



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL

November 2, 2010

Christopher Walenten
Suffolk Construction Company, Inc.
65 Allerton Street
Boston, MA 02119

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000.
Massachusetts Bay Transportation Authority (MBTA), Wonderland Garage, located at 1300 North
Shore (Rte 1A) Revere, MA, Suffolk County, Authorization #MAG910467.

Dear Mr. Walenten:

Based on the review of a Notice of Intent (NOI) submitted on behalf of MBTA by the firm Haley & Aldrich, 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.

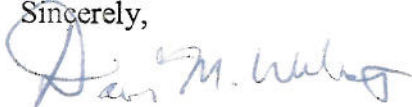
The checklist enclosed with this RGP authorization indicates the pollutants for which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements 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 also the following: (1) the list of pollutants attached to this authorization is subject to a recertification (See Part I.C.8., on Page 16 of the RGP), if the operations at the site result in a discharge lasting longer than six months, and (2) because the effluent discharges from this facility will be discharged into an area of limited dilution, the compliance limits for the metals nickel and iron, reported believed present, are subject to the total recoverable metals limitations by dilution factor range of 1-5 (See the RGP's Appendix IV) and shall not exceed 29 ug/L, and 1,000 ug/L, respectively.

This general permit and authorization to discharge will expire on September 9, 2015. You reported that this project will terminate on December 31, 2011. 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,

A handwritten signature in blue ink, appearing to read "David M. Webster", is written over the printed name.

David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP
Brian A. Ferguson, Haley & Aldrich, Inc.

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

NPDES Permit Number:	MAG910467
Date Permit Issued:	November, 2010
Facility/Site Name:	MBTA Wonderland Garage
Facility/Site Address:	Suffolk County
	Email address of owner; NA Phone n:617.222.4752
Legal Name of operator:	Suffolk Construction Company, Inc.
Operator contact name, title, and Address:	Christopher Walenten
	Email:cwalenten@suffolkconstruction;pn:617.517.4538
Estimated Date of Completion:	12/31/2011
Category and Sub-Category:	Category III-Contaminated Construction Dewatering, Sub-category A, General Urban Fill Sites
Receiving Water:	Easter County Drainage Ditch to marsh into the Broad Sound.

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

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum unless denoted by a **)
✓	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/l) **, 50 mg/l for hydrostatic testing **, Me#60.2/5mL
	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/5.0mg/LmL
✓	4. Cyanide (CN) ^{2, 3}	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/l **/ Me#335.4/ML 5ug/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
	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

	<u>Parameter</u>	<u>Effluent Limit/Method# /ML</u> (All Effluent Limits are shown as Daily Maximum unless denoted by a **)
	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/ ML5ug/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/ML50 ug/L
	31. Total Phenols	300 ug/l Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML50 ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/l /Me#8270D/ML5ug/L,Me#604 &625/ML10ug/L
	33. Total Phthalates (Phthalate esters) ⁶	3.0 ug/L ** /Me#8270D/ML5ug/L,Me#606/ML10ug/L& Me#625/ML5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/l /Me#8270D/ML5ug/L,Me#606/ML10ug/L& Me#625/ML5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/l
	a. Benzo(a) Anthracene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	b. Benzo(a) Pyrene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	c. Benzo(b)Fluoranthene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	d. Benzo(k)Fluoranthene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	e. Chrysene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	f. Dibenzo(a,h)anthracene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	g. Indeno(1,2,3-cd) Pyrene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum unless denoted by a **)
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/l
	h. Acenaphthene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	i. Acenaphthylene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	j. Anthracene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	l. Fluoranthene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	m. Fluorene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	n. Naphthalene ⁵	20 ug/l / Me#8270D/ ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	o. Phenanthrene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/L
	p. Pyrene	X/Me#8270D/ML5ug/L, Me#610/ML5ug/L & Me#625/ML5ug/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

	Metal parameter	Total Recoverable Metal Limit @ H ¹⁰ = 50 mg/l CaCO₃ for discharges in Massachusetts (ug/l) ¹¹		Total Recoverable Metal Limit @ H ¹⁰ = 25 mg/l CaCO₃ for Discharges in New Hampshire (ug/l) ¹¹	
		Freshwater	Saltwater	Freshwater	Saltwater
	39. Antimony	5.6/10mL			
	40. Arsenic **	10/20mL	36/20mL		
	41. Cadmium **	0.2/10ml	8.9/10mL		
	42. Chromium III (trivalent) **	48.8/15mL	100/15mL		
	43. Chromium VI (hexavalent) **	11.4/10mL	50.3/10mL		
	44. Copper **	5.2/15mL	3.7/15mL		
	45. Lead **	1.3/20mL	8.5/20mL		
	46. Mercury **	0.9/0.2mL	1.1/0.2mL		
✓	47. Nickel **	29/20mL	8.2/20mL		
	48. Selenium **	5/20mL	71/20mL		
	49. Silver	1.2/10mL	2.2/10mL		
	50. Zinc **	66.6/15mL	85.6/15mL		
✓	51. Iron	1,000/20mL			

	Other Parameters	Limit
✓	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

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.

⁹ Although 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 x 1,000ug/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 x 2 = 2,000 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

**NOTICE OF INTENT (NOI)
TEMPORARY CONSTRUCTION DEWATERING
WONDERLAND GARAGE
1300 NORTH SHORE (ROUTE 1A)
BOSTON, MASSACHUSETTS**

by

**Haley & Aldrich, Inc.
Boston, Massachusetts**

for

**US Environmental Protection Agency
Boston, Massachusetts**

**File No. 36954-001
October 2010**

Haley & Aldrich, Inc.
465 Medford St.
Suite 2200
Boston, MA 02129-1400

Tel: 617.886.7400
Fax: 617.886.7600
HaleyAldrich.com

**HALEY&
ALDRICH**

5 October 2010
File No. 36954-001

US Environmental Protection Agency
Municipal Assistance Unit
OEP-6-03
5 Post Office Square
Boston, Massachusetts 02109

Attention: Ms. Shelly Puleo

Subject: Notice of Intent (NOI)
Temporary Construction Dewatering
MBTA Wonderland Garage
1300 North Shore (Route 1A)
Revere, Massachusetts

Ladies and Gentlemen:

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 construction site dewatering under the RGP. Temporary construction dewatering is planned in support of construction activities proposed at the MBTA Wonderland Garage site, located at 1300 North Shore (Route 1A), in Revere, Massachusetts, as shown on Figure 1 – Project Locus.

Dewatering is anticipated to be conducted during construction earthwork activities related to garage construction and backfilling of pile caps and grade beams and utility installation. The areas of backfilling will need to be dewatered to facilitate placement of backfill material in-the-dry. We anticipate that dewatering activities will begin in October 2010.

Site Background

A portion of the proposed garage site is a DEP disposal site and a smaller portion of the garage site (Parcel W-2) is subject to an Activity and Use Limitation (AUL) under RTN 3-3487 related to residual petroleum present in soil and groundwater caused by historical releases from former USTs. The existing disposal site achieved regulatory closure under the MCP as a Class A-3 Response Action Outcome (RAO) issued in 1999. Contaminated soil and groundwater will be managed under a Release Abatement Measure (RAM) Plan for the existing RTN.

Site Conditions

Currently the site is a paved parking lot used by MBTA commuters.

Temporary Construction Dewatering Notice of Intent

Dewatering Activities

This NOI addresses the following dewatering activities:

Stormwater and Groundwater Infiltration Discharge

It is anticipated that stormwater precipitation and/or groundwater could collect in open excavations at the site and require discharge under the NPDES RGP to allow completion of construction and backfilling activities.

Dewatering Effluent Treatment

Prior to discharge, all construction dewatering effluent will be routed through a sedimentation tank and a 5 micron bag filter, at a minimum, to remove suspended solids and undissolved chemical constituents, as shown in the Proposed Treatment System Schematic included in Figure 2 herein. Construction dewatering under this RGP NOI will include piping and discharging to storm drains located within and near the site. The storm drains flow through the Eastern County Ditch, then into the Oak Island Marsh and finally discharge into the Lynn Harbor. The proposed discharge route is shown on Figure 3, Proposed Dewatering Discharge Route.

Water Quality Sampling and Testing

In support of the NOI, the following water samples were collected:

- Groundwater Monitoring Well B09-5(OW) – 23 August 2010

The one sample collected from the site is being used for consideration of the NOI; results are summarized in Table I. Total Cyanide was the only compound that exceeded the NPDES RGP Effluent Limits. The location of the Proposed Parking Garage and observation well B09-5(OW) are shown on Figure 3.

NOI Form

The completed "Suggested Notice of Intent" (NOI) form as provided in the RGP is enclosed in Appendix A. The Massachusetts Bay Transportation Authority (MBTA) currently controls the site. Suffolk Construction Company, Inc. is the site operator and construction manager, and will hire a subcontractor to conduct the Site work, including the dewatering and abatement activities. Haley & Aldrich, Inc. (Haley & Aldrich) will monitor the Contractor's dewatering and abatement activities on behalf of Suffolk Construction Company, Inc.

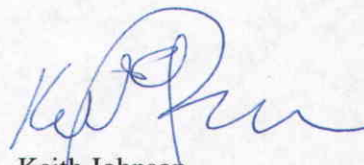
As the construction manager, Suffolk Construction Company, Inc is the permittee and listed Operator for this NPDES RGP, and has signed the NOI form.

Closing

Thank you very much for your consideration of this NOI. 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


Brian A. Ferguson
Staff Engineer


Keith Johnson
Vice President

Attachments:

Table I - Summary of Groundwater Quality Data
Figure 1 - Site Locus
Figure 2 - Proposed Treatment System Schematic
Figure 3 - Proposed Dewatering Discharge Route
Appendix A - Notice of Intent (NOI) for Remediation General Permit (RGP)
Appendix B - MSDS and Fact Sheets (Typical)
Appendix C - Best Management Practices Plan (BMPP)
Appendix D - National Register of Historic Places and Massachusetts Historical
Commission Documentation
Appendix E - Endangered Species Act Documentation
Appendix F - Laboratory Data Reports

c: Suffolk Construction Company, Inc.; Attn: Ronald Thomson, Christopher Walenten

Tables

TABLE I
SUMMARY OF GROUNDWATER QUALITY DATA
 MBTA - WONDERLAND GARAGE
 REVERE, MASSACHUSETTS
 FILE NO. 36954-001

SAMPLE LOCATION LAB SAMPLE ID SAMPLING DATE	MCP RCGW-2 (ug/l)	NPDES RGP Effluent Limits (ug/l) See Note 2	B09-5(OW) L1013009-01 8/23/2010
VOCs (ug/l)			
Total VOCs	NA	NA	ND
SVOCs (ug/l)			
Total SVOCs	NA	NA	ND
PAHs (ug/l)			
Total PAHs	NA	NA	ND
Total Metals (ug/l)			
Antimony	8000	5.6	ND(0.25)
Arsenic	900	10	1.1
Cadmium	4	0.2	ND(0.1)
Chromium	300	48.8	0.7
Copper	100000	5.2	1.2
Iron	NA	1000	47000
Lead	10	1.3	ND(0.25)
Mercury	20	0.9	ND(0.1)
Nickel	200	29	1
Selenium	100	5	1
Silver	7	1.2	ND(0.2)
Zinc	900	66.6	ND(2.5)
Dissolved Metals (ug/l)			
Antimony	8000	5.6	ND(0.25)
Arsenic	900	36	0.7
Cadmium	4	8.9	ND(0.1)
Chromium	300	50.3	0.7
Copper	100000	3.7	0.6
Iron	NA	1000	44000
Lead	10	8.5	ND(0.25)
Mercury	20	1.1	ND(0.1)
Nickel	200	8.2	1.9
Selenium	100	71	1
Silver	7	2.2	ND(0.2)
Zinc	900	85.6	ND(2.5)
PCBs(ug/l)			
Total PCBs (ug/l)	NA	0.000064	ND
General Chemistry (ug/l)			
Solids, Total Suspended	NA	30000	12000
Cyanide, Total	30	5.2	7
Chlorine, Total Residual	NA	11.0	ND(10)
Chloride	NA	NA	810000
pH (H)	NA	NA	6.3
TPH	5000	5000	ND(2000)
Phenolics, Total	NA	300	ND(15)
Chromium, Hexavalent	300	NA	ND(5)
Pesticides (ug/l)			
Total Pesticides (ug/l)	NA	NA	ND

Abbreviations:

NA : Not applicable

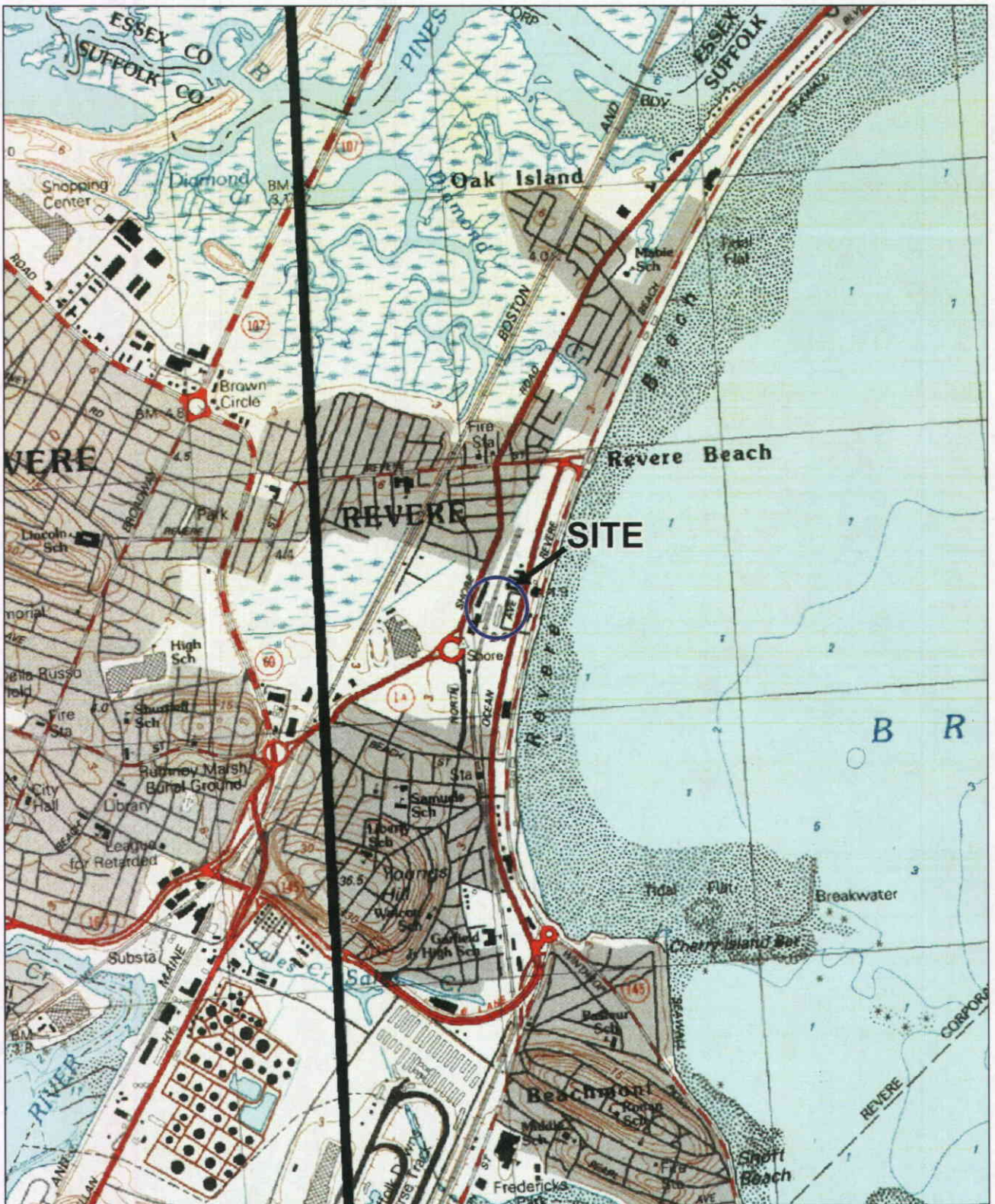
ND(2.5): Not detected; number in parentheses is one-half the laboratory detection limit

*: 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 (RGP)
2. NPDES RGP effluent limits provided for saltwater receiving waters.
3. Metals samples were not filtered, therefore are not applicable for comparison to MCP RCGW criteria.
4. Bold indicates exceedance or 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.
6. Only detected compounds are shown on table.

