dibenzofuran	ND		ug/l	2.0	--	1
n-Nitrosodimethylamine	ND		ug/l	2.0	--	1

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
 Client ID: B-105 (OW)
 Sample Location: CAMBRIDGE, MA

Date Collected: 06/24/11 13:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
P-Chloro-M-Cresol	ND		ug/l	2.0	--	1
2-Chlorophenol	ND		ug/l	2.0	--	1
2,4-Dichlorophenol	ND		ug/l	5.0	--	1
2,4-Dimethylphenol	ND		ug/l	5.0	--	1
2-Nitrophenol	ND		ug/l	10	--	1
4-Nitrophenol	ND		ug/l	10	--	1
2,4-Dinitrophenol	ND		ug/l	20	--	1
4,6-Dinitro-o-cresol	ND		ug/l	10	--	1
Phenol	ND		ug/l	5.0	--	1
2-Methylphenol	ND		ug/l	5.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1
Benzoic Acid	ND		ug/l	50	--	1
Benzyl Alcohol	ND		ug/l	2.0	--	1
Carbazole	ND		ug/l	2.0	--	1
Pyridine	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		21-120
Phenol-d6	19		10-120
Nitrobenzene-d5	48		23-120
2-Fluorobiphenyl	51		15-120
2,4,6-Tribromophenol	65		10-120
4-Terphenyl-d14	67		41-149

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
Client ID: B-105 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 1,8270C-SIM
Analytical Date: 07/05/11 09:11
Analyst: AS

Date Collected: 06/24/11 13:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/30/11 10:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	--	1
2-Chloronaphthalene	ND		ug/l	0.20	--	1
Fluoranthene	ND		ug/l	0.20	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.20	--	1
Benzo(a)anthracene	ND		ug/l	0.20	--	1
Benzo(a)pyrene	ND		ug/l	0.20	--	1
Benzo(b)fluoranthene	ND		ug/l	0.20	--	1
Benzo(k)fluoranthene	ND		ug/l	0.20	--	1
Chrysene	ND		ug/l	0.20	--	1
Acenaphthylene	ND		ug/l	0.20	--	1
Anthracene	ND		ug/l	0.20	--	1
Benzo(ghi)perylene	ND		ug/l	0.20	--	1
Fluorene	ND		ug/l	0.20	--	1
Phenanthrene	ND		ug/l	0.20	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	--	1
Pyrene	ND		ug/l	0.20	--	1
1-Methylnaphthalene	ND		ug/l	0.20	--	1
2-Methylnaphthalene	ND		ug/l	0.20	--	1
Pentachlorophenol	ND		ug/l	0.80	--	1
Hexachlorobenzene	ND		ug/l	0.80	--	1
Hexachloroethane	ND		ug/l	0.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	58		15-120
2,4,6-Tribromophenol	78		10-120
4-Terphenyl-d14	70		41-149



Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
Client ID: B-436 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 07/05/11 12:39
Analyst: JB

Date Collected: 06/24/11 15:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/30/11 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/l	20	--	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--	1
1,2-Dichlorobenzene	ND		ug/l	2.0	--	1
1,3-Dichlorobenzene	ND		ug/l	2.0	--	1
1,4-Dichlorobenzene	ND		ug/l	2.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--	1
2,4-Dinitrotoluene	ND		ug/l	5.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	2.0	--	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Hexachlorocyclopentadiene	ND		ug/l	20	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	2.0	--	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1
Aniline	ND		ug/l	2.0	--	1
4-Chloroaniline	ND		ug/l	5.0	--	1
2-Nitroaniline	ND		ug/l	5.0	--	1
3-Nitroaniline	ND		ug/l	5.0	--	1
4-Nitroaniline	ND		ug/l	5.0	--	1
Dibenzofuran	ND		ug/l	2.0	--	1
n-Nitrosodimethylamine	ND		ug/l	2.0	--	1

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
 Client ID: B-436 (OW)
 Sample Location: CAMBRIDGE, MA

Date Collected: 06/24/11 15:00
 Date Received: 06/24/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
P-Chloro-M-Cresol	ND		ug/l	2.0	--	1
2-Chlorophenol	ND		ug/l	2.0	--	1
2,4-Dichlorophenol	ND		ug/l	5.0	--	1
2,4-Dimethylphenol	ND		ug/l	5.0	--	1
2-Nitrophenol	ND		ug/l	10	--	1
4-Nitrophenol	ND		ug/l	10	--	1
2,4-Dinitrophenol	ND		ug/l	20	--	1
4,6-Dinitro-o-cresol	ND		ug/l	10	--	1
Phenol	ND		ug/l	5.0	--	1
2-Methylphenol	ND		ug/l	5.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1
Benzoic Acid	ND		ug/l	50	--	1
Benzyl Alcohol	ND		ug/l	2.0	--	1
Carbazole	ND		ug/l	2.0	--	1
Pyridine	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	58		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	73		41-149

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
Client ID: B-436 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 1,8270C-SIM
Analytical Date: 07/05/11 09:41
Analyst: AS

Date Collected: 06/24/11 15:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/30/11 10:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	--	1
2-Chloronaphthalene	ND		ug/l	0.20	--	1
Fluoranthene	ND		ug/l	0.20	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.20	--	1
Benzo(a)anthracene	ND		ug/l	0.20	--	1
Benzo(a)pyrene	ND		ug/l	0.20	--	1
Benzo(b)fluoranthene	ND		ug/l	0.20	--	1
Benzo(k)fluoranthene	ND		ug/l	0.20	--	1
Chrysene	ND		ug/l	0.20	--	1
Acenaphthylene	ND		ug/l	0.20	--	1
Anthracene	ND		ug/l	0.20	--	1
Benzo(ghi)perylene	ND		ug/l	0.20	--	1
Fluorene	ND		ug/l	0.20	--	1
Phenanthrene	ND		ug/l	0.20	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	--	1
Pyrene	ND		ug/l	0.20	--	1
1-Methylnaphthalene	ND		ug/l	0.20	--	1
2-Methylnaphthalene	ND		ug/l	0.20	--	1
Pentachlorophenol	ND		ug/l	0.80	--	1
Hexachlorobenzene	ND		ug/l	0.80	--	1
Hexachloroethane	ND		ug/l	0.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	95		10-120
4-Terphenyl-d14	83		41-149



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 07/06/11 11:40
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 06/30/11 10:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG476319-1					
Acenaphthene	ND		ug/l	2.0	--
Benzidine	ND		ug/l	20	--
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--
Hexachlorobenzene	ND		ug/l	2.0	--
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--
2-Chloronaphthalene	ND		ug/l	2.0	--
1,2-Dichlorobenzene	ND		ug/l	2.0	--
1,3-Dichlorobenzene	ND		ug/l	2.0	--
1,4-Dichlorobenzene	ND		ug/l	2.0	--
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--
2,4-Dinitrotoluene	ND		ug/l	5.0	--
2,6-Dinitrotoluene	ND		ug/l	5.0	--
Azobenzene	ND		ug/l	2.0	--
Fluoranthene	ND		ug/l	2.0	--
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	2.0	--
Hexachlorocyclopentadiene	ND		ug/l	20	--
Hexachloroethane	ND		ug/l	2.0	--
Isophorone	ND		ug/l	5.0	--
Naphthalene	ND		ug/l	2.0	--
Nitrobenzene	ND		ug/l	2.0	--
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	--
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 07/06/11 11:40
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 06/30/11 10:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG476319-1					
Benzo(a)anthracene	ND		ug/l	2.0	--
Benzo(a)pyrene	ND		ug/l	2.0	--
Benzo(b)fluoranthene	ND		ug/l	2.0	--
Benzo(k)fluoranthene	ND		ug/l	2.0	--
Chrysene	ND		ug/l	2.0	--
Acenaphthylene	ND		ug/l	2.0	--
Anthracene	ND		ug/l	2.0	--
Benzo(ghi)perylene	ND		ug/l	2.0	--
Fluorene	ND		ug/l	2.0	--
Phenanthrene	ND		ug/l	2.0	--
Dibenzo(a,h)anthracene	ND		ug/l	2.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	2.0	--
Pyrene	ND		ug/l	2.0	--
Aniline	ND		ug/l	2.0	--
4-Chloroaniline	ND		ug/l	5.0	--
1-Methylnaphthalene	ND		ug/l	2.0	--
2-Nitroaniline	ND		ug/l	5.0	--
3-Nitroaniline	ND		ug/l	5.0	--
4-Nitroaniline	ND		ug/l	5.0	--
Dibenzofuran	ND		ug/l	2.0	--
2-Methylnaphthalene	ND		ug/l	2.0	--
n-Nitrosodimethylamine	ND		ug/l	2.0	--
2,4,6-Trichlorophenol	ND		ug/l	5.0	--
P-Chloro-M-Cresol	ND		ug/l	2.0	--
2-Chlorophenol	ND		ug/l	2.0	--
2,4-Dichlorophenol	ND		ug/l	5.0	--
2,4-Dimethylphenol	ND		ug/l	5.0	--
2-Nitrophenol	ND		ug/l	10	--
4-Nitrophenol	ND		ug/l	10	--
2,4-Dinitrophenol	ND		ug/l	20	--
4,6-Dinitro-o-cresol	ND		ug/l	10	--



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 07/06/11 11:40
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 06/30/11 10:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG476319-1					
Pentachlorophenol	ND		ug/l	10	--
Phenol	ND		ug/l	5.0	--
2-Methylphenol	ND		ug/l	5.0	--
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--
2,4,5-Trichlorophenol	ND		ug/l	5.0	--
Benzoic Acid	ND		ug/l	50	--
Benzyl Alcohol	ND		ug/l	2.0	--
Carbazole	ND		ug/l	2.0	--
Pyridine	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	51		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	68		41-149

Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C-SIM

Extraction Method: EPA 3510C

Analytical Date: 07/05/11 09:26

Extraction Date: 06/30/11 10:35

Analyst: AS

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG476321-1					
Acenaphthene	ND		ug/l	0.20	--
2-Chloronaphthalene	ND		ug/l	0.20	--
Fluoranthene	ND		ug/l	0.20	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	0.20	--
Benzo(a)anthracene	ND		ug/l	0.20	--
Benzo(a)pyrene	ND		ug/l	0.20	--
Benzo(b)fluoranthene	ND		ug/l	0.20	--
Benzo(k)fluoranthene	ND		ug/l	0.20	--
Chrysene	ND		ug/l	0.20	--
Acenaphthylene	ND		ug/l	0.20	--
Anthracene	ND		ug/l	0.20	--
Benzo(ghi)perylene	ND		ug/l	0.20	--
Fluorene	ND		ug/l	0.20	--
Phenanthrene	ND		ug/l	0.20	--
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	--
Pyrene	ND		ug/l	0.20	--
1-Methylnaphthalene	ND		ug/l	0.20	--
2-Methylnaphthalene	ND		ug/l	0.20	--
Pentachlorophenol	ND		ug/l	0.80	--
Hexachlorobenzene	ND		ug/l	0.80	--
Hexachloroethane	ND		ug/l	0.80	--

Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C-SIM

Extraction Method: EPA 3510C

Analytical Date: 07/05/11 09:26

Extraction Date: 06/30/11 10:35

Analyst: AS

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG476321-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	35		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	82		41-149

Lab Control Sample Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG476319-2 WG476319-3								
Acenaphthene	73		78		37-111	7		30
1,2,4-Trichlorobenzene	58		59		39-98	2		30
2-Chloronaphthalene	71		76		40-140	7		30
1,2-Dichlorobenzene	56		57		40-140	2		30
1,4-Dichlorobenzene	54		54		36-97	0		30
2,4-Dinitrotoluene	76		81		24-96	6		30
2,6-Dinitrotoluene	62		70		40-140	12		30
Fluoranthene	74		79		40-140	7		30
4-Chlorophenyl phenyl ether	74		77		40-140	4		30
n-Nitrosodi-n-propylamine	63		68		41-116	8		30
Butyl benzyl phthalate	76		81		40-140	6		30
Anthracene	85		87		40-140	2		30
Pyrene	73		78		26-127	7		30
P-Chloro-M-Cresol	65		74		23-97	13		30
2-Chlorophenol	66		69		27-123	4		30
2-Nitrophenol	63		68		30-130	8		30
4-Nitrophenol	37		39		10-80	5		30
2,4-Dinitrophenol	62		67		20-130	8		30
Pentachlorophenol	75		79		9-103	5		30
Phenol	33		36		12-110	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG476319-2 WG476319-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	49		50		21-120
Phenol-d6	33		35		10-120
Nitrobenzene-d5	67		70		23-120
2-Fluorobiphenyl	65		69		15-120
2,4,6-Tribromophenol	92		92		10-120
4-Terphenyl-d14	77		79		41-149

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG476321-2 WG476321-3

Acenaphthene	76		86		37-111	12	40
2-Chloronaphthalene	88		98		40-140	11	40
Fluoranthene	101		116		40-140	14	40
Anthracene	84		96		40-140	13	40
Pyrene	94		108		26-127	14	40
Pentachlorophenol	78		88		9-103	12	40

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 181 MASS. AVE**Project Number:** 4822**Lab Number:** L1109310**Report Date:** 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG476321-2 WG476321-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	56		58		21-120
Phenol-d6	40		41		10-120
Nitrobenzene-d5	80		84		23-120
2-Fluorobiphenyl	78		80		15-120
2,4,6-Tribromophenol	76		80		10-120
4-Terphenyl-d14	92		95		41-149

PCBS

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-01
Client ID: B-106 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 5,608
Analytical Date: 07/01/11 09:16
Analyst: SH

Date Collected: 06/24/11 11:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 06/30/11 21:02
Cleanup Method1: EPA 3665A
Cleanup Date1: 07/01/11
Cleanup Method2: EPA 3660B
Cleanup Date2: 07/01/11

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	64		30-150	A

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-02
Client ID: B-105 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 5,608
Analytical Date: 07/01/11 09:29
Analyst: SH

Date Collected: 06/24/11 13:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 06/30/11 21:02
Cleanup Method1: EPA 3665A
Cleanup Date1: 07/01/11
Cleanup Method2: EPA 3660B
Cleanup Date2: 07/01/11

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	63		30-150	A

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**SAMPLE RESULTS**

Lab ID: L1109310-03
Client ID: B-436 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water
Analytical Method: 5,608
Analytical Date: 07/01/11 09:41
Analyst: SH

Date Collected: 06/24/11 15:00
Date Received: 06/24/11
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 06/30/11 21:02
Cleanup Method1: EPA 3665A
Cleanup Date1: 07/01/11
Cleanup Method2: EPA 3660B
Cleanup Date2: 07/01/11

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	62		30-150	A

Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,608
 Analytical Date: 07/01/11 08:25
 Analyst: SH

Extraction Method: EPA 608
 Extraction Date: 06/30/11 21:02
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/01/11
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/01/11

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-03 Batch: WG476458-1					
Aroclor 1016	ND		ug/l	0.250	--
Aroclor 1221	ND		ug/l	0.250	--
Aroclor 1232	ND		ug/l	0.250	--
Aroclor 1242	ND		ug/l	0.250	--
Aroclor 1248	ND		ug/l	0.250	--
Aroclor 1254	ND		ug/l	0.250	--
Aroclor 1260	ND		ug/l	0.250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	76		30-150	A

Matrix Spike Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476458-3 QC Sample: L1109310-01 Client ID: B-106 (OW)												
Aroclor 1016	ND	2	2.30	115		-	-		40-126	-		30
Aroclor 1260	ND	2	1.43	72		-	-		40-127	-		30

Surrogate	MS		MSD		Acceptance Criteria	Column
	% Recovery	Qualifier	% Recovery	Qualifier		
2,4,5,6-Tetrachloro-m-xylene	87				30-150	A
Decachlorobiphenyl	64				30-150	A

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 181 MASS. AVE**Project Number:** 4822**Lab Number:** L1109310**Report Date:** 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG476458-2								
Aroclor 1016	60		-		40-126	-		30
Aroclor 1260	64		-		40-127	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72				30-150	A
Decachlorobiphenyl	60				30-150	A

Lab Duplicate Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476458-4 QC Sample: L1109310-01 Client ID: B-106 (OW)						
Aroclor 1016	ND	ND	ug/l	NC		30
Aroclor 1221	ND	ND	ug/l	NC		30
Aroclor 1232	ND	ND	ug/l	NC		30
Aroclor 1242	ND	ND	ug/l	NC		30
Aroclor 1248	ND	ND	ug/l	NC		30
Aroclor 1254	ND	ND	ug/l	NC		30
Aroclor 1260	ND	ND	ug/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		85		30-150	A
Decachlorobiphenyl	64		64		30-150	A

METALS

Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

SAMPLE RESULTS

Lab ID: L1109310-01

Date Collected: 06/24/11 11:00

Client ID: B-106 (OW)

Date Received: 06/24/11

Sample Location: CAMBRIDGE, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0010	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Arsenic, Total	0.0024		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Chromium, Total	0.001		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Copper, Total	ND		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Iron, Total	15		mg/l	0.05	--	1	06/28/11 12:30	06/30/11 18:15	EPA 3005A	19,200.7	AI
Lead, Total	0.0012		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	--	1	06/29/11 12:10	06/29/11 17:56	EPA 245.1	3,245.1	DM
Nickel, Total	0.0011		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Selenium, Total	0.002		mg/l	0.001	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0004	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM
Zinc, Total	0.0121		mg/l	0.0050	--	1	06/28/11 12:30	06/29/11 14:55	EPA 3005A	1,6020	BM



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

SAMPLE RESULTS

Lab ID: L1109310-02

Date Collected: 06/24/11 13:00

Client ID: B-105 (OW)

Date Received: 06/24/11

Sample Location: CAMBRIDGE, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.0024		mg/l	0.0010	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Arsenic, Total	0.0014		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Chromium, Total	0.0010		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Copper, Total	0.0037		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Iron, Total	0.12		mg/l	0.05	--	1	06/28/11 12:30	06/30/11 18:27	EPA 3005A	19,200.7	AI
Lead, Total	ND		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	--	1	06/29/11 12:10	06/29/11 17:58	EPA 245.1	3,245.1	DM
Nickel, Total	0.0016		mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Selenium, Total	ND		mg/l	0.001	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0004	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM
Zinc, Total	0.0179		mg/l	0.0050	--	1	06/28/11 12:30	06/29/11 15:19	EPA 3005A	1,6020	BM



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

SAMPLE RESULTS

Lab ID: L1109310-03

Date Collected: 06/24/11 15:00

Client ID: B-436 (OW)

Date Received: 06/24/11

Sample Location: CAMBRIDGE, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0020	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Arsenic, Total	0.0636		mg/l	0.0010	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Cadmium, Total	ND		mg/l	0.0004	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Chromium, Total	ND		mg/l	0.0010	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Copper, Total	ND		mg/l	0.0010	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Iron, Total	24		mg/l	0.05	--	1	06/28/11 12:30	06/30/11 18:30	EPA 3005A	19,200.7	AI
Lead, Total	ND		mg/l	0.0010	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	--	1	06/29/11 12:10	06/29/11 18:03	EPA 245.1	3,245.1	DM
Nickel, Total	0.0028		mg/l	0.0010	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Selenium, Total	0.003		mg/l	0.002	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0008	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM
Zinc, Total	0.0369		mg/l	0.0100	--	2	06/28/11 12:30	06/29/11 15:26	EPA 3005A	1,6020	BM



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG475854-1									
Antimony, Total	ND	mg/l	0.0010	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Arsenic, Total	ND	mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Cadmium, Total	ND	mg/l	0.0002	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Chromium, Total	ND	mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Copper, Total	ND	mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Lead, Total	ND	mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Nickel, Total	ND	mg/l	0.0005	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Selenium, Total	ND	mg/l	0.001	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Silver, Total	ND	mg/l	0.0004	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM
Zinc, Total	ND	mg/l	0.0050	--	1	06/28/11 12:30	06/29/11 14:19	1,6020	BM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG475855-1									
Iron, Total	ND	mg/l	0.05	--	1	06/28/11 12:30	06/30/11 18:09	19,200.7	AI

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG476131-1									
Mercury, Total	ND	mg/l	0.0002	--	1	06/29/11 12:10	06/29/11 17:52	3,245.1	DM

Prep Information

Digestion Method: EPA 245.1



Lab Control Sample Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG475854-2								
Antimony, Total	96		-		80-120	-		
Arsenic, Total	107		-		80-120	-		
Cadmium, Total	108		-		80-120	-		
Chromium, Total	95		-		80-120	-		
Copper, Total	101		-		80-120	-		
Lead, Total	109		-		80-120	-		
Nickel, Total	101		-		80-120	-		
Selenium, Total	108		-		80-120	-		
Silver, Total	98		-		80-120	-		
Zinc, Total	104		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG475855-2								
Iron, Total	97		-		85-115	-		
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG476131-2								
Mercury, Total	102		-		85-115	-		

