UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL RETURN RECEIPT REQUESTED

JUN 2 2 2011

Roy Greenhalgh
General Superintendent
Suffolk Construction
65 Allerton Street
Boston, MA 02119

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Logan Airport/ConRAC site located at Harborside Drive, East Boston MA 02128, Suffolk County; Authorization # MAG910492

Dear Mr. Greenhalgh:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Suffolk Construction and Massachusetts Port Authority (MPA), by the firm EnviroBusiness, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

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

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

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations. With the absence of dilution of freshwater into tidal water,

EPA determined that the Dilution Factor Range (DFR) for each parameter for this site is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for antimony of 5.6ug/L, arsenic of 36ug/L, copper of 3.7ug/L, lead of 8.5 ug/L, mercury of 0.2ug/L, nickel of 8.2ug/L, selenium of 71ug/L, zinc of 85.6ug/L and iron of 1,000ug/L, are required to achieve permit compliance at your site.

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

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on 12/31/2014. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

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

Sincerely,

David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910492 – New**
Authorization Issued:	June, 2011
Facility/Site Name:	Logan Airport/ConRAC
Facility/Site Address:	Harborside Drive, East Boston, MA 02128
	Email address of owner: jstoleck@massport.com
Legal Name of Operator:	Suffolk Construction
Operator contact name, title, and Address:	65 Allerton Street, Boston MA 02119
	Email: rgreenhalgh@suffolkconstruction.com
Estimated Date of Completion:	12/31/2014
Category and Sub-Category:	Petroleum Related Site Remediation. Sub-category C. Petroleum Sites with Additional Contamination and Contaminated Construction Dewatering. Subcategory A and B. General Urban Fill Sites and Known Contaminated Sites, respectively.
Receiving Water:	Inner Boston Harbor

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

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

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

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
√	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	d. Benzo(k)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	e. Chrysene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	f. Dibenzo(a,h)anthracene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	g. Indeno(1,2,3-cd) Pyrene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
√	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
√	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene [5]	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) [8, 9]	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
√	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
√	39. Antimony	5.6/ML 10			
√	40. Arsenic **	10/ML20	36/ML 20		

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
	41. Cadmium **	0.2/ML10	8.9/ML 10		
	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15		
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
√	44. Copper **	5.2/ML15	3.7/ML 15		
√	45. Lead **	1.3/ML20	8.5/ML 20		
	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
√	47. Nickel **	29/ML20	8.2/ML 20		
√	48. Selenium **	5/ML20	71/ML 20		
	49. Silver	1.2/ML10	2.2/ML 10		
√	50. Zinc **	66.6/ML15	85.6/ML 15		
√	51. Iron	1,000/ML 20			

	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

EBI CONSULTING

Nationwide Construction, Environmental & Engineering Services

NPDES REMEDIATION GENERAL PERMIT MAG910000
NOTICE OF INTENT

Project Name:
MPA Project No. L269-C3
Logan ConRAC – Southwest Service Area
Logan International Airport
East Boston, MA

Prepared for:
Suffolk Construction Company, Inc.
65 Allerton Street
Boston, MA 02119

Prepared by:
EBI Consulting, Inc.
21 B Street
Burlington, MA 01803

June 6, 2011

June 6, 2011

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

Email: NPDES.Generalpermits@epa.gov

Project: MPA Project No. L269-C3
Logan ConRAC – Southwest Service Area
Logan International Airport
East Boston, MA

Re: Notice of Intent of Remediation General Permit (RGP) No. MAG 910000

On behalf of Suffolk Construction and Massachusetts Port Authority (Massport or MPA), EnviroBusiness, Inc. (EBI Consulting) has prepared this Remediation General Permit (RGP) Notice of Intent (NOI) for authorization to temporarily discharge dewatered groundwater. This authorization is being requested to support temporary construction-dewatering activities planned to occur at Consolidated Rental Car Facility located in the Southwest Service Area section of Logan Airport. The dewatered groundwater will be treated to meet requirements of NPDES-RGP and will be discharged to Massport's existing stormwater drainage system through the Maverick and Porter Street Outfalls to Boston's Inner Harbor. Refer to Figure 1 for the general Site Locus.