Figures

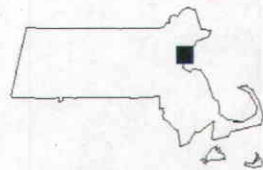
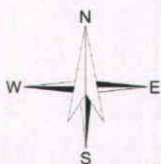


SITE COORDINATES: 42°24'50"N 70°59'29"W

HALEY & ALDRICH

MBTA WONDERLAND GARAGE
REVERE, MASSACHUSETTS

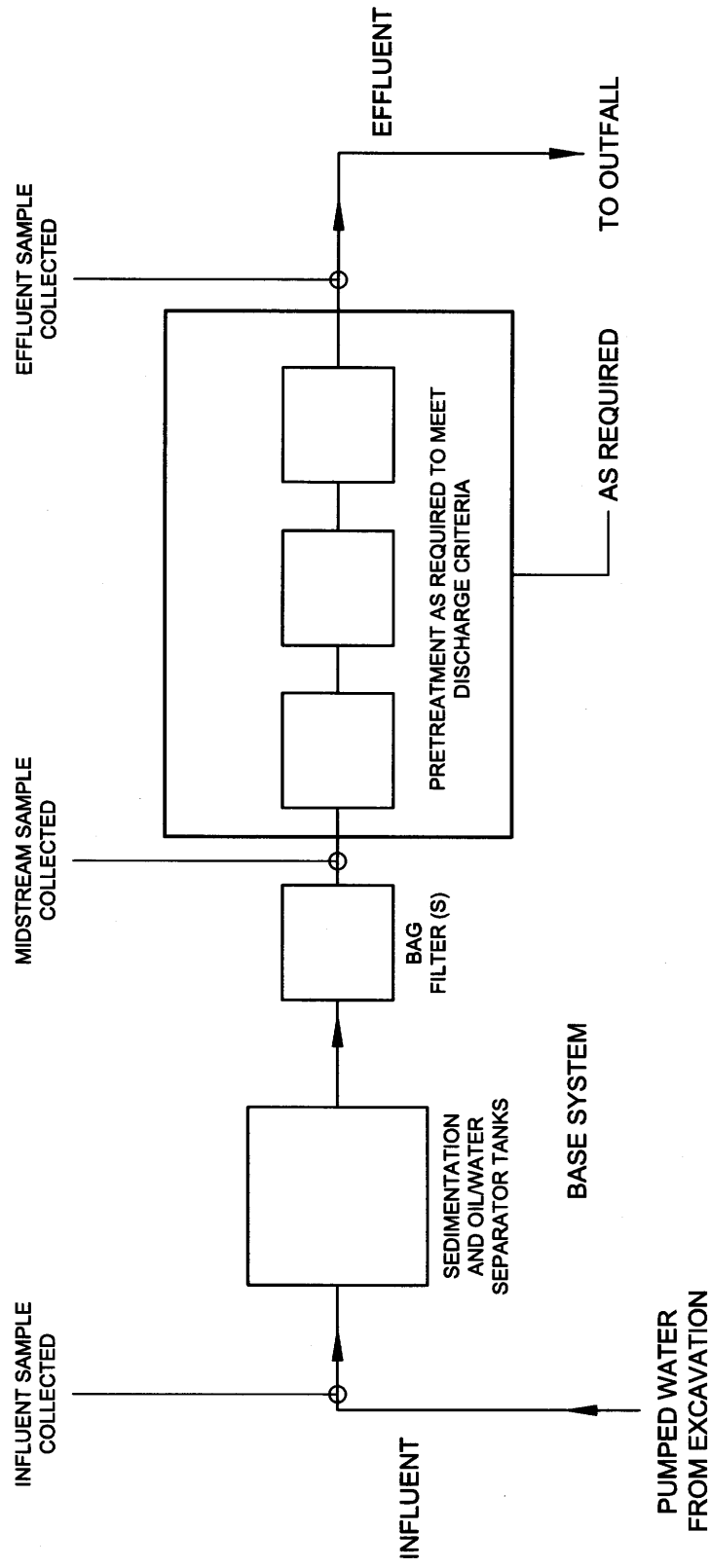
PROJECT LOCUS



U.S.G.S. QUADRANGLE: LYNN, MA

SCALE: 1:24,000
AUGUST 2010

FIGURE 1



LEGEND:

—→ DIRECTION OF FLOW

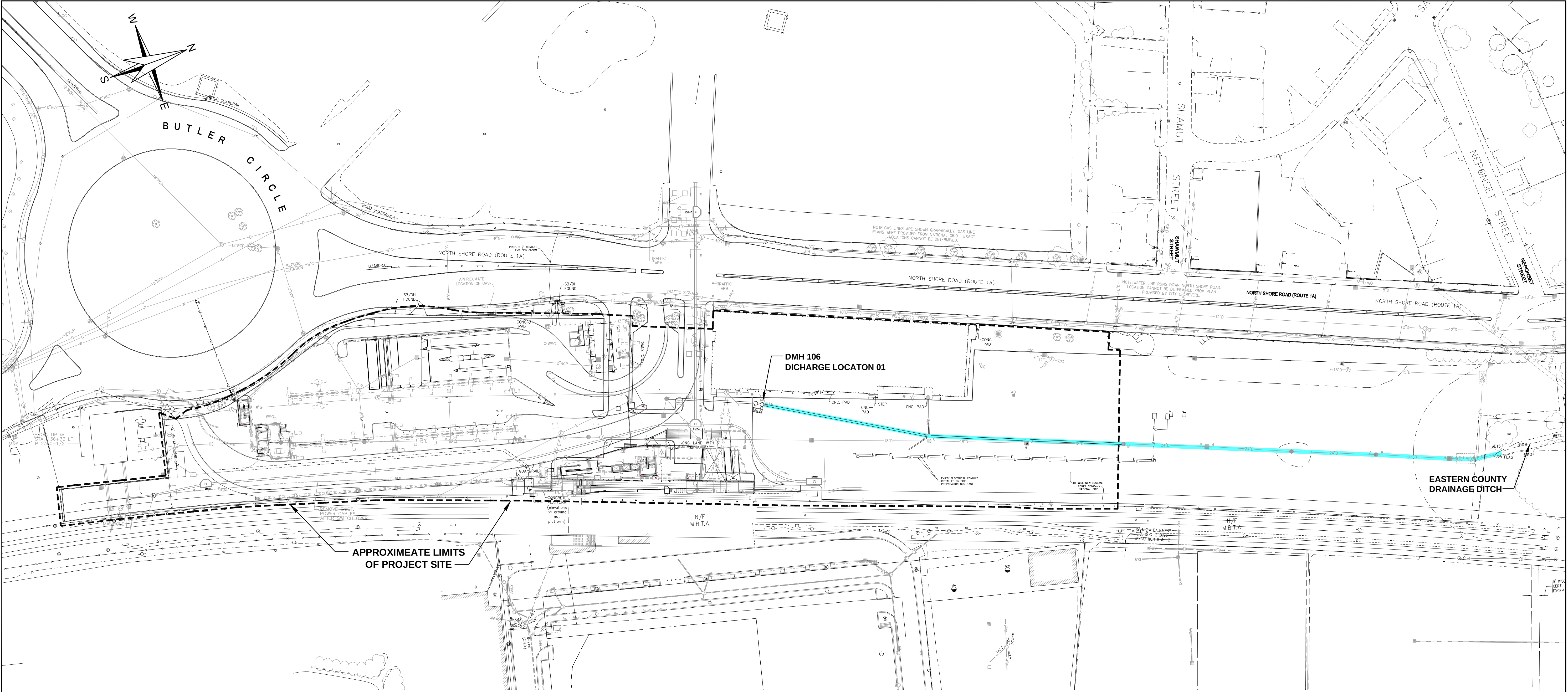
NOTE:

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.

HALEY & ALDRICH
MBTA WONDERLAND GARAGE
1300 NORTH SHORE (ROUTE 1A)
REVERE, MASSACHUSETTS

**PROPOSED
TREATMENT SYSTEM
SCHEMATIC**

SCALE: NONE
SEPTEMBER 2010



NOTE:
BASE PLAN TAKEN FROM PLANS TITLED "SITE UTILITY PLAN SOUTH" AND "SITE UTILITY PLAN NORTH" FROM SUFFOLK CONSTRUCTION, INC., BOSTON, MASSACHUSETTS, DATED 23 AUGUST 2010.



MBTA WONDERLAND GARAGE
REVERE, MASSACHUSETTS

PROPOSED DEWATERING
DISCHARGE ROUTE

SCALE: AS SHOWN
OCTOBER 2010

FIGURE 3

APPENDIX A

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

**Remediation General Permit
Appendix V****Notice of Intent (NOI)
Suggested Forms & Instructions****I. Notice of Intent (NOI) Suggested Form and Instructions**

In order to be covered by the remediation general permit (RGP), applicants must submit a completed Notice of Intent (NOI) to EPA Region I and the appropriate state agency. The owner or operator, as defined by 40 CFR § 122.2, means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.

The following are three general “**operator**” scenarios (variations on any of these three are possible, especially as the number of owners and contractors increases):

- ▶ “*Owner*” as “*Operator*” - *sole permittee*. The property owner designs the structures and control systems for the site, develops and implements the BMPP, and serves as general contractor (or has an on-site representative with full authority to direct day-to-day operations). Under the definition of operator, in this case, the “Owner” would be considered the “operator” and therefore the only party that needs permit coverage. Everyone else working on the site may be considered subcontractors and do not need to apply for permit coverage.
- ▶ “*Contractor*” as “*Operator*” - *sole permittee*. The property owner hires a company (e.g., a contractor) to design the project and oversee all aspects, including preparation and implementation of the BMPP and compliance with the permit (e.g., a “turnkey” project). Here, the contractor would likely be the only party needing a permit. Similarly, EPA expects that property owners hiring a contractor or consultant to perform groundwater remediation work (e.g., due to a leaking fuel oil tank) would come under this type of scenario. EPA believes that the contractor, being a professional in the industry, should be the responsible entity rather than the individual. The contractor is better equipped to meet the requirements of both applying for permit coverage and developing and properly implementing the plans needed to comply with the permit. However, property owners would also meet the definition of “operator” and require permit coverage in instances where they perform any of the required tasks on their personal properties.
- ▶ “*Owner*” and “*Contractor*” as “*Operators*” - *co-permittees*. The owner retains control over any changes to site plans, BMPPs, or wastewater conveyance or control designs, but the contractor is responsible for conducting and overseeing the actual activities (e.g., excavation, installation and operation of treatment train, etc.) and daily implementation of BMPP and other permit conditions. In this case, both parties need to apply for coverage.

Generally, a person would not be considered an “operator,” and subsequently would not need permit coverage, if: 1) that person is a subcontractor hired by, and under the supervision of, the owner or a general contractor (e.g., if the contractor directs the

subcontractor's activities on-site, it is probably not an operator); or 2) the person's activities would otherwise result in the need for coverage under the RGP but another operator has legally assumed responsibility for the impacts of project activities.

A. Instructions for the Suggested Notice of Intent (NOI) - At a minimum, the Notice of Intent must include the following for each individual facility or site. Additional information may be attached as needed.

1. General facility/site information.

- a) Provide the facility/site name, mailing address, and telephone and fax numbers. Provide the facility Standard Industrial Classification (SIC) code(s), which can be found online at http://www.osha.gov/pls/imis/sic_manual.html. Provide the site location, including longitude and latitude.
- b) Provide the facility/site owner's name, address, email address, telephone and fax numbers, if different from the site information. Indicate whether the owner is a Federal, State/Tribal, private, or other entity.
- c) Provide the site operator's (e.g., contractor's) name, mailing address, telephone and fax numbers, and email address if different from the owner's information.
- d) For the site for which the application is being submitted, indicate whether:
 - 1) a prior NPDES permit exclusion has been granted for the discharge (if so, provide the tracking number of the exclusion letter);
 - 2) a prior NPDES application (Form 1 & 2C – for reference, please visit http://www.epa.gov/region1/npdes/epa_attach.html) has ever been filed for the discharge (if so, provide the tracking number and date that the application was submitted to EPA);
 - 3) the discharge is a “new discharge” as defined by 40 CFR 122.2; and
 - 4) for sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 and exempt from state permitting.
- e) Indicate whether there is any ongoing state permitting, licensing, or other action regarding the facility or site which is generating the discharge. If “yes,” provide any site identification number assigned by the state of NH or MA, any permit or license number assigned, and the state agency contact information (e.g. name, location, telephone no.).
- f) Indicate whether or not the facility is covered by other EPA permits including:
 - 1) the Multi-Sector General Permit (MSGP)
<http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>;
 - 2) the Final NPDES General Permit for Dewatering Activity Discharges in Massachusetts and New Hampshire
<http://www.epa.gov/region1/npdes/dewatering.html>;
 - 3) the EPA Construction General Permit
<http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>;
 - 4) an individual NPDES permit; or
 - 5) any other water quality-related individual or general permit.If so, provide permit tracking number(s).
- g) Indicate if the site/facility discharge(s) to an Area of Critical Environmental Concern (ACEC), as shown on the tables and maps in Appendix I.

h) Based on the nature of the facility/site and any historical sampling data, the applicant must indicate which of the sub-categories within which the potential discharge falls.

2. Discharge information.

a) Describe the discharge activities to be covered by the permit. Attach additional sheets as needed.

b) Provide the following information about each discharge:

- 1) the number of discharge points;
- 2) the maximum and average flow rate of the discharge in cubic feet per second. For the average flow magnitude, include the units and appropriate notation if this value is a calculated design value or estimate if technical/design information is not available;
- 3) the latitude and longitude of each discharge with an accuracy of 100 feet (see EPA's siting tool at: http://www.epa.gov/tri/report/siting_tool);
- 4) the total volume of potential discharge (gal), only if hydrostatic testing;
- 5) whether the discharge(s) is intermittent or seasonal and if ongoing.

c) Provide the expected start and end dates of discharge (month/day/year).

d) 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).

3. Contaminant information.

In order to complete the NOI, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for the parameters applicable to the sub-category into which the discharge falls, as listed in Appendix III of the permit and selected in Part 1 of the NOI form, except as noted below.

Permittees shall provide additional sampling results with the NOI if such sampling already exists, or if the permittee has reason to believe the site contains additional contaminants not listed in Appendix III for that sub-category or contains additional contaminants not included in Appendix III.

The applicant may use historical data as a substitute for the new sample if the data was collected no more than 2 years prior to the "Submittal of the NOI" and if collected pursuant to:

- i. for sites in Massachusetts, 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E");
- ii. for sites in New Hampshire, New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act;

a) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is believed present or believed absent in the potential discharge.

Based on the required sampling and analysis, the applicant must fill in the table, or provide a narrative description, with the following additional information for each chemical that is believed present (chemical that violate EPA's criteria limitations):

- 1) the number of samples taken (minimum of one sample for applicable parameters per Appendix III);
- 2) the type of sample (e.g. grab, composite, etc.);
- 3) the analytical method used, including the method number;
- 4) the minimum level (ML) of the method used (based on Appendix VI);
- 5) the maximum daily amount (concentration (ug/l) and mass (kg)) of each pollutant, based on the sampling data

lb/day (pounds per day) equals flow (in million gallons per day, MGD) times concentration in milligrams per liter (mg/l) times 8.34.

Example: $2.5 \text{ MGD} \times 30 \text{ mg/l TSS} \times 8.34 = 625.5 \text{ lb TSS/day}$

MGD = gallons per minute (gpm) x 0.00144

1 kg = 2.2 lbs

And;

- 6) the average daily amount (concentration and mass) of each pollutant, based on the sampling data.

If the results of any sampling indicate that pollutants exist in addition to those listed in Appendix III of the RGP of the permit, the applicant must also describe those contaminants on the NOI in boxes in section I.3.c.) on the line marked "Other," or use additional sheets as needed. Subsequently, EPA may require monitoring for such parameters or will decide if an individual permit is necessary.

c) Determination of Reasonable Potential and Allowable Dilution for Discharges of Metals:

If any *metals* are believed present in the potential discharge to freshwater¹, the applicant must follow the procedures below to determine the dilution factor for each metal.

Step 1: Initial Evaluation

1) The applicant must evaluate all metals believed present in the discharge subject to this permit, including "naturally occurring" metals such as dissolved and/or total Iron. Applicants must enter the highest detected concentration of the metal at zero dilution in the "Maximum value" column of the NOI.

2) Based on the maximum concentration of each metal, the applicant must perform an initial evaluation assuming zero dilution in the receiving water. The applicant must compare the metals concentrations in the untreated (intake) waters to the effluent limits contained in Appendix III.

¹Dilution factors may be available for discharges to saline waters but only with approval of the flow modeling information from the State prior to the submission of the NOI.

- i. If potential discharges (untreated influent) with metals contain concentrations above the concentration limits listed in Appendix III, applicant must proceed to step 2.
- ii. If potential discharges (untreated influent) with metals contain concentrations below the concentrations listed in Appendix III, the applicant may skip step 2 and those metals will **not** be subject to permit limitations or monitoring requirements.

Step 2: Calculation of Dilution Factor

1) **For applicants in NH:** If a metal concentration in a potential discharge (untreated influent) to **freshwater** exceeds the limits in Appendix III with zero dilution, the applicant shall evaluate the potential concentration considering a dilution factor (DF) using the formula below. **For sites in New Hampshire, the applicant must contact NH DES to determine the 7Q10 and dilution factor.**

$$DF = [(Q_d + Q_s)/Q_d] \times 0.9$$

Where:

DF	= Dilution Factor
Q _d	= Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)
Q _s	= Receiving water 7Q10 flow, in cfs, where 7Q10 is the annual minimum flow for 7 consecutive days with a recurrence interval of 10 years
0.9	= Allowance for reserving 10% of the assets in the receiving stream as per Chapter ENV-Wq 1700, Surface Water Quality Regulations

i. Using the DF calculated from the formula above, the applicant must refer to the corresponding dilution range column in Appendix IV. The applicant then compares the maximum concentration of the metal entered on the NOI to the corresponding total recoverable metals limits listed in Appendix IV. Please note that for this reissuance the applicant will be permitted to determine a limit using any fraction within the 1-5 dilution factor range times the metal limit (for all regulated metals). For example: if the DF is 1.5, the Iron limit is 1,500 ug/L; if the DF is 1.5, the antimony limit is 8.4, etc. All limits above a dilution factor of 5 are maintained.