Matrix Spike Analysis **Batch Quality Control**

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475854-4 QC Sample: L1109310-01 Client ID: B-106 (OW)												
Antimony, Total	ND	0.5	0.5224	104		-	-		80-120	-		20
Arsenic, Total	0.0024	0.12	0.1327	108		-	-		80-120	-		20
Cadmium, Total	ND	0.051	0.0544	106		-	-		80-120	-		20
Chromium, Total	0.001	0.2	0.1898	94		-	-		80-120	-		20
Copper, Total	ND	0.25	0.2465	99		-	-		80-120	-		20
Lead, Total	0.0012	0.51	0.5600	110		-	-		80-120	-		20
Nickel, Total	0.0011	0.5	0.4864	97		-	-		80-120	-		20
Selenium, Total	0.002	0.12	0.125	103		-	-		80-120	-		20
Silver, Total	ND	0.05	0.0482	96		-	-		80-120	-		20
Zinc, Total	0.0121	0.5	0.5168	101		-	-		80-120	-		20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475855-4 QC Sample: L1109310-01 Client ID: B-106 (OW)												
Iron, Total	15	1	16	100		-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476131-4 QC Sample: L1109310-02 Client ID: B-105 (OW)												
Mercury, Total	ND	0.001	0.0012	117		-	-		70-130	-		20

Lab Duplicate Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475854-3 QC Sample: L1109310-01 Client ID: B-106 (OW)						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.0024	0.0025	mg/l	5		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.001	0.0010	mg/l	3		20
Copper, Total	ND	0.0013	mg/l	NC		20
Lead, Total	0.0012	0.0012	mg/l	1		20
Nickel, Total	0.0011	0.0012	mg/l	7		20
Selenium, Total	0.002	0.002	mg/l	13		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.0121	0.0142	mg/l	16		20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475855-3 QC Sample: L1109310-01 Client ID: B-106 (OW)						
Iron, Total	15	15	mg/l	0		20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476131-3 QC Sample: L1109310-02 Client ID: B-105 (OW)						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS & MISCELLANEOUS

Project Name: 181 MASS. AVE
Project Number: 4822

Lab Number: L1109310
Report Date: 07/12/11

SAMPLE RESULTS

Lab ID: L1109310-01
Client ID: B-106 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 06/24/11 11:00
Date Received: 06/24/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	34		mg/l	5.0	NA	1	-	06/28/11 20:30	30,2540D	DW
Cyanide, Total	0.005		mg/l	0.005	--	1	06/29/11 12:15	06/30/11 14:57	30,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/24/11 21:30	30,4500CL-D	KK
TPH	ND		mg/l	4.00	--	1	06/29/11 10:15	06/29/11 16:45	74,1664A	JO
Phenolics, Total	0.03		mg/l	0.03	--	1	06/28/11 18:50	06/29/11 00:04	4,420.1	TP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/25/11 03:55	06/25/11 04:21	30,3500CR-D	TP
Anions by Ion Chromatography - Westborough Lab										
Chloride	340		mg/l	5.0	--	10	-	06/28/11 21:11	44,300.0	AU



Project Name: 181 MASS. AVE
Project Number: 4822

Lab Number: L1109310
Report Date: 07/12/11

SAMPLE RESULTS

Lab ID: L1109310-02
Client ID: B-105 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 06/24/11 13:00
Date Received: 06/24/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/28/11 20:30	30,2540D	DW
Cyanide, Total	0.012		mg/l	0.005	--	1	06/29/11 12:15	06/30/11 14:58	30,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/24/11 21:30	30,4500CL-D	KK
TPH	ND		mg/l	4.00	--	1	06/29/11 10:15	06/29/11 16:45	74,1664A	JO
Phenolics, Total	0.03		mg/l	0.03	--	1	06/28/11 18:50	06/29/11 00:05	4,420.1	TP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/25/11 03:55	06/25/11 04:21	30,3500CR-D	TP
Anions by Ion Chromatography - Westborough Lab										
Chloride	250		mg/l	5.0	--	10	-	06/28/11 21:24	44,300.0	AU



Project Name: 181 MASS. AVE
Project Number: 4822

Lab Number: L1109310
Report Date: 07/12/11

SAMPLE RESULTS

Lab ID: L1109310-03
Client ID: B-436 (OW)
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 06/24/11 15:00
Date Received: 06/24/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	32		mg/l	5.0	NA	1	-	06/28/11 20:30	30,2540D	DW
Cyanide, Total	ND		mg/l	0.005	--	1	06/29/11 12:15	06/30/11 14:34	30,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/24/11 21:30	30,4500CL-D	KK
TPH	ND		mg/l	4.00	--	1	06/29/11 10:15	06/29/11 16:45	74,1664A	JO
Phenolics, Total	ND		mg/l	0.03	--	1	06/28/11 18:50	06/29/11 00:05	4,420.1	TP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/25/11 03:55	06/25/11 04:22	30,3500CR-D	TP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1100		mg/l	25	--	50	-	06/28/11 21:36	44,300.0	AU



Project Name: 181 MASS. AVE

Lab Number: L1109310

Project Number: 4822

Report Date: 07/12/11

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG475282-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/24/11 21:30	30,4500CL-D	KK
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG475631-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/25/11 03:55	06/25/11 04:14	30,3500CR-D	TP
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG475813-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/28/11 20:30	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG475901-1										
Phenolics, Total	ND		mg/l	0.03	--	1	06/28/11 18:50	06/28/11 23:54	4,420.1	TP
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-03 Batch: WG475924-1										
Chloride	ND		mg/l	0.50	--	1	-	06/28/11 18:20	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG476036-2										
TPH	ND		mg/l	4.00	--	1	06/29/11 10:15	06/29/11 16:45	74,1664A	JO
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG476047-2										
Cyanide, Total	ND		mg/l	0.005	--	1	06/29/11 12:15	06/30/11 14:20	30,4500CN-CE	JO



Lab Control Sample Analysis Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG475282-2								
Chlorine, Total Residual	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG475631-2								
Chromium, Hexavalent	104		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG475901-2								
Phenolics, Total	92		-		82-111	-		12
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 Batch: WG475924-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG476036-1								
TPH	85		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG476047-1								
Cyanide, Total	104		-		90-110	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475631-3 QC Sample: L1109310-02 Client ID: B-105 (OW)												
Chromium, Hexavalent	ND	0.1	0.093	93		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475901-3 QC Sample: L1108765-01 Client ID: MS Sample												
Phenolics, Total	ND	0.8	0.69	86		-	-		77-124	-		12
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475924-3 QC Sample: L1109137-01 Client ID: MS Sample												
Chloride	150	100	240	93		-	-		40-151	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476036-3 QC Sample: L1109224-03 Client ID: MS Sample												
TPH	ND	20.6	16.5	80		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476047-3 WG476047-4 QC Sample: L1109548-04 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.203	102		0.206	103		90-110	1		30

Project Name: 181 MASS. AVE
Project Number: 4822

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1109310
Report Date: 07/12/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475282-3 QC Sample: L1109308-01 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475631-4 QC Sample: L1109310-02 Client ID: B-105 (OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475813-2 QC Sample: L1109209-03 Client ID: DUP Sample						
Solids, Total Suspended	1900	3300	mg/l	54	Q	32
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475901-4 QC Sample: L1108869-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		12
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG475924-4 QC Sample: L1109310-03 Client ID: B-436 (OW)						
Chloride	1100	1100	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG476036-4 QC Sample: L1109310-03 Client ID: B-436 (OW)						
TPH	ND	ND	mg/l	NC		34

Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

B Absent

C Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1109310-01A	Vial Na2S2O3 preserved	B	N/A	2.6	Y	Absent	504(14)
L1109310-01B	Vial Na2S2O3 preserved	B	N/A	2.6	Y	Absent	504(14)
L1109310-01C	Vial Na2S2O3 preserved	B	N/A	2.6	Y	Absent	624(3)
L1109310-01D	Vial Na2S2O3 preserved	B	N/A	2.6	Y	Absent	624(3)
L1109310-01E	Amber 1000ml unpreserved	B	7	2.6	Y	Absent	8270TCL(7),MCP-8270-10(7),MCP-8270SIM-10(7),8270TCL-SIM(7)
L1109310-01F	Amber 1000ml unpreserved	B	7	2.6	Y	Absent	8270TCL(7),MCP-8270-10(7),MCP-8270SIM-10(7),8270TCL-SIM(7)
L1109310-01G	Amber 1000ml Na2S2O3	B	7	2.6	Y	Absent	PCB-608(7)
L1109310-01H	Amber 1000ml Na2S2O3	B	7	2.6	Y	Absent	PCB-608(7)
L1109310-01I	Amber 1000ml HCl preserved	B	N/A	2.6	Y	Absent	TPH-1664(28)
L1109310-01J	Amber 1000ml HCl preserved	B	N/A	2.6	Y	Absent	TPH-1664(28)
L1109310-01K	Amber 500ml H2SO4preserved	B	<2	2.6	Y	Absent	TPHENOL-420(28)
L1109310-01L	Plastic 1000ml unpreserved	B	7	2.6	Y	Absent	TSS-2540(7)
L1109310-01M	Plastic 500ml unpreserved	B	7	2.6	Y	Absent	HEXCR-3500(1)
L1109310-01N	Plastic 500ml unpreserved	B	7	2.6	Y	Absent	CL-300(28),TRC-4500(1)
L1109310-01O	Plastic 250ml NaOH preserved	B	>12	2.6	Y	Absent	TCN-4500(14)
L1109310-01P	Plastic 250ml HNO3 preserved	B	<2	2.6	Y	Absent	SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1109310-02A	Vial Na2S2O3 preserved	A	N/A	2.4	Y	Absent	504(14)
L1109310-02B	Vial Na2S2O3 preserved	A	N/A	2.4	Y	Absent	504(14)
L1109310-02C	Vial Na2S2O3 preserved	A	N/A	2.4	Y	Absent	624(3)