1. If a metal concentration in the potential discharge (untreated influent) is less than the corresponding limit in Appendix IV, the metal will **not** be subject to permit limitations or monitoring requirements.
2. If a metal concentration in the potential discharge (untreated influent) is equal to or exceeds the corresponding limit in Appendix IV, the applicant must reduce it in the effluent to a concentration below the applicable total recoverable metals limit in Appendix IV prior to discharge.

ii. In either case, the applicant must submit the results of this calculation as part of the NOI. EPA and NH DES will review the proposed effluent limitations for each metal and approve or disapprove the limits in the notification of coverage letter to the applicant.

2) **For applicants in MA:** If a metal concentration in a potential discharge (untreated influent) to **freshwater** exceeds the limits in Appendix III with zero dilution, the applicant must evaluate the potential concentration considering a dilution factor (DF) using the formula below.

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

Where: **DF** = **Dilution Factor**
 Q_d = **Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)**
 Q_s = **Receiving water 7Q10 flow (cfs) where 7Q10 is the minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years**

i. The applicant may estimate the 7Q10 for receiving water by using available information such as nearby USGS stream gauging stations directly or by application of certain “flow factors,” using historic streamflow publication information, calculations based on drainage area, information from state water quality offices, or other means. In many cases Massachusetts has calculated 7Q10 information using “flow factors” for a number of streams in the state. The source of the low flow value(s) used by the applicant must be included on NOI application form. Flow data can also be obtained from web applications such as the one located at: <http://ma.water.usgs.gov/streamstats/>.

ii. Using the DF calculated from the formula above, the applicant must refer to the corresponding dilution range column in Appendix IV. The applicant then shall compare the maximum concentration of each metal entered on the NOI to the corresponding total recoverable metals limit listed in Appendix IV. Please note that for this reissuance the applicant will be permitted to determine a limit using any fraction of the 0-5 of DF times the metal limit (for all regulated metals). For example: if the DF is 1.5, the Iron limit is 1,500 ug/L; if the DF is 1.5, the antimony limit is 8.4, etc. Not to exceed DF of 5.

1. If a metal concentration in the potential discharge (untreated influent) is less than the corresponding limit in Appendix IV, the metal will **not** be subject to permit limitations or monitoring requirements.
2. If a metal concentration in a potential discharge (untreated influent) is equal to or exceeds the corresponding limit in Appendix IV, the applicant must reduce it in the effluent to a concentration below the applicable total recoverable metals limit in Appendix IV prior to discharge.

- iii. The applicant must submit the results of this calculation as part of the NOI. EPA (and MassDEP where the discharge is not covered by 310 CMR 40.0000) will review the proposed effluent limitations for each metal and approve or disapprove the limits in the notification of coverage letter to the applicant.

4. Treatment system information.

- a) Provide a written description of the treatment train and how the system will be set up for each discharge and attach a schematic of the proposed or existing treatment system(s).
- b) Identify each major treatment unit (e.g. frac tanks, filters, air stripper, liquid phase/vapor phase activated carbon, oil/water separators, etc.) by checking all that apply and describing any additional equipment not listed. Attach additional sheets as needed.
- c) Provide the proposed average and maximum flow rates (in gallons per minute, gpm) for the discharge and the design flow rates (in gpm) of the treatment system. Clearly identify the component of the treatment with the most limited flow, i.e., the part of the treatment train that establishes the design flow.
- d) Describe any chemical additives being used, or planned to be used, and attach MSDS sheets for each. EPA may request further information regarding the chemical composition of the additive, potential toxic effects, or other information to insure that approval of the use of the additive will not cause or contribute to a violation of State water quality standards. Approval of coverage under the RGP will constitute approval of the use of the chemical additive(s). If coverage of the discharge under the RGP has already been granted and the use of a chemical additive becomes necessary, the permittee must submit a Notice of Change (NOC).

5. Receiving surface water(s) information.

- a) Identify the discharge pathway by checking whether it is discharged: directly to the receiving water (river, stream, or brook), within the facility (e.g., through a sewer drain), to a storm drain, to a wetland, or other receiving body.
- b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters into which discharge will occur.
- c) Provide a detailed map(s) indicating the location of the site and outfall(s) to the receiving water(s):
 - 1) For multiple discharges, the discharges should be numbered sequentially.
 - 2) In the case of indirect dischargers (to municipal storm sewer, etc) the map(s) must be sufficient to indicate the location of the discharge to the indirect conveyance and the discharge to the state classified 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 and the basin (for Massachusetts, the Surface Water Quality Standards (314 CMR 4.00) are available at <http://www.mass.gov/dep/water/laws/regulati.htm#wqual>) (for New Hampshire, contact the NH DES at (603) 271-2984).
- e) Specify the reported seven day-ten year low flow (7Q10) of the receiving water (see Section I.A.3) c. above). In New Hampshire, the 7Q10 must be provided by to the applicant by the New Hampshire Department of Environmental Services.

f) Indicate whether the receiving water is a listed 303(d) water quality impaired or limited water and if so, for which pollutants (see Section IX of the Fact Sheet for additional information).

For MA, the most updated integrated list of waters (CWA 303(d) and 305(b)) is available at <http://www.mass.gov/dep/water/resources/tmdls.htm#info>.

For NH, the most updated integrated list of waters (CWA 303(d) and 305(b)) is available at <http://des.nh.gov/organization/divisions/water/wmb/swqa/index.htm>.

Also, indicate if there is a final TMDL for any of the listed pollutants. For MA, final TMDLs can be found at: <http://www.mass.gov/dep/water/resources/tmdls.htm> and for NH, final TMDLs can be found at

<http://des.nh.gov/organization/divisions/water/wmb/tmdl/index.htm>. For more information, contact the states at: New Hampshire Department of Environmental Services, Watershed Management Bureau at 603-271-3503 or the Massachusetts Department of Environmental Protection at 508-767-2796 or 508-767-2873.

6. ESA and NHPA Eligibility.

As required in Parts I.A.4 and Appendix VII the operator of a site/facility must ensure that the potential discharge will not adversely affect endangered species, designated critical habitat, or national historic places that are in proximity to the potential discharge. If the potential discharge is to certain water bodies, the applicant must also submit a formal certification with the NOI that indicates the consultation, with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (the Services), resulted in either a no jeopardy opinion or a written concurrence on a finding that the discharge is not likely to adversely affect any endangered species or critical habitat. Facilities should begin the consultation as early in the process as possible.

- a) Using the instructions in Appendix VII and information in Appendix II, indicate under which criterion listed you are eligible for coverage under this general permit.
- b) If you selected criterion D or F, indicate if consultation with the federal services has been completed or if it is underway.
- c) If consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, indicate if a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat was received.
- d) Attach documentation of ESA eligibility as described below and required in Appendix VII, Part I.C, Step 4.

Criterion A - No federally-listed threatened or endangered species or federally-designated critical habitat are present: A copy of the most current county species list pages for the county(ies) where your site or facility and discharges are located. You must also include a statement on how you determined that no listed species or critical habitat are in proximity to your site or facility or discharge locations.

Criterion B - Section 7 consultation completed with the Service(s) on a prior project: A copy of the USFWS and/or NOAA Fisheries, as appropriate, biological opinion or concurrence on a finding of "unlikely to adversely effect" regarding the ESA Section 7 consultation.

Criterion C - Activities are covered by a Section 10 Permit: A copy of the USFWS and/or the NOAA Fisheries, as appropriate, letter transmitting the ESA Section 10 authorization.

Criterion D - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" federally-listed species or federally-designated critical habitat (not including the four species of concern identified in Section I of Appendix I): A copy of the USFWS and/or the NOAA Fisheries, as appropriate, letter or memorandum concluding that the discharge is consistent with the general permit's "not likely to adversely affect" determination.

Criterion E - Activities are covered by certification of eligibility: A copy of the documents originally used by the other operator of your site or facility (or area including your site) to satisfy the documentation requirement of Criteria A, B, C or D.

Criterion F - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" species of concern, as identified in Section I of Appendix I: A copy of the USFWS and/or the NOAA Fisheries, as appropriate, concurrence with the applicant's determination that the discharge is "not likely to adversely affect" listed species.

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

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. Applicants should provide any supplemental information needed to meet the requirements of the permit, including any analytical data used to support the application, and any certification(s) required.

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.

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: MBTA Wonderland Garage		Facility/site mailing address:	
Location of facility/site: longitude: 42°24'50"N latitude: 70°59'29"W		Facility SIC code(s):	Street: 1300 North Shore (Route 1A)
b) Name of facility/site owner:		Town: Revere	
Email address of facility/site owner: NA		State: MA	Zip: 02151
Telephone no. of facility/site owner: 617-222-4752		County: Suffolk	
Fax no. of facility/site owner: 617-222-4429		Owner is (check one): 1. Federal ☐ 2. State/Tribal ☒	
Address of owner (if different from site):		3. Private ☐ 4. Other ☐ if so, describe:	
Street: 500 Aborway			
Town: Jamaica Plain	State: MA	Zip: 02130	County: Suffolk
c) Legal name of operator: Suffolk Construction Company, Inc.		Operator telephone no.: 617-517-4538	
Operator contact name and title: Christopher Walenten		Operator fax no.: 617-989-3359	Operator email: cwalenten@suffolkconstruction.
Address of operator (if different from owner):		Street: 65 Allerton Street	
Town: Boston	State: MA	Zip: 02119	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 ☒, <i>currently being prepared, will be submitted prior to construction.</i> 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.	
Activity Category I - Petroleum Related Site Remediation	Activity Sub-Category A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☐ A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐ A. General Urban Fill Sites ☒ B. Known Contaminated Sites ☐
II - Non Petroleum Site Remediation	
III - Contaminated Construction Dewatering	

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) ☐
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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 dewatering during construction of a new MBTA parking garage	
b) Provide the following information about each discharge:	
1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow 0.223 Is maximum flow a design value? Y ☐ N ☒ Average flow (include units) 0.067 cfs Is average flow a design value or estimate? estimate
3) Latitude and longitude of each discharge within 100 feet:	
pt.1: lat 42°24'50"N long 70°59'29"W	pt.2: lat long
pt.3: lat long	pt.4: lat long
pt.5: lat long	pt.6: lat long
pt.7: lat long	pt.8: lat long; etc.
4) If hydrostatic testing, total volume of the discharge (gals) NA	5) Is the discharge intermittent ☒ or seasonal ☐ ? Is discharge ongoing? Y ☐ N ☒
c) Expected dates of discharge (mm/dd/yy): start 10/01/2010 end 12/31/2011	
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 figure 3	

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.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	1	GRAB	2504D	5000	12000		12000	
2. Total Residual Chlorine (TRC)		☒	☐	1	GRAB	4500CL-D	20	ND		ND	
3. Total Petroleum Hydrocarbons (TPH)		☐	☒	1	GRAB	1664	4000	ND		ND	
4. Cyanide (CN)	57125	☐	☒	1	GRAB	4500CNCE	5	7		7	
5. Benzene (B)	71432	☒	☐	1	GRAB	624	1	ND		ND	
6. Toluene (T)	108883	☒	☐	1	GRAB	624	1	ND		ND	
7. Ethylbenzene (E)	100414	☒	☐	1	GRAB	624	1	ND		ND	
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	GRAB	624	2	ND		ND	
9. Total BTEX ²	n/a	☒	☐	1	GRAB	624	1	ND		ND	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934	☒	☐	1	GRAB	504.1	.01	ND		ND	
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	1	GRAB	624	20	ND		ND	
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	GRAB	624	200	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	☒	☐	1	GRAB	624	20	ND		ND	
14. Naphthalene	91203	☒	☐	1	GRAB	624	0.2	ND		ND	
15. Carbon Tetrachloride	56235	☒	☐	1	GRAB	624	1	ND		ND	
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	GRAB	624	5	ND		ND	
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	GRAB	624	5	ND		ND	
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	GRAB	624	5	ND		ND	
18a. Total dichlorobenzene		☒	☐	1	GRAB	624	5	ND		ND	
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	GRAB	624	1.5	ND		ND	
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	GRAB	624	1.5	ND		ND	
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	GRAB	624	1	ND		ND	
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	1	GRAB	624	1	ND		ND	
23. Methylene Chloride	75092	☒	☐	1	GRAB	624	5	ND		ND	
24. Tetrachloroethene (PCE)	127184	☒	☐	1	GRAB	624	1.5	ND		ND	
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	GRAB	624	2	ND		ND	
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	GRAB	624	1.5	ND		ND	
27. Trichloroethene (TCE)	79016	☒	☐	1	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	☒	☐	1	GRAB	624	2	ND		ND	
29. Acetone	67641	☒	☐	1	GRAB	624	1.5	ND		ND	
30. 1,4 Dioxane	123911	☒	☐	1	GRAB	624	2000	ND		ND	
31. Total Phenols	108952	☒	☐	1	GRAB	420.1	30	ND		ND	
32. Pentachlorophenol (PCP)	87865	☒	☐	1	GRAB	8270C	0.8	ND		ND	
33. Total Phthalates (Phthalate esters) ⁴		☒	☐	1	GRAB	8270C	4.9	ND		ND	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	GRAB	8270C	4.9	ND		ND	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	GRAB	8270C	0.2	ND		ND	
a. Benzo(a) Anthracene	56553	☒	☐	1	GRAB	8270C	0.2	ND		ND	
b. Benzo(a) Pyrene	50328	☒	☐	1	GRAB	8270C	0.2	ND		ND	
c. Benzo(b)Fluoranthene	205992	☒	☐	1	GRAB	8270C	0.2	ND		ND	
d. Benzo(k)Fluoranthene	207089	☒	☐	1	GRAB	8270C	0.2	ND		ND	
e. Chrysene	21801	☒	☐	1	GRAB	8270C	0.2	ND		ND	
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	GRAB	8270C	0.2	ND		ND	
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	GRAB	8270C	0.2	ND		ND	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	GRAB	8270C	0.2	ND		ND	

⁴ The 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	☒	☐	1	GRAB	8270C	0.2	ND		ND	
i. Acenaphthylene	208968	☒	☐	1	GRAB	8270C	0.2	ND		ND	
j. Anthracene	120127	☒	☐	1	GRAB	8270C	0.2	ND		ND	
k. Benzo(ghi) Perylene	191242	☒	☐	1	GRAB	8270C	0.2	ND		ND	
l. Fluoranthene	206440	☒	☐	1	GRAB	8270C	0.2	ND		ND	
m. Fluorene	86737	☒	☐	1	GRAB	8270C	0.2	ND		ND	
n. Naphthalene	91203	☒	☐	1	GRAB	8270C	0.2	ND		ND	
o. Phenanthrene	85018	☒	☐	1	GRAB	8270C	0.2	ND		ND	
p. Pyrene	129000	☒	☐	1	GRAB	8270C	0.2	ND		ND	
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	GRAB	608	0.255	ND		ND	
38. Chloride	16887006	☐	☒	1	GRAB	9251	10000	810000		810000	
39. Antimony	7440360	☒	☐	1	GRAB	6020	0.1	ND		ND	
40. Arsenic	7440382	☒	☐	1	GRAB	6020	0.1	ND		ND	
41. Cadmium	7440439	☒	☐	1	GRAB	6020	0.4	ND		ND	
42. Chromium III (trivalent)	16065831	☒	☐	1	GRAB	6020	1	ND		ND	
43. Chromium VI (hexavalent)	18540299	☒	☐	1	GRAB	6020	10	ND		ND	
44. Copper	7440508	☒	☐	1	GRAB		1	ND		ND	
45. Lead	7439921	☒	☐	1	GRAB		1	ND		ND	
46. Mercury	7439976	☒	☐	1	GRAB		0.2	ND		ND	
47. Nickel	7440020	☐	☒	1	GRAB		1	1.9		ND	
48. Selenium	7782492	☒	☐	1	GRAB		2	ND		ND	
49. Silver	7440224	☒	☐	1	GRAB		0.8	ND		ND	
50. Zinc	7440666	☒	☐	1	GRAB		10	ND		ND	
51. Iron	7439896	☐	☒	1	GRAB		50	44000		44000	
Other (describe):		☐	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
		☐	☐								
		☐	☐								

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? 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: Iron</td> <td>DF: NA</td> </tr> <tr> <td>Metal:</td> <td>DF:</td> </tr> <tr> <td>Metal:</td> <td>DF:</td> </tr> <tr> <td>Metal:</td> <td>DF:</td> </tr> </table> <i>Not Applicable for Eastern County Drainage Ditch.</i>		Metal: Iron	DF: NA	Metal:	DF:	Metal:	DF:	Metal:	DF:	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: Iron	DF: NA									
Metal:	DF:									
Metal:	DF:									
Metal:	DF:									

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 Wonderland Garage 1300 North Shore (Route 1A) Boston, Massachusetts" dated 5 October 2010.					
b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☐	Equalization tanks ☐	Bag filter ☒
	Chlorination ☐	De-chlorination ☐	Other (please describe): GAC, ION EXCHANGER - AS REQUIRED		

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 30 gpm Maximum flow rate of treatment system 100 gpm Design flow rate of treatment system NA gpm				
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): See Appendix B in "Notice of Intent (NOI) Temporary Construction Dewatering Wonderland Garage 1300 North Shore (Route 1A) Boston, Massachusetts" dated 5 October 2010.				
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: Discharge into a new storm water manhole located on-site. Storm drain flows north and discharges to the Eastern County Drainage Ditch.				
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 NA				
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water NA 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.