*Values in parentheses indicate holding time in days



Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1109310-02D	Vial Na2S2O3 preserved	A	N/A	2.4	Y	Absent	624(3)
L1109310-02E	Amber 1000ml unpreserved	A	7	2.4	Y	Absent	8270TCL(7),MCP-8270-10(7),MCP-8270SIM-10(7),8270TCL-SIM(7)
L1109310-02F	Amber 1000ml unpreserved	A	7	2.4	Y	Absent	8270TCL(7),MCP-8270-10(7),MCP-8270SIM-10(7),8270TCL-SIM(7)
L1109310-02G	Amber 1000ml Na2S2O3	A	7	2.4	Y	Absent	PCB-608(7)
L1109310-02H	Amber 1000ml Na2S2O3	A	7	2.4	Y	Absent	PCB-608(7)
L1109310-02I	Amber 1000ml HCl preserved	A	N/A	2.4	Y	Absent	TPH-1664(28)
L1109310-02J	Amber 1000ml HCl preserved	A	N/A	2.4	Y	Absent	TPH-1664(28)
L1109310-02K	Amber 500ml H2SO4preserved	A	<2	2.4	Y	Absent	TPHENOL-420(28)
L1109310-02L	Plastic 1000ml unpreserved	A	7	2.4	Y	Absent	TSS-2540(7)
L1109310-02M	Plastic 500ml unpreserved	A	7	2.4	Y	Absent	HEXCR-3500(1)
L1109310-02N	Plastic 500ml unpreserved	A	7	2.4	Y	Absent	CL-300(28),TRC-4500(1)
L1109310-02O	Plastic 250ml NaOH preserved	A	>12	2.4	Y	Absent	TCN-4500(14)
L1109310-02P	Plastic 250ml HNO3 preserved	A	<2	2.4	Y	Absent	SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1109310-03A	Vial Na2S2O3 preserved	C	N/A	2.5	Y	Absent	504(14)
L1109310-03B	Vial Na2S2O3 preserved	C	N/A	2.5	Y	Absent	504(14)
L1109310-03C	Vial Na2S2O3 preserved	C	N/A	2.5	Y	Absent	624(3)
L1109310-03D	Vial Na2S2O3 preserved	C	N/A	2.5	Y	Absent	624(3)
L1109310-03E	Amber 1000ml unpreserved	C	7	2.5	Y	Absent	8270TCL(7),MCP-8270-10(7),MCP-8270SIM-10(7),8270TCL-SIM(7)
L1109310-03F	Amber 1000ml unpreserved	C	7	2.5	Y	Absent	8270TCL(7),MCP-8270-10(7),MCP-8270SIM-10(7),8270TCL-SIM(7)
L1109310-03G	Amber 1000ml Na2S2O3	C	7	2.5	Y	Absent	PCB-608(7)
L1109310-03I	Amber 1000ml HCl preserved	C	N/A	2.5	Y	Absent	TPH-1664(28)
L1109310-03J	Amber 1000ml HCl preserved	C	N/A	2.5	Y	Absent	TPH-1664(28)
L1109310-03K	Amber 500ml H2SO4preserved	C	<2	2.5	Y	Absent	TPHENOL-420(28)
L1109310-03L	Plastic 1000ml unpreserved	C	7	2.5	Y	Absent	TSS-2540(7)
L1109310-03M	Plastic 500ml unpreserved	C	7	2.5	Y	Absent	HEXCR-3500(1)
L1109310-03N	Plastic 500ml unpreserved	C	7	2.5	Y	Absent	CL-300(28),TRC-4500(1)
L1109310-03O	Plastic 250ml NaOH preserved	C	>12	2.5	Y	Absent	TCN-4500(14)

*Values in parentheses indicate holding time in days



Project Name: 181 MASS. AVE

Project Number: 4822

Lab Number: L1109310

Report Date: 07/12/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1109310-03P	Plastic 250ml HNO3 preserved	C	<2	2.5	Y	Absent	SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1109310-04A	Vial Na2S2O3 preserved	A	N/A	2.4	Y	Absent	HOLD(14)
L1109310-04B	Vial Na2S2O3 preserved	B	N/A	2.6	Y	Absent	HOLD(14)
L1109310-04C	Vial Na2S2O3 preserved	C	N/A	2.5	Y	Absent	HOLD(14)

*Values in parentheses indicate holding time in days



Project Name: 181 MASS. AVE
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GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

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

Terms

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

Data Qualifiers

- | | |
|----------|--|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| P | - The RPD between the results for the two columns exceeds the method-specified criteria. |
| Q | - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less |

Report Format: Data Usability Report



Project Name: 181 MASS. AVE**Lab Number:** L1109310**Project Number:** 4822**Report Date:** 07/12/11**Data Qualifiers**

than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.**RE** - Analytical results are from sample re-extraction.**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).**ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: 181 MASS. AVE
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Report Date: 07/12/11

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 5 Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
- 14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74 Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised June 7, 2011 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl, V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, 9050A, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH₃-H, 4500NO₃-F, 4500NO₂-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3580A, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270C-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 7196A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 8270C-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO₃-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH₃-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO₃-F, 4500-NO₂-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.*

Drinking Water (Organic Parameters: EPA 524.2)

Non-Potable Water (Inorganic Parameters: EPA 1312. Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH₃-H. Organic Parameters: 3540C, 3545, 3546, 3550B,

3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commissoon on Environmental Quality Certificate/Lab ID: T104704476-09-1. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.



CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: Michael Assoc. Inc.

Address: 2269 Mass Ave

City: Cambridge, MA

Phone: 617-868-1420

Fax: 617-868-1423

Email: T.fenickemichael@comcast.net

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All CAM methods for Inorganic analyses require MS every 20 soil samples)

Project Information

Project Name: 181 Mass. Ave

Project Location: Cambridge, MA

Project #: 4822

Project Manager: TJF

Alpha Quote #:

Turn-Around Time

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

Date Due: 7/1/2011 Time:

Date Rec'd in Lab:

6/24/11

Report Information - Data Deliverables

☐ FAX

☐ EMAIL

☒ ADEx

☐ Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

ALPHA Job #:

1109310

Billing Information

☐ Same as Client info

PO #:

Are MCP Analytical Methods Required? LC
☒ Yes ☐ No
Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☒ No
Are CT RCP (Reasonable Confidence Protocols) Required?
☒ Yes ☐ No

ANALYSIS

PCBs
TPH-1664
8270 w/PAH Sim
TPhenol
HexCR
TCN
TRC
TSS
624
504
Total Sb, As, Cd, Cr
Cu, Fe, Pb, As, Ni, Zn
Ag, Zn

SAMPLE HANDLING

☐ Filtration
☐ Done
☐ Not needed
☐ Lab to do
☐ Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials												
		Date	Time														
09310.1	B-106 (ow)	6/24/11	1100	H ₂ O	me	2	2	2	1	1	1	1	2	2	1		16
2	B-105 (ow)		1300			2	2	2	1	1	1	1	2	2	1		16
3	B-436 (ow)		1500			2	2	2	1	1	1	1	2	2	1		16

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MAMCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

Container Type	Preservative	A	A	A	A	P	P	P	P	V	V	P
		H	B	A	D	A	E	A	A	H	A	C

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

APPENDIX G

Material Safety Data Sheets (MSDSs) and Fact Sheets

USFILTER WESTATES CARBON

AQUACARB® 830 AND 1240

Coal based granular activated carbon

(Formerly KG-401 and KG-502)



FOR MUNICIPAL, INDUSTRIAL AND
REMEDIAL WATER TREATMENT

Description & Applications

AquaCarb® 830 and AquaCarb® 1240 are high activity granular activated carbons manufactured from selected grades of bituminous coal. Manufactured by direct activation, they exhibit exceptional hardness and attrition resistance and have become a cost effective choice for use in municipal, industrial and remedial water treatment applications. These high surface area microporous carbons have been specifically developed for the removal of a broad range of organic contaminants from potable, waste and process waters.

- ANSI/NSF Standard 61 classified for use in potable water applications
- Fully conforms to physical, performance and leachability requirements established by the current ANSI/AWWA B604 (which includes the Food Chemical Codex requirements)

- A detailed quality assurance program guarantees consistent quality from lot to lot and shipment to shipment

Quality Control

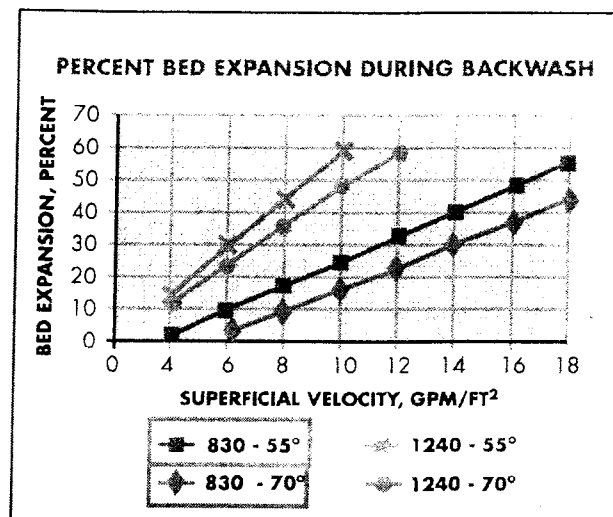
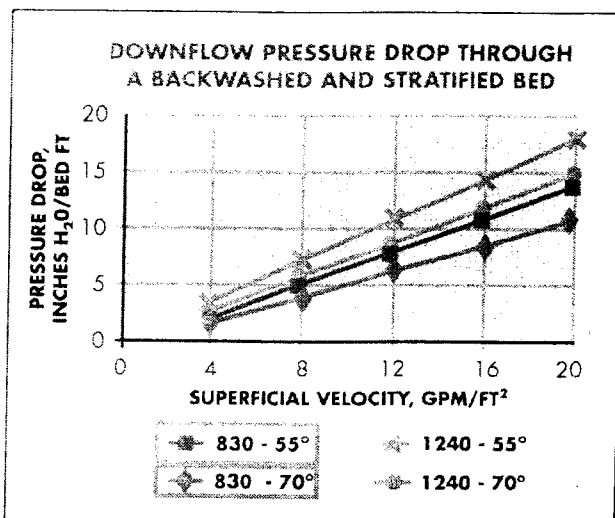
All AquaCarb® activated carbons are extensively quality checked at our State of California certified environmental and carbon testing laboratory located in Los Angeles, CA. USFilter's laboratory is fully equipped to provide complete quality control analyses using ASTM standard test methods in order to assure the consistent quality of all AquaCarb® carbons.

Our technical staff offers hands-on guidance in selecting the most appropriate system, operating conditions and carbon to meet your needs. For more information, contact your nearest USFilter representative.

USFilter

AQUACARB® 830**AQUACARB® 1240****Coal based granular activated carbon**

(Formerly KG-401 and KG-502)



Safety Note: Wet activated carbon depletes oxygen from the air and therefore dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed. Read Material Safety Data Sheet (MSDS) before using this product.

All information presented herein is believed reliable and in accordance with accepted engineering practices. USFilter makes no warranties as to the completeness of this information. Users are responsible for evaluating individual product suitability for specific applications. USFilter assumes no liability whatsoever for any special, indirect or consequential damages arising from the sale, resale or misuse of its products.

SPECIFICATIONS/TYPICAL PROPERTIES

Specification	AquaCarb® 830	AquaCarb® 1240
Carbon Type	Bituminous Coal	Bituminous Coal
Mesh Size, U.S. Sieve	8 x 30	12 x 40
Effective Size, mm	0.8 - 1.1	0.55 - 0.75
Uniformity Coefficient (max)	2.1	1.9
Iodine No., mgI ₂ /g (min.)	900	1000
Abrasion No., Wt. % (min.)	80	80
Apparent Density, g/cc	0.46 - 0.54	0.46 - 0.54

USFilter

Westates

Customer and

Technical Service Network:

Gulf Coast Region	800.659.1723
(Louisiana)	225.744.3153
Western Region	800.659.1771
Mid-Atlantic Region	800.659.1717
Midwest Region	708.345.7290
Northwest Region	800.659.1718
Southeast Region	225.744.3153
New England Region	800.659.1717

USFilter reserves the right to change the specifications referred to in this literature at any time, without prior notice. AquaCarb is a trademark of United States Filter Corporation or its affiliate.

AQUACARB® 830/1240

www.usfilter.com

©2004 United States Filter Corporation

Model NCO Bag or Cartridge Filter Housings

Low cost filter housings for flow rates to 100 gpm*

NCO high-capacity filters offer an exceptional value in basic filtration applications. Offered in a size 2 and size 12 bag housing, the NCO is also available with our Platinum 700 cartridge series.

NCO housings provide large dirt-holding capacity combined with a rugged design rated to 150 psi. The housings incorporate a newly designed hinged, eyenut cover that is easily removed, reducing time spent on bag or cartridge change-out. The NCO bag housing offers versatility for any piping arrangement, utilizing our unistyle design (side and bottom outlet). Two connection sizes are available for both bag and cartridge filters.

The NCO housings are electropolished creating a smooth, easy-to-clean surface. Customize them with several options including, gauges and switches. A variety of filter bags or cartridges (rated 0.5 μ absolute to 100 μ nominal) can be utilized in this housing. Keep your filtration process cost effective without sacrificing quality.

Permanently piped housings are opened without special tools

Carbon or stainless steel housings

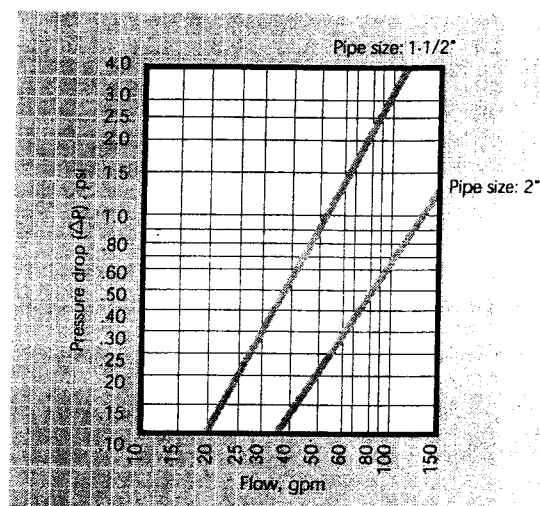
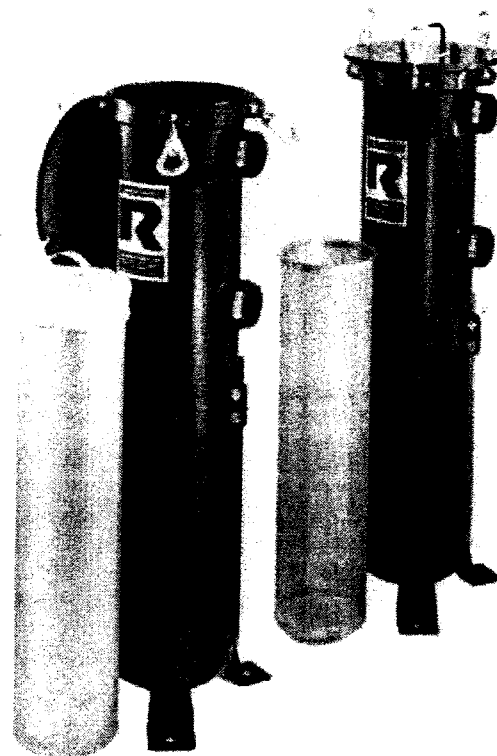
Covers are O-ring sealed

O-ring seals: Buna N, EPR and Viton®

150 psi rated housing

Heavy-duty basket, over 50% open area

Uses standard number 1, 2 or 12 size bags and 500 or 700 series cartridges



* Based on housing only. Fluid viscosity, filter bag used, and expected dirt loading should be considered when sizing a filter.

Filter selection surface area is:

2.3 square feet (number 1 size bag),

4.4 square feet (number 2 size bag),

5.6 square feet (number 12 size bag)

85 square feet (500 series cartridge)

125 square feet (700 series cartridge)

1-1/2-inch or 2-inch NPT inlet and outlet

1/4-inch NPT vent connection

Adjustable leg assembly

How To Order

Build an ordering code as shown in the example.



QUALITY SYSTEM
REGISTERED TO
ISO 9001:1994

Example : **Housing** **Options**
NCO8-30-2P-* - 150-C-B-PB

MODEL

NCO8 (#1, #2 bag
& 500 cartridge)

NLCO8 (#12 bag)

NCO8135 (700 cartridge)

NCO8135 convertible

BASKET SIZE

15-inch (NCO only) = **15**

30-inch (NCO or NLCO) = **30**

NCO8135 = **No Symbol**

PIPE SIZE

1-1/2-inch female NPT = **1-1/2P**

2-inch female NPT = **2P**

OUTLET STYLE

Side/Bottom Unistyle (NCO or NLCO) = *****

Bottom = **1**

PRESSURE RATING

150 psi = **150**

HOUSING MATERIAL

Carbon steel = **C**

304 Stainless steel = **S**

COVER SEAL

Buna N = **B**

Ethylene propylene = **E**

Viton® Fluoroelastomer = **V**

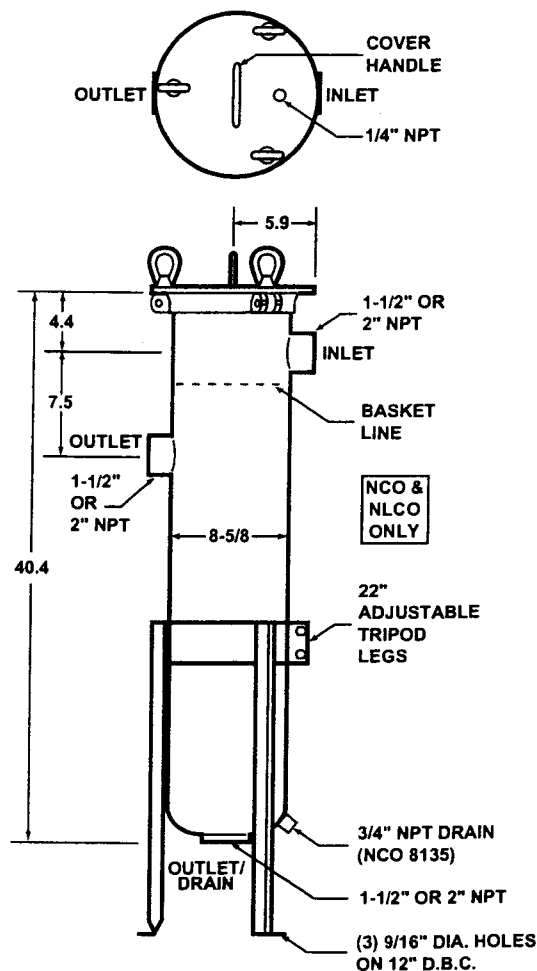
BASKET TYPE

Filter bag basket (NCO or NLCO) = **PB**

700 Cartridge (NCO8135) = **700**

Convertible (NCO8135) = **700PB**

1. Filter bags are specified separately.
See Rosedale Master Catalog 3rd edition.
2. Basket material is compatible with housing.
3. Weight (approximately): 70 lbs.



Rosedale Products, Inc.

3730 W. Liberty Rd, Ann Arbor, MI 48103

Tel: 800-821-5373 or 734-665-8201

Fax: 734-665-2214

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

E-mail: filters@rosedaleproducts.com

Sheet NCO-100 5M605 Printed in USA



Call us today for our complete catalog or visit our web site to see our entire product line.

**ASM-10-HP****ANION EXCHANGE RESIN
ARSENIC SELECTIVE**

RESINTECH ASM-10-HP is a strongly basic hybrid anion exchange resin specially formulated to selectively remove arsenic. It is supplied in the salt form as clean, moist, tough, uniform, spherical beads.

RESINTECH ASM-10-HP exhibits extraordinary throughput capacity in arsenic removal service on potable water supplies. Its performance is virtually unaffected by common anions, such as chlorides, bicarbonates or sulfates. It is effective over the entire pH range of potable water.

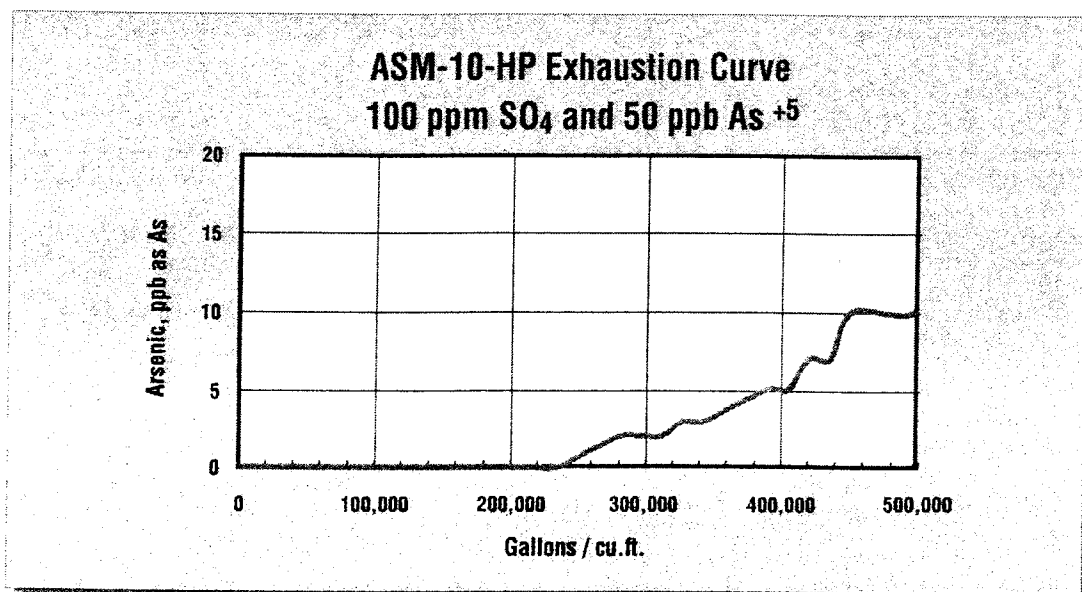
RESINTECH ASM-10-HP is also available in organic trap, perchlorate selective and nitrate selective configured resins. These resins are fully selective for arsenic, but still retain their original ion exchange selectivity.