See "Notice of Intent (NOI) Temporary Construction Dewatering Wonderland Garage 1300 North Shore (Route 1A) Boston, Massachusetts" dated 5 October 2010.

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:	MBTA Wonderland Garage
Operator signature:	
Printed Name & Title:	Christopher Walenten, LEED AP, Suffolk Construction Company Inc.
Date:	10/19/10

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

MSDS and Fact Sheets (Typical)

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

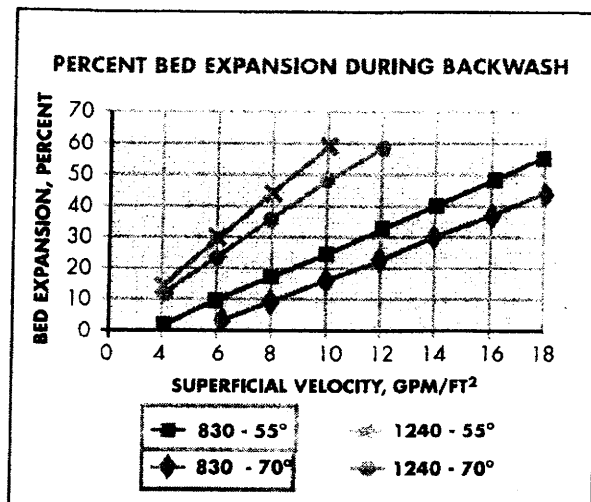
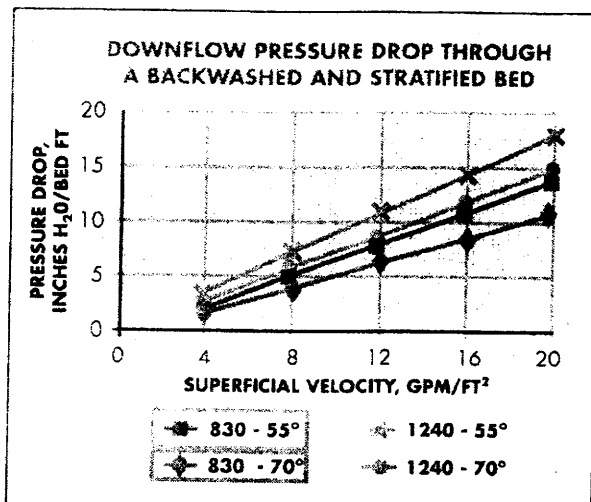
All AquaCarb® activated carbons are extensively quality checked at our State of California certified environmental and carbon testing laboratory located in Los Angeles, CA. USFilter's laboratory is fully equipped to provide complete quality control analyses using ASTM standard test methods in order to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

WV 1000-125-001

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

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

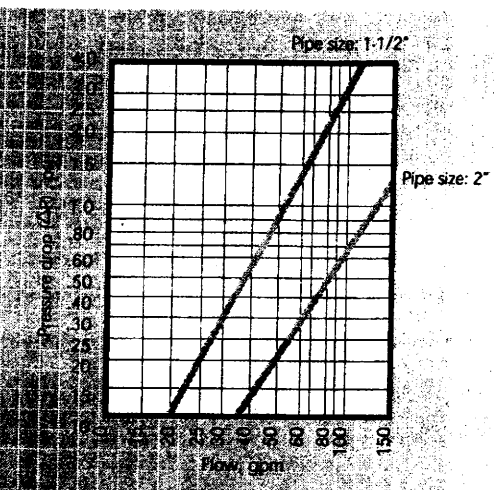
Covers are O-ring sealed

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**
NCOS-30 - 2P - * - 150 - C - B - PB

MODEL

NCOS (#1, #2 bag
& 500 cartridge)
NLCOS (#12 bag)
NCOS135 (700 cartridge)
NCOS135 convertible

BASKET SIZE

15-inch (NCO only) = **15**
30-inch (NCO or NLCO) = **30**
NCO135 = **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**

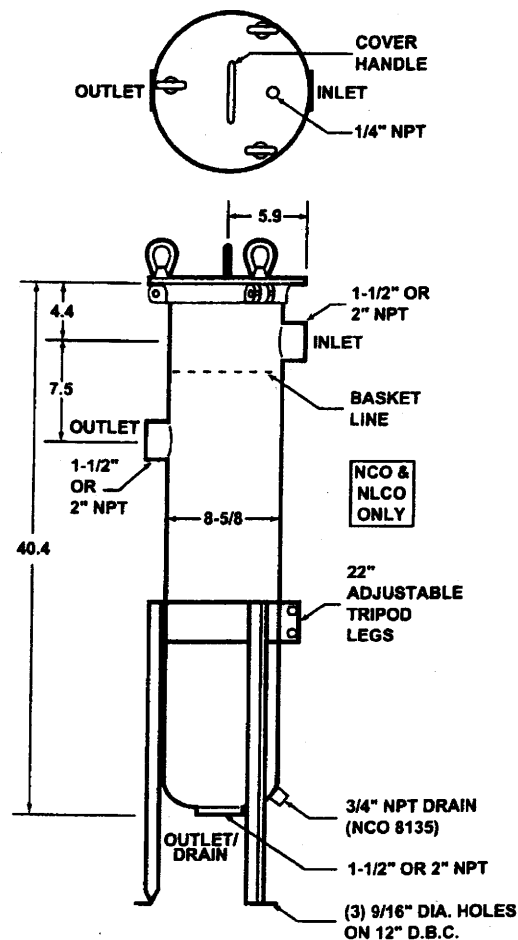
COVER SEAL

Buna N = **B**
Ethylene propylene = **E**
Viton® Fluoroelastomer = **V**

BASKET TYPE

Filter bag basket (NCO or NLCO) = **PB**
700 Cartridge (NCO135) = **700**
Convertible (NCO135) = **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.

RESINTeCH

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.

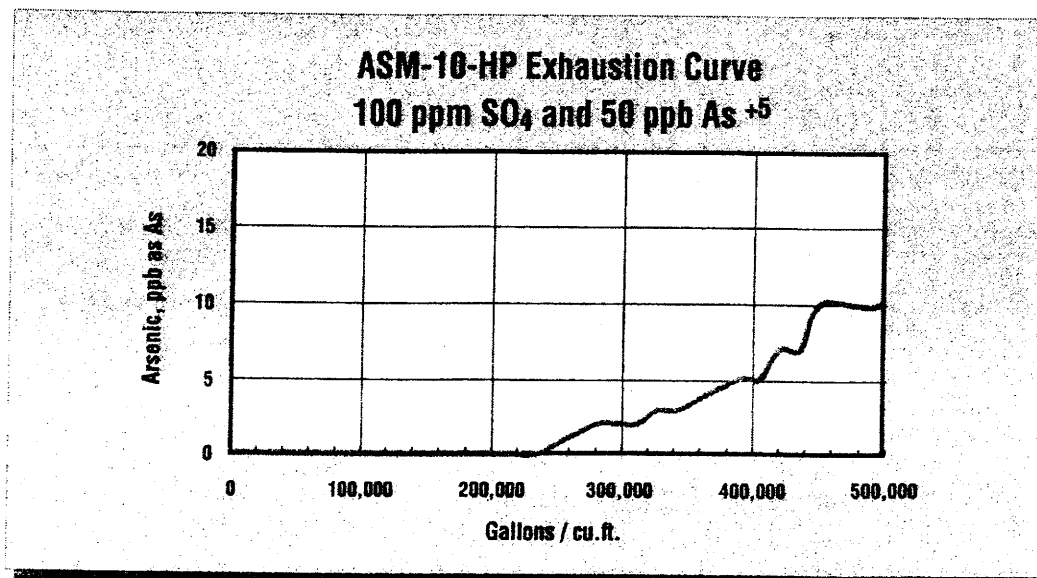
RESINTeCH ASM-10-HP is also available in organic trap, perchlorate selective and nitrate selective configured resins. These resins are fully selective for arsenic, but still retain their original ion exchange selectivity.

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

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.

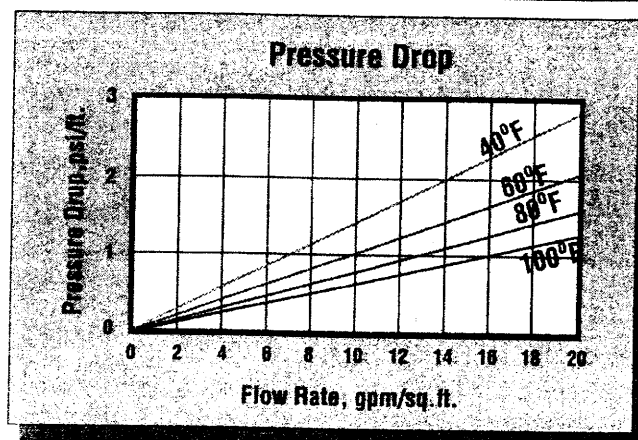
REGENERATION

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

DISPOSAL

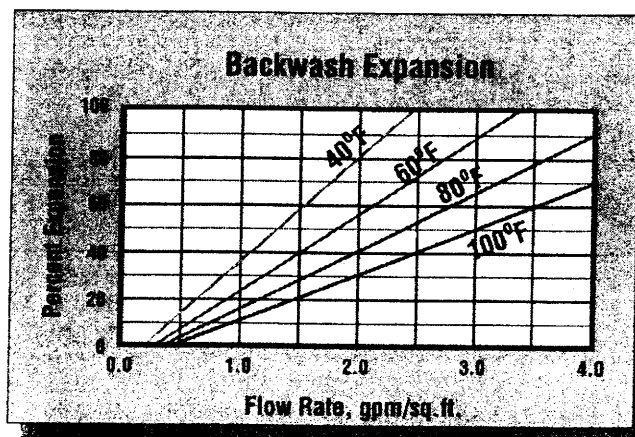
It is recommended that users review local regulations and consult with local authorities on the best method of disposal.

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.



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.

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ASM-10-HP091604

RESINTECH

CGS

CATION EXCHANGE RESIN
SOFTENING GRADE
Na FORM

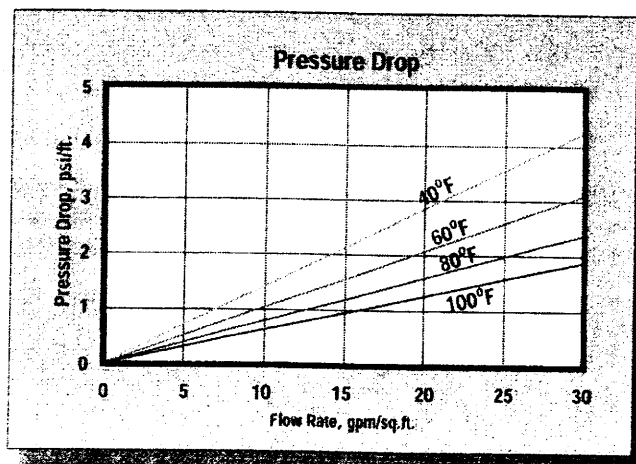
RESINTECH CGS is a high purity, light colored, high capacity, gel type sulfonated polystyrene cation resin supplied in the sodium form as moist, tough uniform spherical beads. *ResinTech CGS* specifically is intended for use in all water softening applications, including beverages, potable water and 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

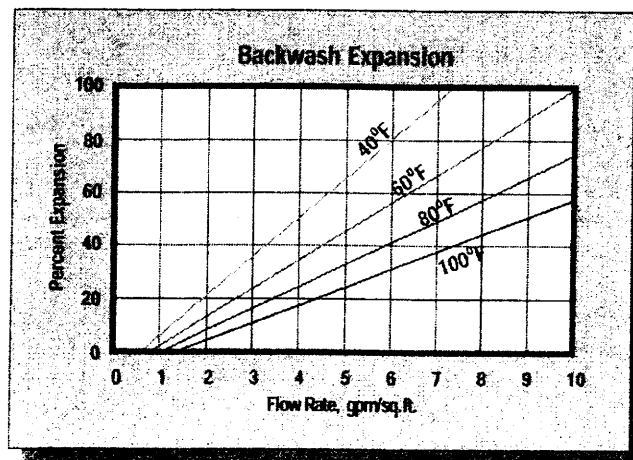
- **COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS**
Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the F.D.A. *
- **EXCELLENT REGENERATION EFFICIENCY**
Virtually the same operating capacity as premium grade *ResinTech CG8-BL*
- **NSF/ANSI-61 VALIDATED** 
- **UNIFORM 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 Kilograms/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 Kilograms/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 obtain 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.

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CGSver010601

#	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)

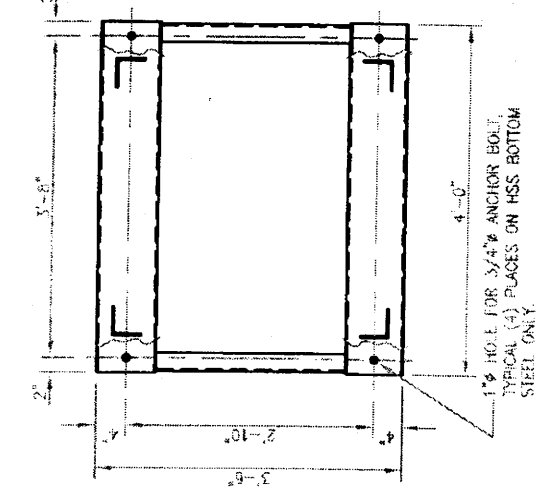
GENERAL NOTES

- 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

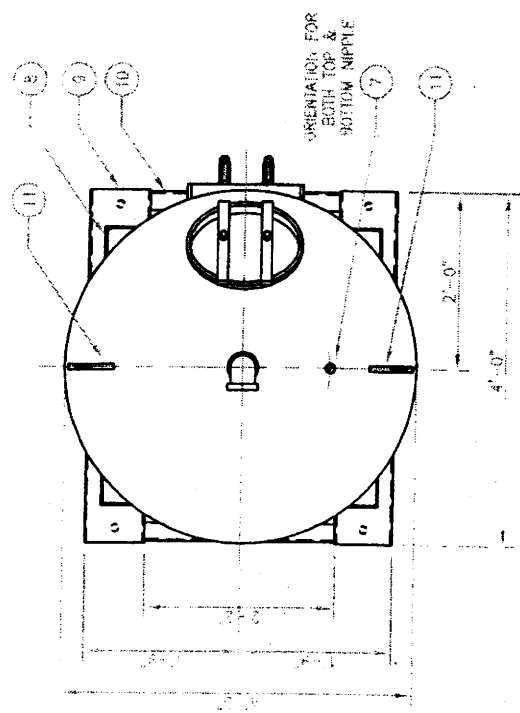
A	FOR QUOTATION	06/28/05	DATE
NO.	REVISIONS		

**1000 LBS LIQUID PHASE ADSORPTION TANK
GENERAL ARRANGEMENT & DETAILS**

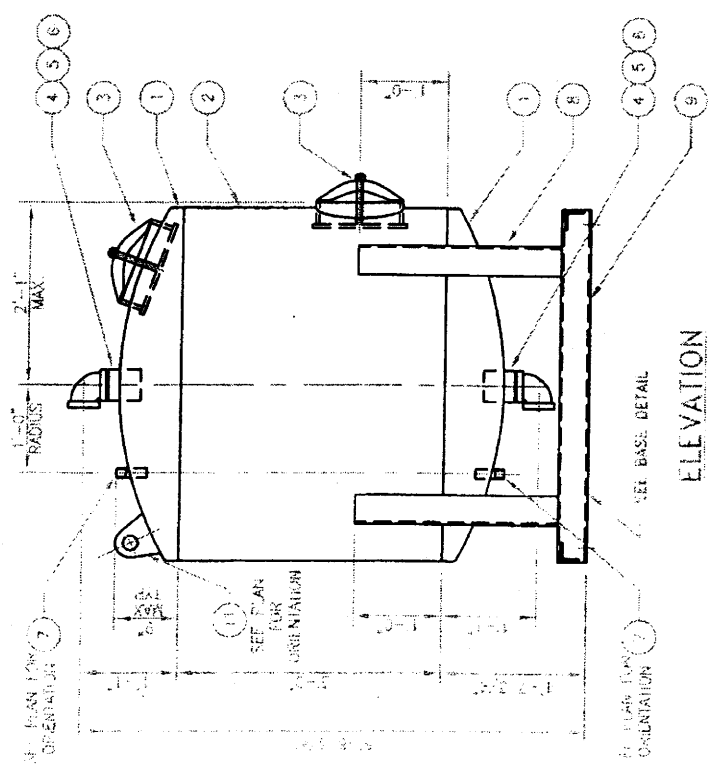
SCALE: NONE	APPROVED:	DRAWN BY: TLO
DATE: 06/27/05		
 GROUNDWATER TREATMENT & TECHNOLOGY P.O. BOX 1174 DENVILLE, NJ 07834		
FILE: 11-1181	DRAWING NUMBER: M-01	



BASE DETAIL



PLAN



ELEVATION

RESINTeCH

SBG1

ANION EXCHANGE RESIN
TYPE ONE GEL
Cl OR OH FORM

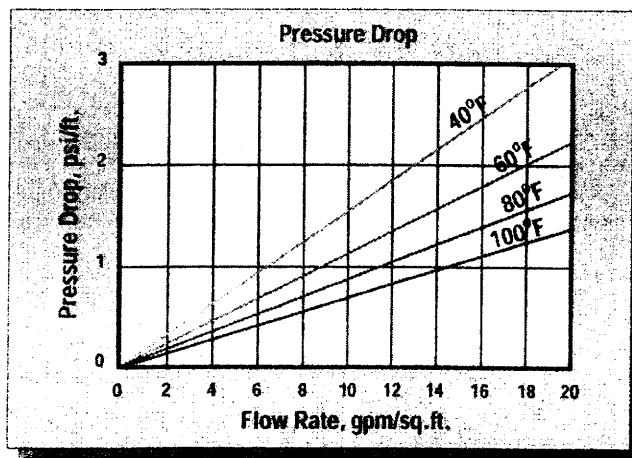
RESINTeCH SBG1 is a high capacity, shock resistant, gelular, Type 1, strongly basic anion exchange resin supplied in the chloride or hydroxide form as moist, tough, uniform, spherical beads. *RESINTeCH SBG1* is intended for use in all types of deionization systems and chemical processing applications. 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.

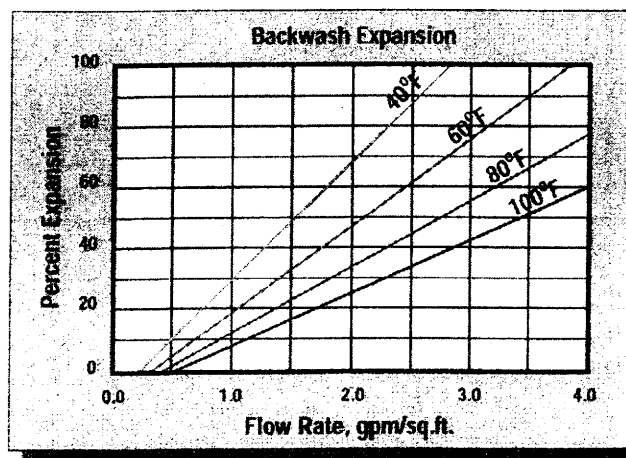
*For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to ensure compliance with extractable levels.

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.

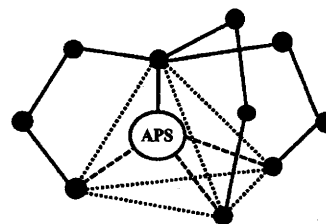
***CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials such as ion exchange resins.

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 serv050102

Applied Polymer Systems, Inc.



Material Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: APS 702aa Floc 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: Floc 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)

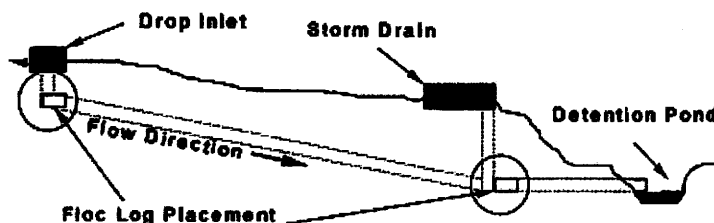
APS, Inc. currently has over (40) types of Floc Log ®. Each are designed for specific soils or lithologies. Each Floc Log ® is tailored for the specific requirement of water chemistry and soil within your geographical area. Most soils within EPA Region 4 have been classified and will not require a soil 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

APPENDIX C

Best Management Practices Plan (BMPP)

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
REMEDATION GENERAL PERMIT
MBTA WONDERLAND GARAGE
REVERE, 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 dewatering planned to occur at the MBTA Wonderland Garage project site located in Revere, 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 effluent is anticipated to be pumped from well points installed in sump pits within the excavation, through hoses, and directly into a tank for sedimentation control. The effluent will then flow through any necessary treatment systems and discharge through hoses to catch basins on site that discharge to the Eastern County Ditch. Dewatering effluent treatment may consist of bag filters, granular activated carbon (GAC), ion exchange, or precipitation, as required.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted at the influent to the system and the treated effluent 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
MBTA WONDERLAND GARAGE
REVERE, 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 fractionization tanks, filters, hoses, pumps, and flow meters. 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

It is anticipated that the excavation support system, erosion control measures, and the nature of the site and surrounding infrastructure will minimize potential runoff to or from the site. The project specifications also include requirements for erosion control. Site security for the treatment system will be covered within the overall site security plan.

No adverse affects on designated uses of surrounding surface water bodies is anticipated. The nearest surface water body is the Eastern County Ditch. Dewatering effluent will be pumped to a sedimentation tank and bag filter, at a minimum, prior to discharge to the storm drains.

Management of Treatment System Materials

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 for equipment or materials storage that may be possible sources of pollution away from any dewatering activities, to the extent practicable.

Sediment from the fractionization tank used in the treatment system will be characterized and removed from the site to an appropriate receiving facility, in accordance with applicable laws and regulations. If used, granular activated carbon and/or ion exchange resin may be recycled and/or removed from the site to an appropriate receiving facility. Bag filters, if used, will be disposed of as necessary.

Appendix D

**National Register of Historic Places and
Massachusetts Historical Commission Documentation**

Massachusetts Historical Commission

William Francis Galvin, Secretary of the Commonwealth

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[MHC Home](#)

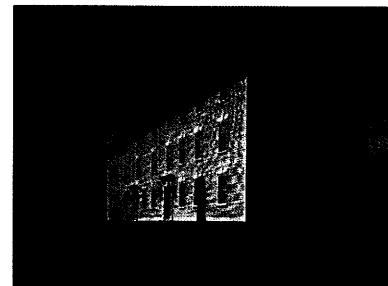
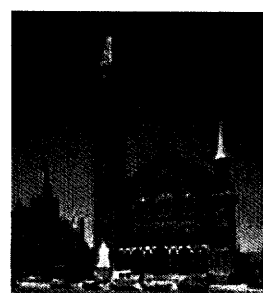
Massachusetts Cultural Resource Information System **MACRIS**

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.](#)



[Home](#) | [Search](#) | [Index](#) | [Feedback](#) | [Contact](#)

Massachusetts Cultural Resource Information System

MACRIS

[MHC Home](#) | [MACRIS Home](#)

Results

[Get Results in Report Format](#)

☒ PDF

☐ Spreadsheet

Below are the results of your search, using the following search criteria:

Town(s): Revere

Street No: 1300

Street Name: North Shore

Resource Type(s): Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, [click here](#)

No Results Found.

[New Search](#)

[New Search -- Same Town\(s\)](#)

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Massachusetts Cultural Resource Information System

MACRIS

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Search by Location

MACRIS last updated on 8/17/2010

Scanned forms and photos now available for selected towns!

To begin your search, double click on the name of each town or city you want to include from the box labeled "Massachusetts Towns" (or highlight the town and click the 'Add to list' button). Your selection(s) will appear in the box on the right. To search the entire database, select "(All Towns)."

To remove a town from your selection list, double click on its name in the box labeled "Your Selections" (or highlight the name and click 'Remove from list').

If you are searching on only one town, you can further narrow your search by selecting a particular neighborhood, street and/or street number.

When you've finished your selections by location, click "Next" to continue.

To start over, click "New Search."

Massachusetts Towns

Towns listed in green have some scanned forms available.

(All Towns)

Abington

Acton

Acushnet

Adams

Agawam

Alford

Amesbury

Add to List

Your Selection(s)

Remove from List

Optional:

Village/Neighborhood:

Street No.:

StreetName:

MHC ID:

New Search

Next

[MHC Home](#) | [MACRIS Home](#)

nps.gov

National Park Service
U.S. Department of the Interior

Search

- ☒ NPS Focus
☐ Search nps.gov

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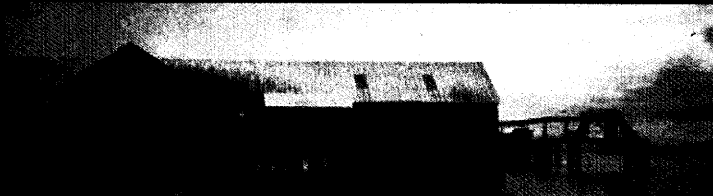
Contact Us

Find A Park

History & Culture

Nature & Science

Education & Interpretation

National Register
of
Historic Places

TITLE LIST DISPLAY

From: NPS Digital Library**Term(s) Searched:** Massachusetts and Suffolk**Records Displayed:** 241 to 255 of 330[Go back to: Revise Search](#)Sort By: **Title** | Relevancy | Modified

•	Pierce-Hichborn House <i>[Image]</i>	6%
•	Pierce-Hichborn House <i>[Image]</i>	6%
•	Publicity Building <i>[Image]</i>	6%
•	Quincy Market <i>[Image]</i>	6%
•	Quincy Market <i>[Image]</i>	6%
•	Revere Beach Reservation <i>[Image]</i>	6%
•	Revere Beach Reservation <i>[Image]</i>	6%
•	Revere Beach Reservation Historic District <i>[Image]</i>	6%
•	Revere, Paul, House <i>[Image]</i>	6%
•	Revere, Paul, House <i>[Image]</i>	6%
•	Richards, Ellen H. Swallow, House <i>[Image]</i>	6%
•	Richards, Ellen H. Swallow, House <i>[Image]</i>	6%
•	Richardson Block <i>[Image]</i>	6%
•	Riviera, The <i>[Image]</i>	6%
•	Ronan, Mary, T., School <i>[Image]</i>	6%

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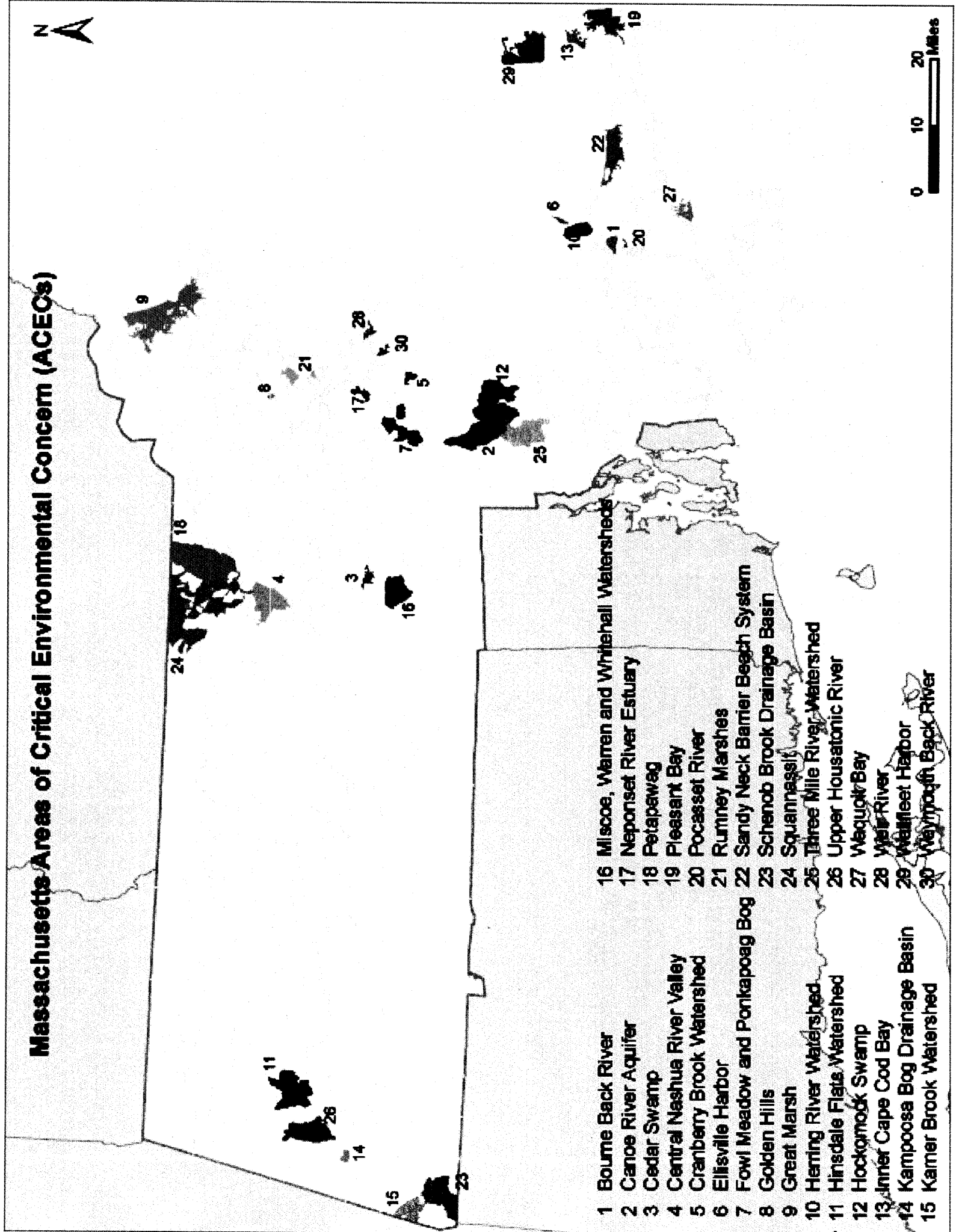
Last updated: 08/24/10

73

APPENDIX E

Endangered Species Act Documentation

Massachusetts Areas of Critical Environmental Concern (ACECs)



MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN

June 2009

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

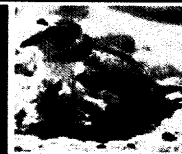
June 2009

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		

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

Department of Fish and Game

Commissioner Mary B. Griffin

**Mass.**[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.

[Randolph](#) | [Raynham](#) | [Reading](#) | [Rehoboth](#) | [Revere](#) | [Richmond](#) | [Rochester](#) | [Rockland](#) | [Rockport](#) | [Rowe](#) | [Rowley](#) | [Royalston](#) | [Russell](#) | [Rutland](#)

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
RANDOLPH	Amphibian	Ambystoma opacum	Marbled Salamander	T		1995
RANDOLPH	Butterfly/Moth	Metarranthis pilosaria	Coastal Swamp Metarranthis Moth	SC		1994
RANDOLPH	Dragonfly/Damselfly	Enallagma daeckii	Attenuated Bluet	SC		1996
RANDOLPH	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC		1989

REHOBOTH	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC	1984
REHOBOTH	Amphibian	Ambystoma opacum	Marbled Salamander	T	2008
REHOBOTH	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	T	1994
REHOBOTH	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC	1914
REHOBOTH	Bird	Accipiter striatus	Sharp-shinned Hawk	SC	1909
REHOBOTH	Bird	Asio flammeus	Short-eared Owl	E	Historic
REHOBOTH	Reptile	Glyptemys insculpta	Wood Turtle	SC	2002
REHOBOTH	Reptile	Terrapene carolina	Eastern Box Turtle	SC	2008
REHOBOTH	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T	1903
REHOBOTH	Vascular Plant	Cardamine longii	Long's Bitter-cress	E	2006
REHOBOTH	Vascular Plant	Platanthera flava var. herbiola	Pale Green Orchis	T	1914
REHOBOTH	Vascular Plant	Spartina cynosuroides	Salt Reedgrass	T	1998
REHOBOTH	Vascular Plant	Spiranthes vernalis	Grass-leaved Ladies'-tresses	T	1986

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
REVERE	Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC		1915
REVERE	Bird	Charadrius melodus	Piping Plover	T	T	2007
REVERE	Vascular Plant	Agastache scrophulariifolia	Purple Giant Hyssop	E		1917
REVERE	Vascular Plant	Agrimonia pubescens	Hairy Agrimony	T		1913
REVERE	Vascular Plant	Asclepias purpurascens	Purple Milkweed	E		1896
REVERE	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T		1918
REVERE	Vascular Plant	Elymus villosus	Hairy Wild Rye	E		1909
REVERE	Vascular Plant	Gentiana andrewsii	Andrews' Bottle Gentian	E		1882
REVERE	Vascular Plant	Pedicularis lanceolata	Swamp Lousewort	E		Historic
REVERE	Vascular Plant	Polygonum glaucum	Sea-beach Knotweed	SC		1800s
REVERE	Vascular Plant	Sanicula odorata	Long-styled Sanicle	T		1910
REVERE	Vascular Plant	Suaeda calceoliformis	American Sea-blite	SC		1897

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
RICHMOND	Amphibian	Ambystoma jeffersonianum	Jefferson Salamander	SC		2008
RICHMOND	Bird	Botaurus lentiginosus	American Bittern	E		2008
RICHMOND	Bird	Cistothorus platensis	Sedge Wren	E		1988
RICHMOND	Bird	Gallinula chloropus	Common Moorhen	SC		1991
RICHMOND	Butterfly/Moth	Euphyes dion	Dion Skipper	T		2008