FEATURES & BENEFITS

- **TREMENDOUS AFFINITY FOR ARSENIC OVER OTHER ANIONS**
Highest arsenic removal capacity of organic based arsenic removal media
- **MADE FROM NSF/ANSI-61 VALIDATED ANION EXCHANGE RESIN**
- **NO ARSENIC DUMPING**
Effluent arsenic levels will not exceed influent levels if resin is operated past exhaustion point
- **EFFECTIVE ACROSS THE ENTIRE POTABLE WATER pH RANGE**
- **SINGLE USE OR REGENERABLE APPLICATIONS**
- **SUPERIOR PHYSICAL STABILITY**
Spherical and uniform particle size provide low pressure drop and greater resistance to bed compaction. Unlike granular, coated medias, ASM-10-HP will not shed particles.



Exhaustion Curve



RESINTECH® ASM-10-HP

PHYSICAL PROPERTIES (Cl form)

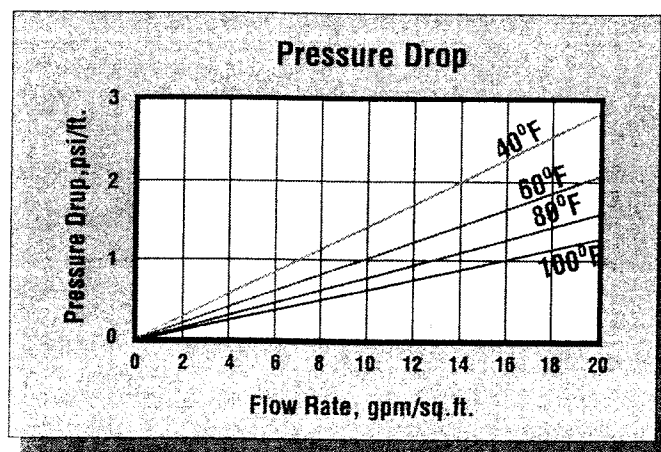
Polymer Structure	Styrene with DVB
Functional Group	R-N-R ⁺ Cl ⁻
Ionic Form, as shipped	Chloride
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 to 50 Nominal
- 50 mesh (U.S. Std)	Less than 1 Percent
pH Range	4 to 10
Water Retention	35 to 55 Percent
Solubility	Insoluble
Approximate Shipping Weight	44 lbs./ft ³
Total Capacity	>1.0 meq / mL
Sphericity	> 93 Percent

WATER QUALITY GUIDELINES

Feedwater quality (aside from arsenic) should generally be of potable quality. Please consult your ResinTech technical salesman for recommendations outside the following guidelines:

Conductivity	1000 micromhos/cm
Chloride	250 ppm
Sulfate	250 ppm
pH	5.5 to 9.5
Phosphate	5 ppm
Silica	10 ppm
Turbidity	5 NTU
Chlorine	0.3 ppm

HYDRAULIC PROPERTIES



PRESSURE DROP

The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various water temperatures.

SUGGESTED OPERATING CONDITIONS

Flow Rate	2 to 10 gpm/cu. ft. 1 to 20 gpm/sq. ft.
Pressure Loss	25 psi max.
Temperature	170°F max.

OPERATING CAPACITY

Under ideal conditions, the 1st cycle throughput capacity for arsenic removal with approximately 50 ppb As⁺⁵ in the inlet is greater than 500,000 gallons per cu. ft., while producing less than 10 ppb of effluent arsenic. The throughput capacity varies inversely with changes in the influent arsenic levels.

RESINTECH ASM-10-HP has modest capacity for arsenite (As⁺³). It is suggested that if the arsenite concentration exceeds 20% of the total arsenic present, the feedwater should be pre-chlorinated to ensure conversion to arsenate (As⁺⁵).

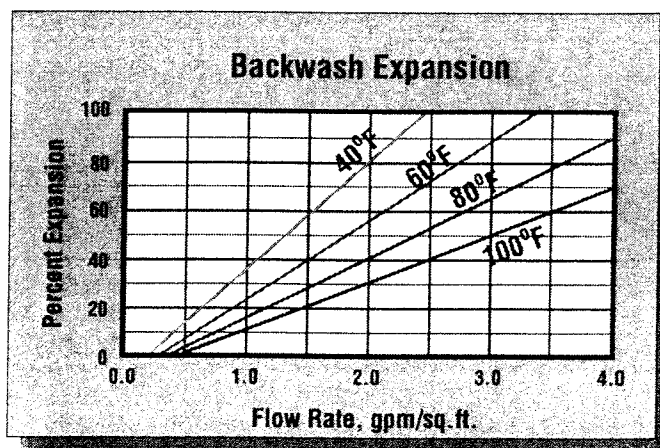
ASM-10-HP is also selective for other oxy-anions, such as selenate. It will remove modest amounts of both phosphate and silica.

REGENERATION

ResinTech ASM-10-HP can be partially regenerated in the field with alkaline brine. For additional information contact your local ResinTech representative.

DISPOSAL

It is recommended that users review local regulations and consult with local authorities on the best method of disposal.



BACKWASH

After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed.

***CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

Material Safety Data Sheets (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However, we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents. Further, we assume no liability for the consequences of any such actions.

RESINTECH is a registered trademark ® of RESINTECH INC.

ASM-10-HP091604

**CGS****CATION EXCHANGE RESIN
SOFTENING GRADE
Na FORM**

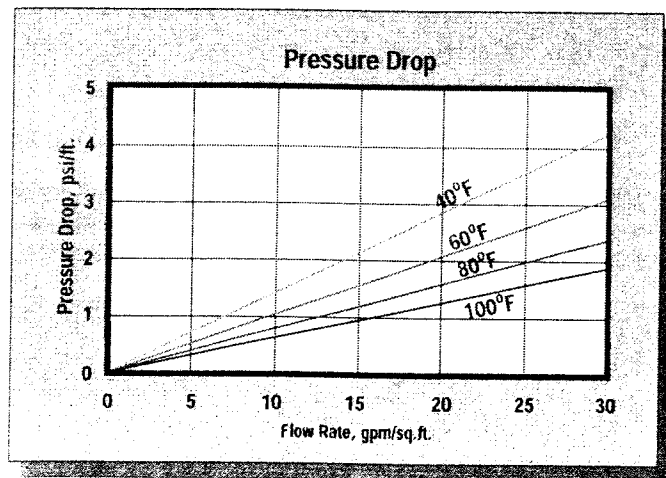
RESINTECH CGS is a high purity, light colored, high capacity, gel type sulfonated polystyrene cation resin supplied in the sodium form as moist, tough uniform spherical beads. *ResinTech CGS* specifically is intended for use in all water softening applications, including beverages, potable water and water used for food processing. It's high capacity and high DVB content provide long life and good chlorine resistance in all potable water applications. (It is also available as a dark colored product *RESINTECH CGS-BL* with identical properties.)

FEATURES & BENEFITS

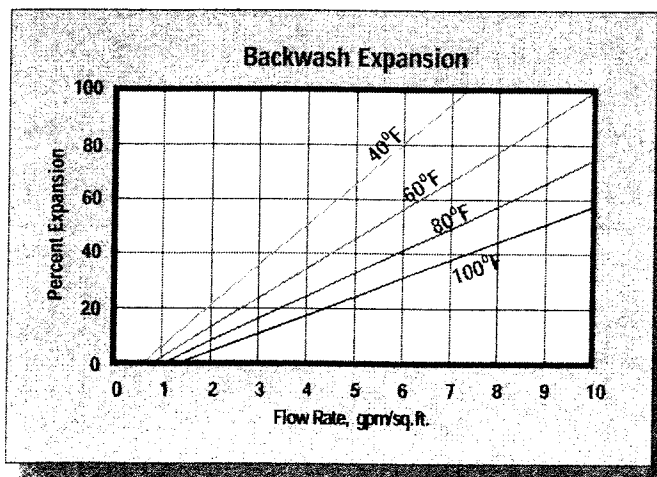
- **COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS**
Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the F.D.A. *
- **EXCELLENT REGENERATION EFFICIENCY**
Virtually the same operating capacity as premium grade *ResinTech CG8-BL*.
- **NSF/ANSI-61 VALIDATED** 
- **UNIFORM PARTICLE SIZE**
16 to plus 50 mesh range; gives a LOWER PRESSURE DROP while maintaining SUPERIOR KINETICS.
- **SUPERIOR PHYSICAL STABILITY**
90% plus sphericity and high crush strengths together with a very uniform particle size provide greater resistance to bead breakage while maintaining low pressure drops.
- **LOW COLOR THROW**

*For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to insure compliance with extractable levels.

HYDRAULIC PROPERTIES



PRESSURE DROP - The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate, at various temperatures.



BACKWASH - After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of *RESINTECH CGS* in the sodium form.

RESINTECH® CGS

PHYSICAL PROPERTIES

Polymer Structure	Styrene Crosslinked with DVB
Functional Group	R-(SO ₃) ⁻ M ⁺
Ionic Form, as shipped	Sodium
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 to 50
+16 mesh (U.S. Std)	< 5 percent
-50 mesh (U.S. Std)	< 1 percent
pH Range	0 to 14
Sphericity	90+ percent
Uniformity Coefficient	Approx. 1.6
Water Retention	
Sodium Form	48 to 54 percent
Solubility	Insoluble
Shipping Weight	
Sodium Form	48 lbs./cu.ft.
Total Capacity	
Sodium Form	1.8 meq/ml min

SUGGESTED OPERATING CONDITIONS

Maximum Temperature	
Sodium Form	250 ⁰ F
Minimum Bed Depth	24 inches
Backwash Rate	50 to 75% Bed Expansion
Regenerant (NaCl or KCl)	
Concentration	10 to 15 percent
Flow Rate	0.5 to 1.5 gpm/cu.ft.
Contact Time	> 20 minutes
Level	4 to 15 pounds/cu.ft.
Displacement Rate	Same as Regen Flow Rate
Volume	10 to 15 gallons/cu.ft.
Fast Rinse Rate	Same as Service Flow Rate
Volume	35 to 60 gallons/cu.ft.
Service Flow Rate	2 to 10 gpm/cu.ft.

OPERATING CAPACITY

Sodium Chloride (NaCl) Regeneration

The sodium cycle operating capacity of *RESINTECH CGS* for hardness removal at various regeneration levels with an influent calcium/magnesium ratio of 2/1 and a hardness level of 500 ppm, as CaCO₃, is shown in the following table:

Pounds NaOH/cu.ft.	Capacity Kilograins/cu.ft.
5	20.0
7.5	25.4
10	29.0
15	33.0

Potassium Chloride (KCl) Regeneration

The potassium cycle operating capacity of *RESINTECH CGS* for hardness removal at various regeneration levels with an influent calcium/magnesium ratio of 2/1 and a hardness level of 500 ppm, as CaCO₃, is shown in the following table:

Pounds NaOH/cu.ft.	Capacity Kilograins/cu.ft.
5	16.6
7.5	21.8
10	26.6
15	31.2

APPLICATIONS

Softening

RESINTECH CGS is ideally suited for industrial, commercial, or residential softening applications where free chlorine is not present because of its high capacity, uniform particle size and good physical stability.

***CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials such as ion exchange resins.

Material Safety Data Sheets (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information that information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However, we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents. Further, we assume no liability for the consequences of any such actions.

RESINTECH is a registered trademark ® of RESINTECH INC.

CGSver010003

#	QTY.	DESCRIPTION
1	2	C.S. STD. Flanged&Dished Non-Code tank head 3/16" THK.
2	1	C.S. 3/16" THK. x 48" OD x 36" Long
3	2	C.S. Elliptical Non-Code Manway Assembly 12"x16" w/ 2 yoke
4	2	3" SCH 40, C.S. Black Pipe Threaded Coupling
5	2	3" SCH 40, C.S. Close Threaded Nipple
6	2	3" SCH 40, C.S. Black Pipe 90° Elbow
7	2	1" SCH 40, C.S. 4" Long Threaded Nipple
8	4	Angle 4" x 4" x 1/4" Support Leg
9	2	HSS 8" x 4" x 1/4" Base
10	2	Angle 2 1/2" x 2 1/2" x 1/4" Cross Tie
11	2	Lifting Lug (Design by Fabricator, See Note 2)

GENERAL NOTES

- 1) MATERIAL SHALL BE CARBON STEEL GRADE A 36 UNLESS NOTED OTHERWISE.
- 2) FABRICATOR TO DESIGN LIFTING LUGS TO MEET 4000 LBS LIFTING REQUIREMENT.
- 3) TANK INTERIOR SHALL BE SANDBLASTED TO SSPC-SP-5 WHITE METAL FINISH, PAINTING BY OTHERS.
- 4) TANK EXTERIOR SANDBLASTING AND PAINTING BY OTHERS.
- 5) TANK SHALL BE LEVEL +/- ONE DEGREE.
- 6) FABRICATION TOLERANCE SHALL BE +/- (1/4) INCH.
- 7) UNLESS NOTED OTHERWISE, ALL WELDS SHALL BE SEAL WELD, ALL JOINTS SHALL BE WELDED BOTH SIDE WHERE APPLICABLE.
- 8) STEEL PLATES JOINING METHOD SHOWN ARE INTENDED FOR REFERENCES ONLY, FINAL STEEL JOINING METHOD SHALL BE DETERMINE BY FABRICATOR TO SUIT THEIR SHOP PREFERENCES.
- 9) THE TANK SHALL BE PRESSURE TESTED TO HOLD WATER AT FULL CAPACITY AT 75 PSI PRIOR SHIPMENT.
- 10) THIS DRAWINGS IS THE PROPERTY OF GROUND/WATER TREATMENT & TECHNOLOGY, INC

A	FOR QUOTATION	06/28/05	DATE
NO.	REVISIONS		

1000 LBS LIQUID PHASE ADSORPTION TANK GENERAL ARRANGEMENT & DETAILS

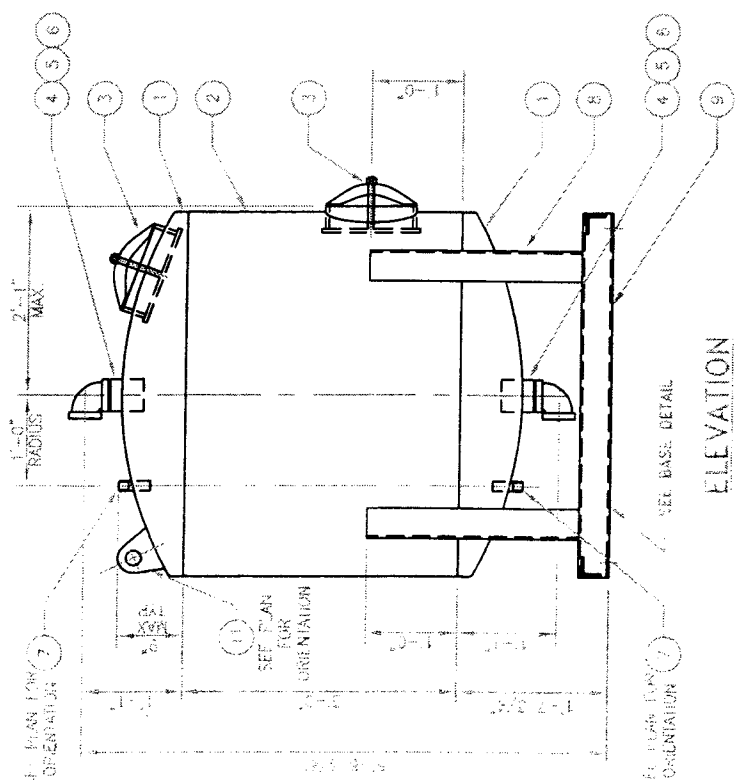
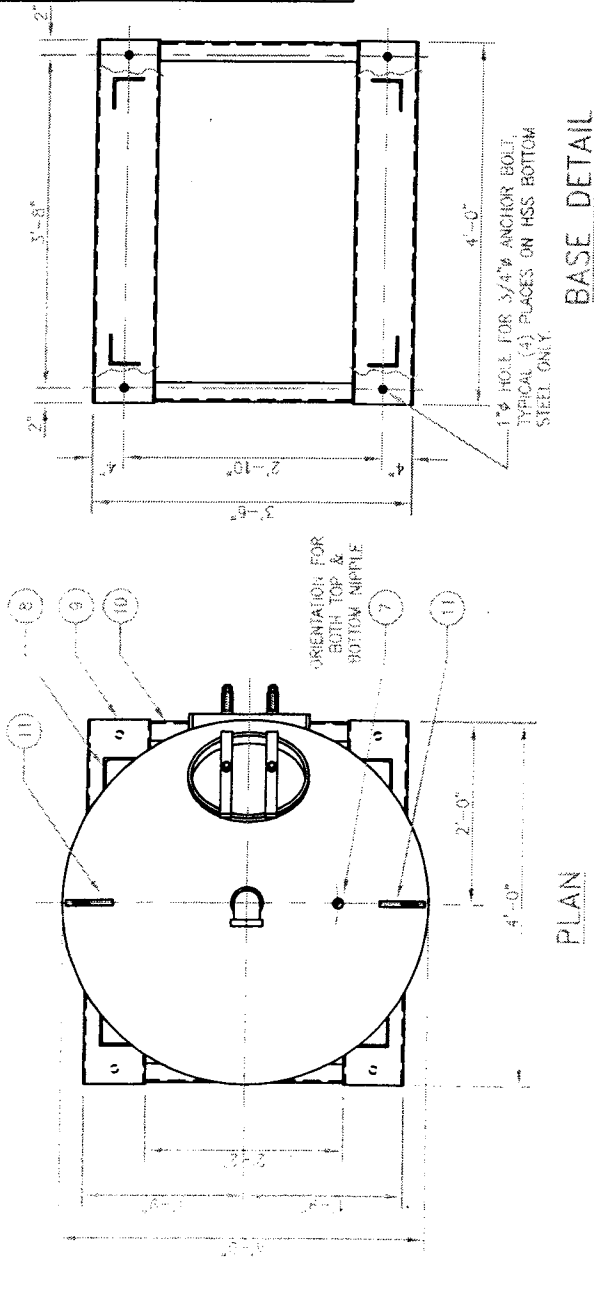
SCALE:	NONE	APPROVED:	TLO
DATE:	06/27/05		



GROUNDWATER TREATMENT & TECHNOLOGY
P.O. BOX 1174
DENVER, NJ 07834

FILE: 11-1181

DRAWING NUMBER: M-01



**SBG1****ANION EXCHANGE RESIN
TYPE ONE GEL
Cl OR OH FORM**

RESINTECH SBG1 is a high capacity, shock resistant, gelular, Type 1, strongly basic anion exchange resin supplied in the chloride or hydroxide form as moist, tough, uniform, spherical beads. *RESINTECH SBG1* is intended for use in all types of deionization systems and chemical processing applications. It is similar to *RESINTECH SBG1P* but has a higher volumetric capacity and exhibits lower TOC leach rates. This makes it the better performer in single use applications such as in cartridge deionization and when high levels of regeneration are used such as in polishing mixed beds. On the other hand, *RESINTECH SBG1P* is more resistant to organic fouling and gives higher operating capacities at low regeneration levels such as those used in make up demineralizers.

FEATURES & BENEFITS

- **COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS.**

Conforms to paragraph 21CFR173.125 of the Food Additives Regulations of the F.D.A.*

- **HIGH TOTAL CAPACITY**

Provides longer run lengths in single use applications or where high levels of regeneration are used such as in mixed bed polishers, cartridge demineralizers.

- **UNIFORM PARTICLE SIZE**

16 to plus 50 mesh range; gives a LOWER PRESSURE DROP while maintaining SUPERIOR KINETICS.

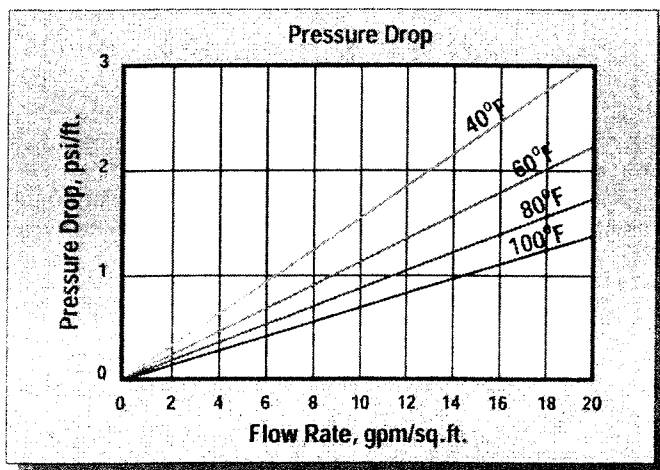
- **SUPERIOR PHYSICAL STABILITY**

- **LOWER TOC LEACH RATE**

Makes it ideal for polishing mixed beds in wafer washing and other high purity water polishing applications.