Instructions for filing with the Revere Conservation Commission

1. Filings are required for projects subject to Massachusetts General Laws Chapter 131 Section 30, *The Wetland Protection Act* and *Title 16 Environment Chapter 16.04 Wetlands Protection* of the Revised City of Revere Ordinances. The Massachusetts State Building Code **780 CMR 3107.0 FLOOD-RESISTANT CONSTRUCTION** details requirements for residential and commercial structures in flood prone areas.
2. Any proposed project within the affecting costal or inland waters of the Commonwealth of Massachusetts within the City of Revere is required to file prior to proceeding and receiving a building permit if required.
3. Any project that disturbs the ground will require a permit. Activities including installation of a foundation for a home or business, installation of foundations for a porch or other structure, paving of a walkway or a driveway, any filing and adding soil to create a lawn require a filing. Any existing structure which is altered greater than 50% which includes work below the flood height in the 100 flood zone year requires a filing.
4. Most projects will require the filing of a **Notice of Intent (NOI)**. Some smaller projects may *only* require the filing of a **Request for Determination (RDA)**. A **NOI** may still be required after the Conservation Commission makes a determination in response to a **RDA**. Filing of an **NOI** directly usually saves time. **RDA's** are filled to determine whether a **NOI** filing is required. **RDA's** are also used to determine what resources areas are affected by the project and the limits of those resource areas are prior to filing a **NOI**. **RDA's** can also be utilized to determine whether a project is subject to the City of Revere's Wetlands Bylaws. Most projects in Revere requiring the filing of a **NOI** are subject to filing under Revere's Wetlands Bylaws. However the filing of one **NOI** is valid for both the WPA and the City of Revere Wetlands Bylaws.
5. The proponent is required to obtain the correct forms from the Revere Conservation Commission or the Commonwealth of Massachusetts Department of Environmental Protection. These forms and instructions are available on line at <http://www.mass.gov/dep/brp/ww/rpwwhome.htm>. Some filings can be done on line at DEP's website, <https://edep.dep.mass.gov/DEPHome.aspx> , check the site for applicability.
6. **State Regulations** regarding the Wetland Protection Act are 310CMR10.00. These are also available on line at <http://www.mass.gov/dep/brp/ww/rpwwhome.htm>
7. The typical impacted resource (s) in the City of Revere, are coastal resources. However inland resources may also be affected.
8. **Public Hearings are required** for both **RDA's** and **NOI's**. Most filings require a continuation of the public hearing from the first meeting at which an application is heard to the following month's meeting due to scheduling of site visits in between and assignment of file number and comments from DEP.
9. **Public Hearing Notice is required** for publication in the local paper at least seven days before

the public hearing. The local paper is the Revere Journal (telephone: 781-453-0588; fax 781-485-1403) and is published week on Wednesday, which means that usually notice is published the week before the meeting is held. You usually need to get the Public Notice to the newspaper for publication by Noon on the Monday before publication. If the Monday is a holiday or there is a holiday on the following Tuesday or Wednesday, you will need to get the Public Notice to the Revere Journal the Thursday before publication. The proponent is required to pay for the public hearing publication directly to the Revere Journal and provide proof that the hearing has been advertised.

10. **RDA Filings:** Requests for Determination of Applicability require **MA DEP WPA Form 1**. Fill out Section A including your name and/or applicant and address (Section A1.), the name of a representative if any (Section A2), what you want the Revere Conservation Commission to determine (Section B1), the property address, map/plat, block, parcel/lot numbers (Section C1a., map, block and parcel are available from the City of Revere Assessors Office 781-286-8170), describe your project (Section C1B), reference any maps/plans that you have for the project which you will submit with the application (Section C1C.), and describe the proposed work. Section C2A.). After you have read the regulations and think your project is regulated under the **WPA** is exempt fill out the section that applies (Section C2Bc.) If you know whether you are within jurisdiction of the Rivers Act, a resource with special rules under the **WPA**, check the appropriate category (Section C3A). Fill out Section C3B to support what you checked in Section C3A if applicable. If Fill out the section for name and address of the property owner, who if not you needs to be notified and sent a copy of the RDA (Section D). Sign and date application and submit 1 original and 8 copies to the City of Revere Conservation Commission, 281 Broadway, Revere, MA 02151 at least ten (10) days before the next scheduled meeting. Send a copy to the Commonwealth of Massachusetts Department of Environmental Protection, Northeast Regional Office (DEP NERO, 205B Lowell Street, Wilmington, MA 01887 978-694-3200)
11. **NOI Filings:** Notice of Intent filings require **MA DEP WPA Form 3** (in some cases it may be possible to use Form 4, the *Abbreviated Notice of Intent*. Fill out the project location (Section A1). Fill out your name and/or applicant and address (Section A2). Fill out the name and address of the property owner (Section A3). Fill out the name and address of a representative if any (Section A4),. Fill out the WPA Fee Paid (Section A5, this amount depends on the type of project and what resources are impacted, this is one of the last things you will fill in). Provide a general description of your project (Section A6). Check the appropriate category for your project (Section A7). Get from the Suffolk County Registry of deeds or Land Court the appropriate listing reference for the last property transfer recorded affecting this property (Section A8). what you want the Revere Conservation Commission to determine, the property address, map/plat, block, parcel/lot numbers (map, block and parcel are available from the City of Revere Assessors Office 781-286-8170), reference any maps/plans that you have for the project which you will submit with the application, And describe the proposed work.. After you have read the regulations and think your project is regulated under the **WPA** is exempt fill out the section that applies (Section 2Bc.) If you know whether you are within jurisdiction of the Rivers Act, a resource with special rules under the

WPA , check the appropriate category (Section 3A). If Fill out the section for name and address of the property owner, who if not you needs to be notified and sent a copy of the RDA (Section D). Fill out Section 3B to support what you checked in Section 3A if applicable. Sign and date application and submit 1 original and 8 copies to the City of Revere Conservation Commission, 281 Broadway, Revere, MA 02151 at least ten (10) days before the next scheduled meeting. Send a copy to the Commonwealth of Massachusetts Department of Environmental Protection, Northeast Regional Office (DEP NERO, 205B Lowell Street, Wilmington, MA 01887 978-694-3200)

12. **Abutter Notification:** RDA filings and NOI filings require notification of abutters within one hundred feet of the property boundary line. Copies of Notice of Public Meeting are to be sent by registered mail return receipt at least seven days prior to the date of the public hearing by the applicant. A listing of abutters can be obtained from the City of Revere Assessors Office.
13. **Fees:** No applications will be heard without the correct fee having been paid to both the Commonwealth of Massachusetts and the City of Revere as applicable. Fees paid to the Commonwealth of Massachusetts are required to be accompanied by MADEP Wetland Fee Transmittal Form and are to be sent to Department of Environmental Protection, Box 4062, Boston, MA 02211.
14. **File Numbers:** No orders are given without a file number assigned from the Department of Environmental Protection. File Numbers can be obtained by e-filing with eDEP or by regular mail.
15. **Online Resources:** Many resources are available over the Internet from various websites of the Commonwealth of Massachusetts and the Federal Government including online filing, wetlands mapping and information pertaining to Natural Heritage and Endangered Species and Area of Critical Environmental Concern programs.
16. **Completed Application:** A completed application submitted to the Revere Conservation Commission must contain an original and eight copies of the following: Notice of Intent Application, Storm water Management Form (if Applicable), NOI Wetland Fee Transmittal w/Fee, FEMA Flood Zone Map, Locus Map, Wetland Resource Areas Map, Layout/Property Plan, Architectural Plan (if Applicable), List of Submissions, Copy of Legal Notice/Abutters Notification.

Downloadable Forms in MSWord are available on DEP's Website

Wetlands and Waterways Forms

Links below are to Online Adobe Acrobat PDF's

MADEP WPA Form 1 Request for Determination of Applicability	MADEP WPA Form 3 Notice of Intent Application including instructions	MADEP WPA Form 4 Abbreviated Notice of Intent
Instructions for MADEP WPA Form 4 Notice of Intent	MADEP WPA Form 4A Abbreviated Notice of Resource Area Delineation	Request for Department Action Transmittal Form
MADEP WPA Form 8A Request for an Extension of Orders of Condition	MADEP Wetland Fee Transmittal Form	Storm Water Management Form

APPENDIX F

Laboratory Data Reports



ANALYTICAL REPORT

Lab Number:	L1013009
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Kate Leblanc
Phone:	(617) 886-7458
Project Name:	MBTA WONDERLAND GARAGE
Project Number:	36954-001
Report Date:	08/27/10

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: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1013009-01	B09-5(OW)	Not Specified	08/23/10 13:00
L1013009-02	TRIP BLANK	Not Specified	08/23/10 00:00

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

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.

Semivolatile Organics - SIM

The surrogate recovery for L1013009-01 is above the acceptance criteria for 2,4,6-Tribromophenol (122%). Since the sample was non-detect for all target analytes, re-analysis is not required.

Semivolatile Organics

The WG429161-2 LCS recovery, associated with L1013009-01, was above the acceptance criteria for 2,4-Dinitrotoluene (97%); however, the associated sample was non-detect for this target compound. The results of the original analysis are reported.

The WG429161-2/-3 LCS/LCSD RPDs, associated with L1013009-01, are above the acceptance criteria for 1,2,4-Trichlorobenzene (43%), 1,2-Dichlorobenzene (38%) and 1,4-Dichlorobenzene (40%); however, the individual LCS/LCSD recoveries are within method limits.

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Case Narrative (continued)

Metals

L1013009-01: The dissolved result is greater than the total result for Nickel. The sample containers were verified as being labeled correctly by the laboratory and aliquots were re-analyzed from each bottle, confirming the original results.

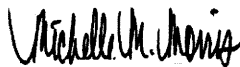
The WG429229-4 MS recovery for Total Iron I(0%), performed on L1013009-01, is invalid because the sample concentration is greater than four times the spike amount added.

Chloride

L1013009-01 has an elevated detection limit due to the dilution required to quantitate the result 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:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 08/27/10

ORGANICS

VOLATILES

Project Name: MBTA WONDERLAND GARAGE**Lab Number:** L1013009**Project Number:** 36954-001**Report Date:** 08/27/10**SAMPLE RESULTS**

Lab ID: L1013009-01
Client ID: B09-5(OW)
Sample Location: Not Specified
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 08/27/10 11:51
Analyst: SS

Date Collected: 08/23/10 13:00
Date Received: 08/23/10
Field Prep: See Narrative
Extraction Date: 08/27/10 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Pesticides by GC - Westborough Lab						
1,2-Dibromoethane	ND		ug/l	0.011	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.011	--	1

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01
 Client ID: B09-5(OW)
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 5,624
 Analytical Date: 08/24/10 09:59
 Analyst: TT

Date Collected: 08/23/10 13:00
 Date Received: 08/23/10
 Field Prep: See Narrative

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	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	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Serial_No:08271021:05
Lab Number: L1013009
Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01
Client ID: B09-5(OW)
Sample Location: Not Specified

Date Collected: 08/23/10 13:00
Date Received: 08/23/10
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	10	--	1
Vinyl acetate	ND		ug/l	20	--	1
4-Methyl-2-pentanone	ND		ug/l	10	--	1
2-Hexanone	ND		ug/l	10	--	1
Acrolein	ND		ug/l	8.0	--	1
Acrylonitrile	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	20	--	1
Dibromomethane	ND		ug/l	1.0	--	1
1,4-Dioxane	ND		ug/l	2000	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	104		80-120
Fluorobenzene	108		80-120
4-Bromofluorobenzene	90		80-120

Project Name: MBTA WONDERLAND GARAGE**Lab Number:** L1013009**Project Number:** 36954-001**Report Date:** 08/27/10**SAMPLE RESULTS**

Lab ID: L1013009-02
Client ID: TRIP BLANK
Sample Location: Not Specified
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 08/27/10 12:03
Analyst: SS

Date Collected: 08/23/10 00:00
Date Received: 08/23/10
Field Prep: Not Specified
Extraction Date: 08/27/10 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Pesticides by GC - Westborough Lab						
1,2-Dibromoethane	ND		ug/l	0.011	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.011	--	1

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Serial_No:08271021:05
Lab Number: L1013009
Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-02
Client ID: TRIP BLANK
Sample Location: Not Specified
Matrix: Water
Analytical Method: 5,624
Analytical Date: 08/24/10 10:35
Analyst: TT

Date Collected: 08/23/10 00:00
Date Received: 08/23/10
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	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	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1



Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-02

Date Collected: 08/23/10 00:00

Client ID: TRIP BLANK

Date Received: 08/23/10

Sample Location: Not Specified

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	10	--	1
Vinyl acetate	ND		ug/l	20	--	1
4-Methyl-2-pentanone	ND		ug/l	10	--	1
2-Hexanone	ND		ug/l	10	--	1
Acrolein	ND		ug/l	8.0	--	1
Acrylonitrile	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	20	--	1
Dibromomethane	ND		ug/l	1.0	--	1
1,4-Dioxane	ND		ug/l	2000	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	98		80-120
Fluorobenzene	103		80-120
4-Bromofluorobenzene	92		80-120

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624
 Analytical Date: 08/24/10 07:37
 Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG429063-2					
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	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	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: MBTA WONDERLAND GARAGE
 Project Number: 36954-001

Lab Number: L1013009
 Report Date: 08/27/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,624
 Analytical Date: 08/24/10 07:37
 Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG429063-2					
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylene (Total)	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Carbon disulfide	ND		ug/l	5.0	--
2-Butanone	ND		ug/l	10	--
Vinyl acetate	ND		ug/l	20	--
4-Methyl-2-pentanone	ND		ug/l	10	--
2-Hexanone	ND		ug/l	10	--
Acrolein	ND		ug/l	8.0	--
Acrylonitrile	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	20	--
Dibromomethane	ND		ug/l	1.0	--
1,4-Dioxane	ND		ug/l	2000	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	105		80-120
Fluorobenzene	108		80-120
4-Bromofluorobenzene	96		80-120

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1

Analytical Date: 08/27/10 11:14

Analyst: SS

Extraction Date: 08/27/10 10:30

Parameter	Result	Qualifier	Units	RL	MDL
Pesticides by GC - Westborough Lab for sample(s): 01-02 Batch: WG429812-1					
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: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG429063-1								
Methylene chloride	78	-	-	-	1-221	-	-	30
1,1-Dichloroethane	138	-	-	-	59-155	-	-	30
Chloroform	136	-	-	-	51-138	-	-	30
Carbon tetrachloride	140	-	-	-	70-140	-	-	30
1,2-Dichloropropane	136	-	-	-	1-210	-	-	30
Dibromochloromethane	116	-	-	-	53-149	-	-	30
1,1,2-Trichloroethane	113	-	-	-	52-150	-	-	30
2-Chloroethylvinyl ether	122	-	-	-	1-305	-	-	30
Tetrachloroethene	119	-	-	-	64-148	-	-	30
Chlorobenzene	96	-	-	-	37-160	-	-	30
Trichlorofluoromethane	77	-	-	-	17-181	-	-	30
1,2-Dichloroethane	144	-	-	-	49-155	-	-	30
1,1,1-Trichloroethane	138	-	-	-	52-162	-	-	30
Bromodichloromethane	126	-	-	-	35-155	-	-	30
trans-1,3-Dichloropropene	132	-	-	-	17-183	-	-	30
cis-1,3-Dichloropropene	125	-	-	-	1-227	-	-	30
Bromoform	92	-	-	-	45-169	-	-	30
1,1,2,2-Tetrachloroethane	96	-	-	-	46-157	-	-	30
Benzene	123	-	-	-	37-151	-	-	30
Toluene	111	-	-	-	47-150	-	-	30
Ethylbenzene	102	-	-	-	37-162	-	-	30

Lab Control Sample Analysis Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	LCS		LCSD		%Recovery		RPD		RPD Limits	
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG429063-1										
Chloromethane	96	-	-	-	1-273		-	-	30	
Bromomethane	90	-	-	-	1-242		-	-	30	
Vinyl chloride	72	-	-	-	1-251		-	-	30	
Chloroethane	77	-	-	-	14-230		-	-	30	
1,1-Dichloroethene	90	-	-	-	1-234		-	-	30	
trans-1,2-Dichloroethene	134	-	-	-	54-156		-	-	30	
cis-1,2-Dichloroethene	127	-	-	-	60-140		-	-	30	
Trichloroethene	121	-	-	-	71-157		-	-	30	
1,2-Dichlorobenzene	96	-	-	-	18-190		-	-	30	
1,3-Dichlorobenzene	95	-	-	-	59-156		-	-	30	
1,4-Dichlorobenzene	94	-	-	-	18-190		-	-	30	
p/m-Xylene	87	-	-	-	40-160		-	-	30	
o-Xylene	88	-	-	-	40-160		-	-	30	
XYLENE (TOTAL)	88	-	-	-	40-160		-	-	30	
Styrene	82	-	-	-	40-160		-	-	30	
Acetone	103	-	-	-	40-160		-	-	30	
Carbon disulfide	83	-	-	-	40-160		-	-	30	
2-Butanone	137	-	-	-	40-160		-	-	30	
Vinyl acetate	142	-	-	-	40-160		-	-	30	
4-Methyl-2-pentanone	114	-	-	-	40-160		-	-	30	
2-Hexanone	118	-	-	-	40-160		-	-	30	

Lab Control Sample Analysis

Project Name: MBTA WONDERLAND GARAGE

Project Number: 36954-001

Batch Quality Control

Lab Number: L1013009

Report Date: 08/27/10

Parameter	LCS		LCSD		%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits			
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG429063-1									
Acrolein	73		-		40-160		-		30
Acrylonitrile	117		-		40-160		-		30
Dibromomethane	114		-		70-130		-		30