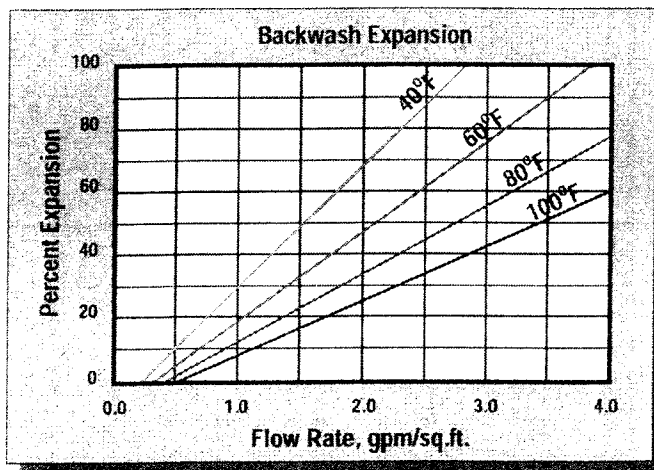
*For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to ensure compliance with extractable levels.

HYDRAULIC PROPERTIES



PRESSURE DROP

The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate, at various temperatures.



BACKWASH

After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of *RESINTECH SBG1* in the sodium form.

RESINTECH® SBG1

PHYSICAL PROPERTIES

Polymer Structure	Styrene Crosslinked with DVB
Functional Group	R-N-(CH ₃) ₃ ⁺ Cl ⁻
Ionic Form, as shipped	Chloride or Hydroxide
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 to 50
+16 mesh (U.S. Std)	< 5 percent
-50 mesh (U.S. Std)	< 1 percent
pH Range	0 to 14
Sphericity	> 93 percent
Uniformity Coefficient	Approx. 1.6
Water Retention	
Chloride Form	43 to 50 percent
Hydroxide Form	Approx. 53 to 60 percent
Solubility	Insoluble
Approximate Shipping Weight	
Cl Form	44 lbs/cu.ft.
OH Form	41 lbs/cu.ft.
Swelling Cl- to OH-	18 to 25 percent
Total Capacity	
Cl Form	1.45 meq/ml min
OH Form	1.15 meq/ml min

SUGGESTED OPERATING CONDITIONS

Maximum Continuous Temperature	
Hydroxide Form	140°F
alt Form	170°F
Minimum Bed Depth	24 inches
Backwash Rate	50 to 75 percent Bed Expansion
Regenerant Concentration*	2 to 6 percent
Regenerant Flow Rate	0.25 to 1.0 gpm/cu.ft.
Regenerant Contact Time	At least 40 Minutes
Regenerant Level	4 to 10 pounds/cu.ft.
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	10 to 15 gals/cu.ft.
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	35 to 60 gals/cu.ft.
Service Flow Rates	
Polishing Mixed Beds	3 to 15 gpm/cu.ft.
Non-Polishing Apps.	2 to 4 gpm/cu.ft.

OPERATING CAPACITY

The operating capacity of *RESINTECH SBG1* for a variety of acids at various regeneration levels when treating an influent with a concentration 500 ppm, expressed as CaCO₃ is shown in the following table:

Pounds NaOH/ft ³	Capacity Kilograms per cubic foot			
	HCl	H ₂ SO ₄	H ₂ SiO ₃	H ₂ CO ₃
4	11.3	14.0	14.7	18.6
6	12.8	16.3	17.3	19.8
8	14.3	13.3	19.5	21.6
10	15.5	20.0	22.2	22.2

APPLICATIONS

DEMINERALIZATION – *RESINTECH SBG1* is highly recommended for use in mixed bed demineralizers, wherever complete ion removal; superior physical and osmotic stability and low TOC leachables are required such as in wafer fabrication and other ultrapure applications.

RESINTECH SBG1 has high total capacity and low swelling on regeneration and provides maximum operating capacity in cartridge deionization applications. It is ideal for single use applications such as precious metal recovery, radwaste disposal and purification of toxic waste streams.

Highly crosslinked Type 1, styrenic anion exchangers have greater thermal and oxidation resistance than other types of strong base resins. They can be operated and regenerated at higher temperatures. The combination of lower porosity, high total capacity and Type 1 functionality make *RESINTECH SBG1* the resin of choice when water temperatures exceed 85°F and where the combination of carbon dioxide, borate and silica exceed 40% of the total anions.

RESINTECH SBG1P and *RESINTECH SBG1* are quite similar; the difference between them is the degree of porosity. *RESINTECH SBG1P* has greater porosity that gives it faster kinetics, and greater ability to reversibly sorb slow moving ions such as Naturally occurring Organic Matter (NOM). At lower regeneration levels and where chlorides make up a substantial portion of the anion load, or where the removal and elution of naturally occurring organics is of concern *RESINTECH SBG1P*, SBACR or SBG2 should be considered. At the higher regeneration levels used in mixed bed polishers *RESINTECH SBG1* provides higher capacity, and the lowest possible TOC leach rates.

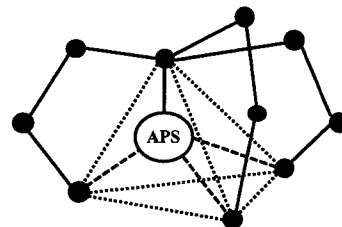
***CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

Material Safety Data Sheets (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information that information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However, we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further, we assume no liability for the consequences of any such actions.

RESINTECH is a registered trademark ® of RESINTECH INC.

SBG1 Serv 050102

Applied Polymer Systems, Inc.



Material Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: APS 702aa Flocc Log
Supplied: Applied Polymer Systems, Inc.
519 Industrial Drive
Woodstock, GA 30189
www.siltstop.com
Tel. 678-494-5998
Fax. 678-494-5298

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation: Anionic water-soluble Co-polymer gel

3. HAZARD IDENTIFICATION

Placement of these materials on wet walking surface will create extreme slipping hazard.

4. FIRST AID MEASURES

Inhalation: None
Skin contact: Contact with wet skin could cause dryness and chapping. Wash with soap and water. Use of rubber gloves required.
Eye contact: Rinse thoroughly with plenty of water, also under the eyelids, seek medical attention in case of persistent irritation.
Ingestion: Consult a physician

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water, water spray, foam, carbon dioxide, dry powder.
Special fire-fighting precautions: Flocc Logs that become wet render surfaces extremely slippery.
Protective equipment for firefighters: No special equipment required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special precautions required.
Methods for cleaning up: Dry wipe as well as possible. Keep in suitable and closed containers for disposal.
After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Wash hands after handling.
Storage: Keep in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Specializing in the Optimization of Water Treatment Systems, Flocculents, and Drill Fluids. Polymer Characterization and Application for: Erosion Control, Acid Rock Drainage Mitigation, Solubilized Metal Control, and Dredging.

Engineering controls: Use dry handling areas only.

Personal protection equipment

Respiratory Protection: None
 Hand protection: Dry cloth, leather or rubber gloves.
 Eye Protection: Safety glasses with side shields. Do not wear contact lenses.
 Skin protection: No special protective clothing required.
 Hygiene measures: Wash hands before breaks and at end of work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Granular semi-solid gel
 Color: White to Brown
 Odor: None
 pH: 7.89
 Melting point: N/A
 Flash point: N/A
 Vapor density: N/A

10. STABILITY AND REACTIVITY

Stability: Product is stable, no hazardous polymerization will occur.
 Materials to avoid: Oxidizing agents may cause exothermic reactions.
 Hazardous decomposition products: Thermal decomposition may produce nitrogen oxides (NOx), carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LC 50/*Daphnia Magna*/48h/>420mg/L

Inhalation: None

12. ECOLOGICAL INFORMATION

Water Flea: LC 50/*Daphnia Magna*/48h/>420mg/l

Algae: EC 50/*Selenastrum capricornutum*/96h>500mg/l

Bioaccumulation: The product is not expected to bioaccumulate.

Persistence / degradability: Not readily biodegradable: (~85% after 180 days).

13. TRANSPORT AND REGULATORY INFORMATION

Not regulated by DOT, RCRA status-Not a hazardous waste

NFPA and HMIS ratings:

NFPA	Health:	3	Flammability:	0	Reactivity:	1
HMIS	Health	2	Flammability	0	Reactivity	1

[Back](#)

Floc Log Specifications:

Floc Log Specifications:

ANSI/NSF Standard Drinking Water Treatment Chemical Additives

EPA/600/R-98/182 168 Hr. Chronic Toxicity Test (*Pimephales promelas*)

EPA/600/4-90/027F 48Hr. Acute Static Screen Toxicity Test (*Daphnia Magna*)

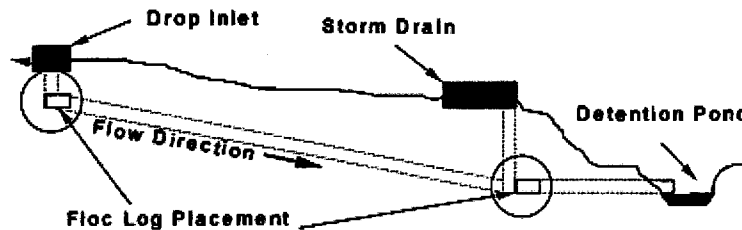
APS, Inc. currently has over (40) types of Floc Log ®. Each are designed for specific soils or lithologies. Each Floc Log ® is tailored for the specific requirement of water chemistry and soil within your geographical area. Most soils within EPA Region 4 have been classified and will not require a soil and water sample. Areas outside EPA Region 4 will require a soil and water sample. There is no charge for this analysis.

Floc Log ® is available in two forms, clarifier and particle. Clarifier Floc Log ® is used for colloidal water and very fine suspended particles. Particle Floc Log ® is used for heavily particle laden water in areas before sediment traps and sediment ponds.

**Enhancement tools and Engineering designs
are available on request:**

**APS Particle Curtain, APS Soft Armor,
APS Floc Log Mix Tank, APS Byron Box**

Consult your local distributor or Applied Polymer Systems, Inc. for proper Floc Log ® type, correct application and other Silt Stop products.



Applied Polymer Systems, Inc.
519 Industrial Drive • Woodstock, GA 30189
678.494.5998
info@siltstop.com