Surrogate	LCS		LCSD		Acceptance	
	%Recovery	Qual	%Recovery	Qual	Criteria	
Pentafluorobenzene	104				80-120	
Fluorobenzene	109				80-120	
4-Bromofluorobenzene	89				80-120	
Pesticides by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG429812-2						
1,2-Dibromoethane	116		-		70-130	20
1,2-Dibromo-3-chloropropane	114		-		70-130	20

Matrix Spike Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429063-3 QC Sample: L1013025-01 Client ID: MS										
Sample										
Methylene chloride	ND	20	15	73	-	-	-	1-221	-	30
1,1-Dichloroethane	ND	20	26	131	-	-	-	59-155	-	30
Chloroform	ND	20	26	132	-	-	-	51-138	-	30
Carbon tetrachloride	ND	20	32	158	Q	-	-	70-140	-	30
1,2-Dichloropropane	ND	20	26	133	-	-	-	1-210	-	30
Dibromochloromethane	ND	20	22	110	-	-	-	53-149	-	30
1,1,2-Trichloroethane	ND	20	22	108	-	-	-	52-150	-	30
2-Chloroethylvinyl ether	ND	20	21	106	-	-	-	1-305	-	30
Tetrachloroethene	ND	20	23	114	-	-	-	64-148	-	30
Chlorobenzene	ND	20	19	96	-	-	-	37-160	-	30
Trichlorofluoromethane	ND	20	16	79	-	-	-	17-181	-	30
1,2-Dichloroethane	ND	20	28	138	-	-	-	49-155	-	30
1,1,1-Trichloroethane	ND	20	28	142	-	-	-	52-162	-	30
Bromodichloromethane	ND	20	25	125	-	-	-	35-155	-	30
trans-1,3-Dichloropropene	ND	20	24	123	-	-	-	17-183	-	30
cis-1,3-Dichloropropene	ND	20	24	121	-	-	-	1-227	-	30
Bromoform	ND	20	19	95	-	-	-	45-169	-	30
1,1,2,2-Tetrachloroethane	ND	20	19	97	-	-	-	46-157	-	30
Benzene	ND	20	24	118	-	-	-	35-151	-	30
Toluene	ND	20	22	108	-	-	-	47-150	-	30
Ethylbenzene	ND	20	21	103	-	-	-	37-162	-	30

Matrix Spike Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429063-3 QC Sample: L1013025-01 Client ID: MS										
Chloromethane	ND	20	20	101	-	-	-	1-273	-	30
Bromomethane	ND	20	17	83	-	-	-	1-242	-	30
Vinyl chloride	ND	20	14	72	-	-	-	1-251	-	30
Chloroethane	ND	20	15	73	-	-	-	14-230	-	30
1,1-Dichloroethene	ND	20	17	86	-	-	-	1-234	-	30
trans-1,2-Dichloroethene	ND	20	25	126	-	-	-	54-156	-	30
cis-1,2-Dichloroethene	ND	20	24	120	-	-	-	60-140	-	30
Trichloroethene	ND	20	23	117	-	-	-	71-157	-	30
1,2-Dichlorobenzene	ND	20	18	91	-	-	-	18-190	-	30
1,3-Dichlorobenzene	ND	20	18	91	-	-	-	59-156	-	30
1,4-Dichlorobenzene	ND	20	18	91	-	-	-	18-190	-	30
p/m-Xylene	ND	40	34	86	-	-	-	40-160	-	30
o-Xylene	ND	20	17	87	-	-	-	40-160	-	30
XYLENE (TOTAL)	ND	60	52	86	-	-	-	40-160	-	30
Styrene	ND	20	16	81	-	-	-	40-160	-	30
Acetone	ND	50	46	92	-	-	-	40-160	-	30
Carbon disulfide	ND	20	15	77	-	-	-	40-160	-	30
2-Butanone	ND	50	61	122	-	-	-	40-160	-	30
Vinyl acetate	ND	40	47	117	-	-	-	40-160	-	30
4-Methyl-2-pentanone	ND	50	50	100	-	-	-	40-160	-	30
2-Hexanone	ND	50	52	104	-	-	-	40-160	-	30

Matrix Spike Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429063-3 QC Sample: L1013025-01 Client ID: MS									
Acrolein	ND	40	23	57	-	-	40-160	-	30
Acrylonitrile	ND	40	33	82	-	-	40-160	-	30
Dibromomethane	ND	20	21	104	-	-	-	-	30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
4-Bromofluorobenzene	90				80-120
Fluorobenzene	105				80-120
Pentafluorobenzene	100				80-120
Pesticides by GC - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429812-3 QC Sample: L1013009-01 Client ID: B09-5(OW)					
1,2-Dibromoethane	ND	0.255	0.286	112	70-130
1,2-Dibromo-3-chloropropane	ND	0.255	0.283	111	70-130

Lab Duplicate Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429063-4 QC Sample: L1013025-01 Client ID: DUP						
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	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: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429063-4 QC Sample: L1013025-01 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	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	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30



Lab Duplicate Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG429063-4 QC Sample: L1013025-01 Client ID: DUP					
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Dibromomethane	ND	ND	ug/l	NC	30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		104		80-120
Fluorobenzene	104		108		80-120
4-Bromofluorobenzene	95		91		80-120



SEMIVOLATILES

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01
 Client ID: B09-5(OW)
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 1,8270C
 Analytical Date: 08/25/10 15:57
 Analyst: JB

Date Collected: 08/23/10 13:00
 Date Received: 08/23/10
 Field Prep: See Narrative
 Extraction Method: EPA 3510C
 Extraction Date: 08/24/10 14:58

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

Benzidine	ND		ug/l	50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	5.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	50	--	1
2,4-Dinitrotoluene	ND		ug/l	6.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	5.0	--	1
4-Chlorophenyl phenyl ether	ND		ug/l	5.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	5.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	5.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Hexachlorocyclopentadiene	ND		ug/l	30	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	5.0	--	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	15	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	5.0	--	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	20	--	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	7.0	--	1
Dibenzofuran	ND		ug/l	5.0	--	1

Project Name: MBTA WONDERLAND GARAGE
 Project Number: 36954-001

Serial_No:08271021:05
 Lab Number: L1013009
 Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01
 Client ID: B09-5(OW)
 Sample Location: Not Specified

Date Collected: 08/23/10 13:00
 Date Received: 08/23/10
 Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
n-Nitrosodimethylamine	ND		ug/l	50	--	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
P-Chloro-M-Cresol	ND		ug/l	5.0	--	1
2-Chlorophenol	ND		ug/l	6.0	--	1
2,4-Dichlorophenol	ND		ug/l	10	--	1
2,4-Dimethylphenol	ND		ug/l	10	--	1
2-Nitrophenol	ND		ug/l	20	--	1
4-Nitrophenol	ND		ug/l	10	--	1
2,4-Dinitrophenol	ND		ug/l	30	--	1
4,6-Dinitro-o-cresol	ND		ug/l	20	--	1
Phenol	ND		ug/l	7.0	--	1
2-Methylphenol	ND		ug/l	6.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	6.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1
Benzoic Acid	ND		ug/l	50	--	1
Benzyl Alcohol	ND		ug/l	10	--	1
Carbazole	ND		ug/l	5.0	--	1
Pyridine	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	34		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	91		33-120

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01
 Client ID: B09-5(OW)
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 1,8270C-SIM
 Analytical Date: 08/25/10 19:29
 Analyst: HL

Date Collected: 08/23/10 13:00
 Date Received: 08/23/10
 Field Prep: See Narrative
 Extraction Method: EPA 3510C
 Extraction Date: 08/24/10 14:58

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

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01

Date Collected: 08/23/10 13:00

Client ID: B09-5(OW)

Date Received: 08/23/10

Sample Location: Not Specified

Field Prep: See Narrative

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	23		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	91		15-120
2,4,6-Tribromophenol	122	Q	10-120
4-Terphenyl-d14	97		33-120

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 08/25/10 07:00
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 08/24/10 14:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG429161-1					
Acenaphthene	ND		ug/l	5.0	--
Benzidine	ND		ug/l	50	--
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--
Hexachlorobenzene	ND		ug/l	5.0	--
Bis(2-chloroethyl)ether	ND		ug/l	5.0	--
2-Chloronaphthalene	ND		ug/l	6.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
3,3'-Dichlorobenzidine	ND		ug/l	50	--
2,4-Dinitrotoluene	ND		ug/l	6.0	--
2,6-Dinitrotoluene	ND		ug/l	5.0	--
Azobenzene	ND		ug/l	5.0	--
Fluoranthene	ND		ug/l	5.0	--
4-Chlorophenyl phenyl ether	ND		ug/l	5.0	--
4-Bromophenyl phenyl ether	ND		ug/l	5.0	--
Bis(2-chloroisopropyl)ether	ND		ug/l	5.0	--
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	10	--
Hexachlorocyclopentadiene	ND		ug/l	30	--
Hexachloroethane	ND		ug/l	5.0	--
Isophorone	ND		ug/l	5.0	--
Naphthalene	ND		ug/l	5.0	--
Nitrobenzene	ND		ug/l	5.0	--
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	15	--
Bis(2-Ethylhexyl)phthalate	ND		ug/l	5.0	--
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: MBTA WONDERLAND GARAGE
 Project Number: 36954-001

Lab Number: L1013009
 Report Date: 08/27/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 08/25/10 07:00
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 08/24/10 14:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG429161-1					
Benzo(a)anthracene	ND		ug/l	5.0	--
Benzo(a)pyrene	ND		ug/l	5.0	--
Benzo(b)fluoranthene	ND		ug/l	5.0	--
Benzo(k)fluoranthene	ND		ug/l	5.0	--
Chrysene	ND		ug/l	5.0	--
Acenaphthylene	ND		ug/l	5.0	--
Anthracene	ND		ug/l	5.0	--
Benzo(ghi)perylene	ND		ug/l	5.0	--
Fluorene	ND		ug/l	5.0	--
Phenanthrene	ND		ug/l	5.0	--
Dibenzo(a,h)anthracene	ND		ug/l	5.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	7.0	--
Pyrene	ND		ug/l	5.0	--
Aniline	ND		ug/l	20	--
4-Chloroaniline	ND		ug/l	5.0	--
1-Methylnaphthalene	ND		ug/l	5.0	--
2-Nitroaniline	ND		ug/l	5.0	--
3-Nitroaniline	ND		ug/l	5.0	--
4-Nitroaniline	ND		ug/l	7.0	--
Dibenzofuran	ND		ug/l	5.0	--
2-Methylnaphthalene	ND		ug/l	5.0	--
n-Nitrosodimethylamine	ND		ug/l	50	--
2,4,6-Trichlorophenol	ND		ug/l	5.0	--
P-Chloro-M-Cresol	ND		ug/l	5.0	--
2-Chlorophenol	ND		ug/l	6.0	--
2,4-Dichlorophenol	ND		ug/l	10	--
2,4-Dimethylphenol	ND		ug/l	10	--
2-Nitrophenol	ND		ug/l	20	--
4-Nitrophenol	ND		ug/l	10	--
2,4-Dinitrophenol	ND		ug/l	30	--
4,6-Dinitro-o-cresol	ND		ug/l	20	--



Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 08/25/10 07:00
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 08/24/10 14:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG429161-1					
Pentachlorophenol	ND		ug/l	10	--
Phenol	ND		ug/l	7.0	--
2-Methylphenol	ND		ug/l	6.0	--
3-Methylphenol/4-Methylphenol	ND		ug/l	6.0	--
2,4,5-Trichlorophenol	ND		ug/l	5.0	--
Benzoic Acid	ND		ug/l	50	--
Benzyl Alcohol	ND		ug/l	10	--
Carbazole	ND		ug/l	5.0	--
Pyridine	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	24		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	94		33-120

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C-SIM
 Analytical Date: 08/25/10 10:34
 Analyst: HL

Extraction Method: EPA 3510C
 Extraction Date: 08/24/10 14:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG429162-1					
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: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis
Batch Quality ControlAnalytical Method: 1,8270C-SIM
Analytical Date: 08/25/10 10:34
Analyst: HLExtraction Method: EPA 3510C
Extraction Date: 08/24/10 14:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG429162-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	94		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG429161-2 WG429161-3								
Acenaphthene	80		68		37-111	16		30
1,2,4-Trichlorobenzene	70		45		39-98	43	Q	30
2-Chloronaphthalene	98		73		40-140	29		30
1,2-Dichlorobenzene	72		49		40-140	38	Q	30
1,4-Dichlorobenzene	69		46		36-97	40	Q	30
2,4-Dinitrotoluene	97	Q	83		24-96	16		30
2,6-Dinitrotoluene	81		74		40-140	9		30
Fluoranthene	91		94		40-140	3		30
4-Chlorophenyl phenyl ether	79		75		40-140	5		30
n-Nitrosodi-n-propylamine	73		65		41-116	12		30
Butyl benzyl phthalate	92		86		40-140	7		30
Anthracene	86		86		40-140	0		30
Pyrene	85		83		26-127	2		30
p-Chloro-M-Cresol	80		71		23-97	12		30
2-Chlorophenol	79		59		27-123	29		30
2-Nitrophenol	76		66		30-130	14		30
4-Nitrophenol	37		32		10-80	14		30
2,4-Dinitrophenol	66		58		20-130	13		30
Pentachlorophenol	77		71		9-103	8		30
Phenol	29		22		12-110	27		30

Lab Control Sample Analysis Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	LCS		LCSD		%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits			
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG429161-2 WG429161-3									
Surrogate	LCS		LCSD		Acceptance				
	%Recovery	Qual	%Recovery	Qual	%Recovery	Criteria			
2-Fluorophenol	39		32			21-120			
Phenol-d6	24		21			10-120			
Nitrobenzene-d5	69		62			23-120			
2-Fluorobiphenyl	68		62			15-120			
2,4,6-Tribromophenol	83		89			10-120			
4-Terphenyl-d14	84		87			33-120			

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG429162-2 WG429162-3

Acenaphthene	71	55	37-111	25	40
2-Chloronaphthalene	98	90	40-140	9	40
Fluoranthene	94	74	40-140	24	40
Anthracene	81	57	40-140	35	40
Pyrene	91	70	26-127	26	40
Pentachlorophenol	84	63	9-103	29	40

Lab Control Sample Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

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

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG429162-2 WG429162-3

Surrogate	LCS		LCSD		Acceptance	
	%Recovery	Qual	%Recovery	Qual	Criteria	
2-Fluorophenol	30		26		21-120	
Phenol-d6	21		16		10-120	
Nitrobenzene-d5	53		41		23-120	
2-Fluorobiphenyl	67		59		15-120	
2,4,6-Tribromophenol	86		80		10-120	
4-Terphenyl-d14	91		73		33-120	

PCBS

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01
 Client ID: B09-5(OW)
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 5,608
 Analytical Date: 08/26/10 21:09
 Analyst: KB

Date Collected: 08/23/10 13:00
 Date Received: 08/23/10
 Field Prep: See Narrative
 Extraction Method: EPA 608
 Extraction Date: 08/25/10 08:39
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 08/26/10
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 08/26/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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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	62		30-150	A

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Analytical Method: 5,608
 Analytical Date: 08/26/10 15:21
 Analyst: KB

Extraction Method: EPA 608
 Extraction Date: 08/25/10 08:39
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 08/26/10
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 08/26/10

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG429324-1					
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	82		30-150	A
Decachlorobiphenyl	82		30-150	A

Matrix Spike Analysis Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MS Found	MSD %Recovery	MSD Found	MSD %Recovery	MSD Found	Recovery Limits	RPD Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429324-3 QC Sample: L1013009-01 Client ID: B09-5(OW)												
Aroclor 1016	ND	2.08	2.24	108	-	-	-	-	-	40-126	-	30
Aroclor 1260	ND	2.08	2.19	105	-	-	-	-	-	40-127	-	30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81				30-150	A
Decachlorobiphenyl	64				30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Project Number: 36954-001

Lab Number: L1013009

Report Date: 08/27/10

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG429324-2								
Aroclor 1016	118	-	-	-	40-126	-	-	30
Aroclor 1260	113	-	-	-	40-127	-	-	30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82	-	-	-	30-150	A
Decachlorobiphenyl	75	-	-	-	30-150	A

Lab Duplicate Analysis Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429324-4 QC Sample: L1013009-01 Client ID: B09-5(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		87		30-150	A
Decachlorobiphenyl	62		68		30-150	A

METALS

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01

Date Collected: 08/23/10 13:00

Client ID: B09-5(OW)

Date Received: 08/23/10

Sample Location: Not Specified

Field Prep: See Narrative

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	0.0005	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Arsenic, Total	0.0011		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Chromium, Total	0.0007		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Copper, Total	0.0012		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Iron, Total	47		mg/l	0.05	--	1	08/24/10 17:45	08/27/10 14:25	EPA 3005A	19,200.7	AI
Lead, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	--	1	08/26/10 14:20	08/27/10 13:02	EPA 245.1	3,245.1	EZ
Nickel, Total	0.001		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Selenium, Total	0.001		mg/l	0.001	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0004	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Zinc, Total	ND		mg/l	0.0050	--	1	08/24/10 11:00	08/26/10 21:06	EPA 3005A	1,6020	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Arsenic, Dissolved	0.0007		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Chromium, Dissolved	0.0007		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Copper, Dissolved	0.0006		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Iron, Dissolved	44		mg/l	0.05	--	1	08/24/10 18:00	08/27/10 14:41	EPA 3005A	19,200.7	AI
Lead, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Mercury, Dissolved	ND		mg/l	0.0002	--	1	08/26/10 11:30	08/26/10 15:37	EPA 7470A	3,245.1	EZ
Nickel, Dissolved	0.0019		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Selenium, Dissolved	0.001		mg/l	0.001	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Silver, Dissolved	ND		mg/l	0.0004	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM
Zinc, Dissolved	ND		mg/l	0.0050	--	1	08/24/10 11:00	08/26/10 19:53	EPA 3005A	1,6020	BM



Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01 Batch: WG429137-1										
Antimony, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Arsenic, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Chromium, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Copper, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Lead, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Nickel, Dissolved	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Selenium, Dissolved	ND		mg/l	0.001	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Silver, Dissolved	ND		mg/l	0.0004	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Zinc, Dissolved	ND		mg/l	0.0050	--	1	08/24/10 11:00	08/26/10 18:41	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 Batch: WG429138-1										
Antimony, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Arsenic, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Chromium, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Copper, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Lead, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Nickel, Total	ND		mg/l	0.0005	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Selenium, Total	ND		mg/l	0.001	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Silver, Total	ND		mg/l	0.0004	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM
Zinc, Total	ND		mg/l	0.0050	--	1	08/24/10 11:00	08/26/10 18:41	1,6020	BM

Prep Information

Digestion Method: EPA 3005A



Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

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 Batch: WG429229-1									
Iron, Total	ND	mg/l	0.05	--	1	08/24/10 17:45	08/27/10 14:18	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
Dissolved Metals - Westborough Lab for sample(s): 01 Batch: WG429236-1									
Iron, Dissolved	ND	mg/l	0.05	--	1	08/24/10 18:00	08/27/10 14:35	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
Dissolved Metals - Westborough Lab for sample(s): 01 Batch: WG429608-1									
Mercury, Dissolved	ND	mg/l	0.0002	--	1	08/26/10 11:30	08/26/10 15:31	3,245.1	EZ

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG429642-1									
Mercury, Total	ND	mg/l	0.0002	--	1	08/26/10 14:20	08/27/10 12:05	3,245.1	EZ

Prep Information

Digestion Method: EPA 245.1



Lab Control Sample Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE**Lab Number:** L1013009**Project Number:** 36954-001**Report Date:** 08/27/10

Parameter	LCS		LCSD		%Recovery	
	%Recovery	Qual	%Recovery	Qual	Limits	
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG429137-2						
Antimony, Dissolved	98	-	-	-	80-120	-
Arsenic, Dissolved	98	-	-	-	80-120	-
Cadmium, Dissolved	111	-	-	-	80-120	-
Chromium, Dissolved	97	-	-	-	80-120	-
Copper, Dissolved	103	-	-	-	80-120	-
Lead, Dissolved	101	-	-	-	80-120	-
Nickel, Dissolved	103	-	-	-	80-120	-
Selenium, Dissolved	102	-	-	-	80-120	-
Silver, Dissolved	96	-	-	-	80-120	-
Zinc, Dissolved	103	-	-	-	80-120	-

Lab Control Sample Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG429138-2					
Antimony, Total	98	-	80-120	-	
Arsenic, Total	98	-	80-120	-	
Cadmium, Total	111	-	80-120	-	
Chromium, Total	97	-	80-120	-	
Copper, Total	103	-	80-120	-	
Lead, Total	101	-	80-120	-	
Nickel, Total	103	-	80-120	-	
Selenium, Total	102	-	80-120	-	
Silver, Total	96	-	80-120	-	
Zinc, Total	103	-	80-120	-	

Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG429229-2

Iron, Total	100	-	85-115	-	
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Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG429236-2

Iron, Dissolved	100	-	85-115	-	
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Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG429608-2

Mercury, Dissolved	115	-	85-115	-	
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Lab Control Sample Analysis
Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG429642-2					
Mercury, Total	111	-	85-115	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429137-4 QC Sample: L1013009-01 Client ID: B09-5(OW)									
Antimony, Dissolved	ND	0.5	0.5436	109	-	-	80-120	-	20
Arsenic, Dissolved	0.0007	0.12	0.1339	111	-	-	80-120	-	20
Cadmium, Dissolved	ND	0.051	0.0579	114	-	-	80-120	-	20
Chromium, Dissolved	0.0007	0.2	0.1998	100	-	-	80-120	-	20
Copper, Dissolved	0.0006	0.25	0.2566	102	-	-	80-120	-	20
Lead, Dissolved	ND	0.51	0.5556	109	-	-	80-120	-	20
Nickel, Dissolved	0.0019	0.5	0.5152	103	-	-	80-120	-	20
Selenium, Dissolved	0.001	0.12	0.113	93	-	-	80-120	-	20
Silver, Dissolved	ND	0.05	0.0485	97	-	-	80-120	-	20
Zinc, Dissolved	ND	0.5	0.5168	103	-	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429138-4 QC Sample: L1013014-01 Client ID: MS Sample									
Antimony, Total	ND	0.5	0.5344	107	-	-	80-120	-	20
Arsenic, Total	ND	0.12	0.1303	108	-	-	80-120	-	20
Cadmium, Total	ND	0.051	0.0611	120	-	-	80-120	-	20
Chromium, Total	0.0036	0.2	0.2167	106	-	-	80-120	-	20
Copper, Total	0.050	0.25	0.3349	114	-	-	80-120	-	20
Lead, Total	0.0012	0.51	0.5652	110	-	-	80-120	-	20
Nickel, Total	0.0012	0.5	0.5664	113	-	-	80-120	-	20
Selenium, Total	ND	0.12	0.136	113	-	-	80-120	-	20
Silver, Total	ND	0.05	0.0519	104	-	-	80-120	-	20
Zinc, Total	0.0645	0.5	0.6220	112	-	-	80-120	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429229-4 QC Sample: L1013009-01 Client ID: B09-5(OW)								
Iron, Total	47	1	47	0	-	-	75-125	20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429236-4 QC Sample: L1013009-01 Client ID: B09-5(OW)								
Iron, Dissolved	44	1	45	100	-	-	75-125	20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429608-4 QC Sample: L1013073-01 Client ID: MS Sample								
Mercury, Dissolved	ND	0.001	0.0011	109	-	-	70-130	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429642-4 QC Sample: L1012545-01 Client ID: MS Sample								
Mercury, Total	ND	0.001	0.0010	104	-	-	70-130	20

Lab Duplicate Analysis

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Batch Quality Control

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429137-3 QC Sample: L1013009-01 Client ID: B09-5(OW)						
Antimony, Dissolved	ND	ND	mg/l	NC		20
Arsenic, Dissolved	0.0007	ND	mg/l	NC		20
Cadmium, Dissolved	ND	ND	mg/l	NC		20
Chromium, Dissolved	0.0007	0.0007	mg/l	0		20
Copper, Dissolved	0.0006	0.0007	mg/l	5		20
Lead, Dissolved	ND	ND	mg/l	NC		20
Nickel, Dissolved	0.0019	0.0020	mg/l	2		20
Selenium, Dissolved	0.001	0.001	mg/l	5		20
Silver, Dissolved	ND	ND	mg/l	NC		20
Zinc, Dissolved	ND	ND	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429138-3 QC Sample: L1013014-01 Client ID: DUP Sample						
Copper, Total	0.050	0.0511	mg/l	2		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429229-3 QC Sample: L1013009-01 Client ID: B09-5(OW)						
Iron, Total	47	46	mg/l	2		20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429236-3 QC Sample: L1013009-01 Client ID: B09-5(OW)						
Iron, Dissolved	44	43	mg/l	2		20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429608-3 QC Sample: L1013073-01 Client ID: DUP Sample						
Mercury, Dissolved	ND	ND	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s):	01	QC Batch ID: WG429642-3	QC Sample: L1012545-01	Client ID: DUP Sample	
Mercury, Total	ND	ND	mg/l	NC	20



INORGANICS & MISCELLANEOUS

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

SAMPLE RESULTS

Lab ID: L1013009-01

Date Collected: 08/23/10 13:00

Client ID: B09-5(OW)

Date Received: 08/23/10

Sample Location: Not Specified

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	12		mg/l	5.0	NA	1	-	08/25/10 11:30	30,2540D	SD
Cyanide, Total	0.007		mg/l	0.005	--	1	08/24/10 16:30	08/27/10 09:01	30,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/23/10 23:50	30,4500CL-D	SB
Chloride	810		mg/l	10	--	10	-	08/27/10 02:27	1,9251	LA
pH (H)	6.3		SU	-	NA	1	-	08/23/10 22:00	30,4500H+-B	SB
TPH	ND		mg/l	4.00	--	1	08/24/10 19:00	08/27/10 12:30	74,1664A	JO
Phenolics, Total	ND		mg/l	0.03	--	1	-	08/27/10 13:28	4,420.1	TP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/24/10 01:30	08/24/10 01:30	30,3500CR-D	JT



Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429024-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/23/10 23:50	30,4500CL-D	SB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429054-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/24/10 01:30	08/24/10 01:30	30,3500CR-D	JT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429183-2										
Cyanide, Total	ND		mg/l	0.005	--	1	08/24/10 16:30	08/27/10 08:32	30,4500CN-CE	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429247-2										
TPH	ND		mg/l	4.00	--	1	08/24/10 19:00	08/27/10 12:30	74,1664A	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429375-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/25/10 11:30	30,2540D	SD
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429719-2										
Chloride	ND		mg/l	1.0	--	1	-	08/27/10 01:42	1,9251	LA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG429791-1										
Phenolics, Total	ND		mg/l	0.03	--	1	-	08/27/10 13:25	4,420.1	TP



Lab Control Sample Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429021-1						
pH	100	.	-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429024-2						
Chlorine, Total Residual	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429054-2						
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429183-1						
Cyanide, Total	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429247-1						
TPH	80		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429719-1						
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s):	01	Batch: WG429791-2						
Phenolics, Total	96		-		82-111	-		12

Matrix Spike Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	Recovery Limits	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429054-4 QC Sample: L1013009-01 Client ID: B09-5(OW)										
Chromium, Hexavalent	ND	0.1	0.104	104		-	-	85-115	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429183-3 QC Sample: L1012857-02 Client ID: MS Sample										
Cyanide, Total	ND	0.2	0.233	116	Q	-	-	90-110	-	30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429247-3 QC Sample: L1011692-76 Client ID: MS Sample										
TPH	ND	20.6	16.6	80		-	-	64-132	-	34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429719-3 QC Sample: L1013090-01 Client ID: MS Sample										
Chloride	6.3	20	27	104		-	-	58-140	-	7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG429791-3 QC Sample: L1013214-02 Client ID: MS Sample										
Phenolics, Total	ND	0.8	0.74	92		-	-	77-124	-	12

Lab Duplicate Analysis

Batch Quality Control

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429021-2	QC Sample: L1012986-02	Client ID: DUP Sample		
pH (H)	6.5	6.6	SU	2		5
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429024-3	QC Sample: L1013021-02	Client ID: DUP Sample		
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429054-3	QC Sample: L1013009-01	Client ID: B09-5(OW)		
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429183-4	QC Sample: L1012931-02	Client ID: DUP Sample		
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429247-4	QC Sample: L1013009-01	Client ID: B09-5(OW)		
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429375-2	QC Sample: L1013017-01	Client ID: DUP Sample		
Solids, Total Suspended	720	740	mg/l	3		32
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429719-4	QC Sample: L1013090-01	Client ID: DUP Sample		
Chloride	6.3	6.5	mg/l	3		7
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG429791-4	QC Sample: L1013214-01	Client ID: DUP Sample		
Phenolics, Total	0.03	0.04	mg/l	29	Q	12



Project Name: MBTA WONDERLAND GARAGE

Project Number: 36954-001

Lab Number: L1013009

Report Date: 08/27/10

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

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013009-01A	Vial Na2S2O3 preserved	A	N/A	2	Y	Absent	504(14)
L1013009-01B	Vial Na2S2O3 preserved	A	N/A	2	Y	Absent	504(14)
L1013009-01C	Vial Na2S2O3 preserved	A	N/A	2	Y	Absent	624(7)
L1013009-01D	Vial Na2S2O3 preserved	A	N/A	2	Y	Absent	624(7)
L1013009-01E	Amber 1000ml unpreserved	A	6	2	Y	Absent	8270TCL(7)
L1013009-01F	Amber 1000ml unpreserved	A	6	2	Y	Absent	8270TCL(7)
L1013009-01G	Plastic 250ml HNO3 preserved	A	<2	2	Y	Absent	CU-6020S(180),FE-RI(180),SE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),AG-6020S(180),AS-6020S(180),HG-R(28),SB-6020S(180),CD-6020S(180)
L1013009-01H	Plastic 1000ml unpreserved	A	6	2	Y	Absent	HEXCR-3500(1),TRC-4500(1),PH-4500(.01)
L1013009-01I	Amber 1000ml Na2S2O3	A	6	2	Y	Absent	PCB-608(7)
L1013009-01J	Amber 1000ml Na2S2O3	A	6	2	Y	Absent	PCB-608(7)
L1013009-01K	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	TPH-1664(28)
L1013009-01L	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	TPH-1664(28)
L1013009-01M	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1013009-01N	Plastic 1000ml unpreserved	A	6	2	Y	Absent	TPHENOL-420(28)
L1013009-01O	Plastic 1000ml unpreserved	A	6	2	Y	Absent	TSS-2540(7)
L1013009-01R	Amber 1000ml unpreserved	A	6	2	Y	Absent	8270TCL-SIM(7)
L1013009-01S	Amber 1000ml unpreserved	A	6	2	Y	Absent	8270TCL-SIM(7)
L1013009-01T	Plastic 250ml NaOH preserved	A	>12	2	Y	Absent	TCN-4500(14)
L1013009-01W	Plastic 500ml unpreserved	A	6	2	Y	Absent	CL-9251(28)
L1013009-02A	Vial Na2S2O3 preserved	A	N/A	2	Y	Absent	624(7)

*Values in parentheses indicate holding time in days



Serial_No:08271021:05

Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013009-02C	Vial Ascorbic Acid/HCl preserved	A	N/A	2	Y	Absent	504(14)

Container Comments

L1013009-01K

L1013009-01L

*Values in parentheses indicate holding time in days

Project Name: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

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.
- 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.

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.
- 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.
- 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.
- 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 than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.

Report Format: Data Usability Report



Project Name: MBTA WONDERLAND GARAGE

Lab Number: L1013009

Project Number: 36954-001

Report Date: 08/27/10

Data Qualifiers

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: MBTA WONDERLAND GARAGE
Project Number: 36954-001

Lab Number: L1013009
Report Date: 08/27/10

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.
- 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 July 19, 2010 - 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, 300.0, 353.2, SM2130B, 2320B, 4500CI-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, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-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.5, 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,Ti)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-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), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Ti,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 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-B,C-Titr, 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, 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

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

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. *Organic Parameters:* 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 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, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH₃-H, 4500NH₃-E, 4500NO₂-B, 4500P-E, 4500-S₂-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. *Organic Parameters:* SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. *Organic Parameters:* SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

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

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. *Organic Parameters:* 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-D, 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, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. *Organic Parameters:* SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. *Organic Parameters:* SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

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 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. *Organic Parameters:* EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH₃-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO₃-F, 4500-NO₂-B, 4500P-E, 2540C, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. *Organic Parameters:* EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. *Organic Parameters:* EPA 8260B, 8270C, 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.

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

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. *Organic Parameters:* 3540C, 3545, 3580A, 5035, 8021B, 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 NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commission 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, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S₂-AD, 3005A, 3015, 9010B, 9030B. **Organic Parameters:** EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, **Organic Parameters:** EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **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. **EPA 350.1** for Ammonia in a Soil matrix.

Haley & Aldrich, Inc.
465 Medford St.,
Suite 2200,
Boston, MA 02129-1400

CHAIN OF CUSTODY RECORD

ALPHA Job # 116130081

Phone (617) 886-7400
Fax (617) 886-7600

Page 1 of 1

H&A FILE NO.		LABORATORY		DELIVERY DATE			
PROJECT NAME		ADDRESS		TURNAROUND TIME			
H&A CONTACT		CONTACT		PROJECT MANAGER			
36954-001		Alpha Analytical		8/23/10			
P879 Wonderlen Garage		Weirbaco, WA		5 Day			
Kate Leblanc		G. Hall		Kate Leblanc			
Sample No.	Date	Time	Depth	Type	Analysis Requested	Number of Containers	Comments
809-5602	8/23/10	13:20	4	4	1 2 3 4 5 6 7 8 9 10 11	21	Laboratory to use applicable DEF CAM methods, unless otherwise directed. ① 504 E08 Tripblank ② 624 Tripblank ③ 624, E03/DCE-504 ④ Dissolved Metals (FP) ⑤ Total Metals (CRP) ⑥ PCBs ⑦ pH, Hex Cr, TRC ⑧ Chloride ⑨ TPH-1664
Sampling Comments							
③ TCu ⑤ Total Phenols ⑥ SVOCs - 8270/PAH-VIA ⑦ TSC Please see Analysis using EPA required method and minimum detection levels for the NPDES RGP							
Evidence samples were tampered with? YES NO If YES, please explain in section below.							
Required Reporting Limits and Data Quality Objectives							
RC-S1 RC-S2 RC-GW1 RC-GW2 RC-GW3							