The Logan ConRAC Construction Project encompasses a 49-acre Site located within the Southwest Service Area (SWSA) at Logan International Airport, See Figures 1 and 2 provided in Attachment 1. According to information included in Contract Documents from previous site investigation reports, soils within portions of the site may contain certain Volatile Organic Compounds (VOCs), Total Petroleum Hydrocarbon (TPH), polynuclear aromatic hydrocarbons (PAHs), and metals. Recently, Groundwater samples were collected from an area of the site where a deep excavation will be conducted. Samples were collected and analyzed in accordance with Remediation General Permit (RGP) contaminants of concern. Analytical results have indicated levels that exceed RGP allowable discharge limits without proper treatment. Based on this condition, a dewatered groundwater treatment system was designed and this RGP-NOI has been prepared. Groundwater from the project will be treated prior to discharge. The type of treatment will depend on Discharge Monitoring and Compliance performed by EBI as outlined in Project Specifications 02140 (Attachment 4) and this RGP NOI. The RGP will be used for the entire project. Due to the fluctuating groundwater table over the entire site the amount of dewatering/treatment is unknown at this time.

EBI Consulting is the Environmental Consultant/Subcontractor to Suffolk Construction (Suffolk), who is the Construction Manager for Massport. Massport is considered the owner of the project. Below is the contact information for each of the entities listed above. All correspondence related to this submittal should be forwarded to the parties below. Attachments to this RGP-NOI request include the RGP Plan (Attachment 1), NPDES-RGP Notice of Intent (Attachment 2) and Laboratory Report (Attachment 3).

Preparer of NOI: EBI Consulting, Inc.
21 B Street
Burlington, MA 01803
Attn: Mark Germano, LSP
Tel: 617.715.1839

Operator: Suffolk Construction Company, Inc.
65 Allerton Street
Boston, MA 02119
Attn: Roy Greenhalgh
Tel: 617.427.3843

Owner: Massachusetts Port Authority**,** Capital programs Department
Suite 209S-Logan Office Center
One Harborside Drive
East Boston, MA 02128-2909
Attn: Jim Stolecki, PE
Tel: 617.568.3552

If you have any questions or require additional information, please do not hesitate to contact me via email at ppeterson@ebiconsulting.com or by telephone at 617-715-1839.

Respectfully submitted,
EBI CONSULTING

Philip M. Peterson

cc: Tom Spence, Suffolk Construction
Jim Stolecki, Massport
Mark Germano, LSP (EBI Consulting)
EBI Project File

Attachments:
Attachment 1 - Remediation General Permit (RGP) Plan
Attachment 2 - RGP Notice of Intent (NOI)
Attachment 3 - Laboratory Analytical
Attachment 4 - Contract Specification Section 02140
Attachment 5 - EPA NPDES RGP Authorization to Discharge

Attachment 1
Remediation General Permit (RGP) Plan

1.0 Project Description

The site for the proposed ConRAC Facility lies within the 49-acre area and is currently referred to as the Southwest Service Area (SWSA), see Figure 1 (Site Locus). The Project involves the construction of a four-level, 1.2 million square-foot precast parking garage that will consolidate rental car facilities, and combine the existing car rental shuttle buses into a shared common bus system with Massachusetts Port Authority (Massport) buses. The project will also consist of a reconfigured taxi pool, roadway and intersection improvements, site access improvements, and landscaping.

The proposed work will be performed by Suffolk Construction for Massport in accordance with the Massport project specifications (Massachusetts Port Authority L269). This NPDES Remediation General Permit (RGP) Notice of Intent (NOI) has been prepared to address activities associated with dewatering of groundwater to support the site work within the SWSA or Logan ConRAC (the "Site"). RGP discharges will be conveyed via underground drainage from portions of the Site to the Boston Inner Harbor and is expected to flow westerly through existing drainage systems and discharge at the Maverick and Porter Street Outfalls, see Figure 2 (Stormwater Outfalls).

The Site is located within the landside, commercial area of Logan International Airport (Logan) in Boston, Massachusetts. This RGP-NOI covers the proposed construction activities including, but not limited to, the following items and associated scope of work requiring dewatering of groundwater:

- General Site-Civil preparation activities including
- Demolition of existing buildings
- Deep pile foundations
- Utility re-locations
- Site drainage and grading
- Landscaping and irrigation
- Temporary roadways and traffic
- Elevated roadway structures
- Construction phasing and sequencing
- Construction of building structures

If groundwater is dewatered and requires discharge to the Inner Boston Harbor, treatment will be employed as detailed in this NOI and RGP Plan. Determination of groundwater conditions will be based on location of area to be dewatered, field observations and screening of both soil and groundwater conditions. Also, monitoring of dewatered groundwater will be performed in accordance with monitoring requirements of NPDES permits, including the RGP Authorization prior to discharge. The groundwater is not anticipated to be contaminated across the entire site however, at a minimum, sedimentation and/or frac tank will be used to reduce total suspended solids prior to discharging to the stormwater management system.

Figure 1 - Site Locus

Figure 2 – Massport Stormwater Outfall Locations (Maverick and Porter)

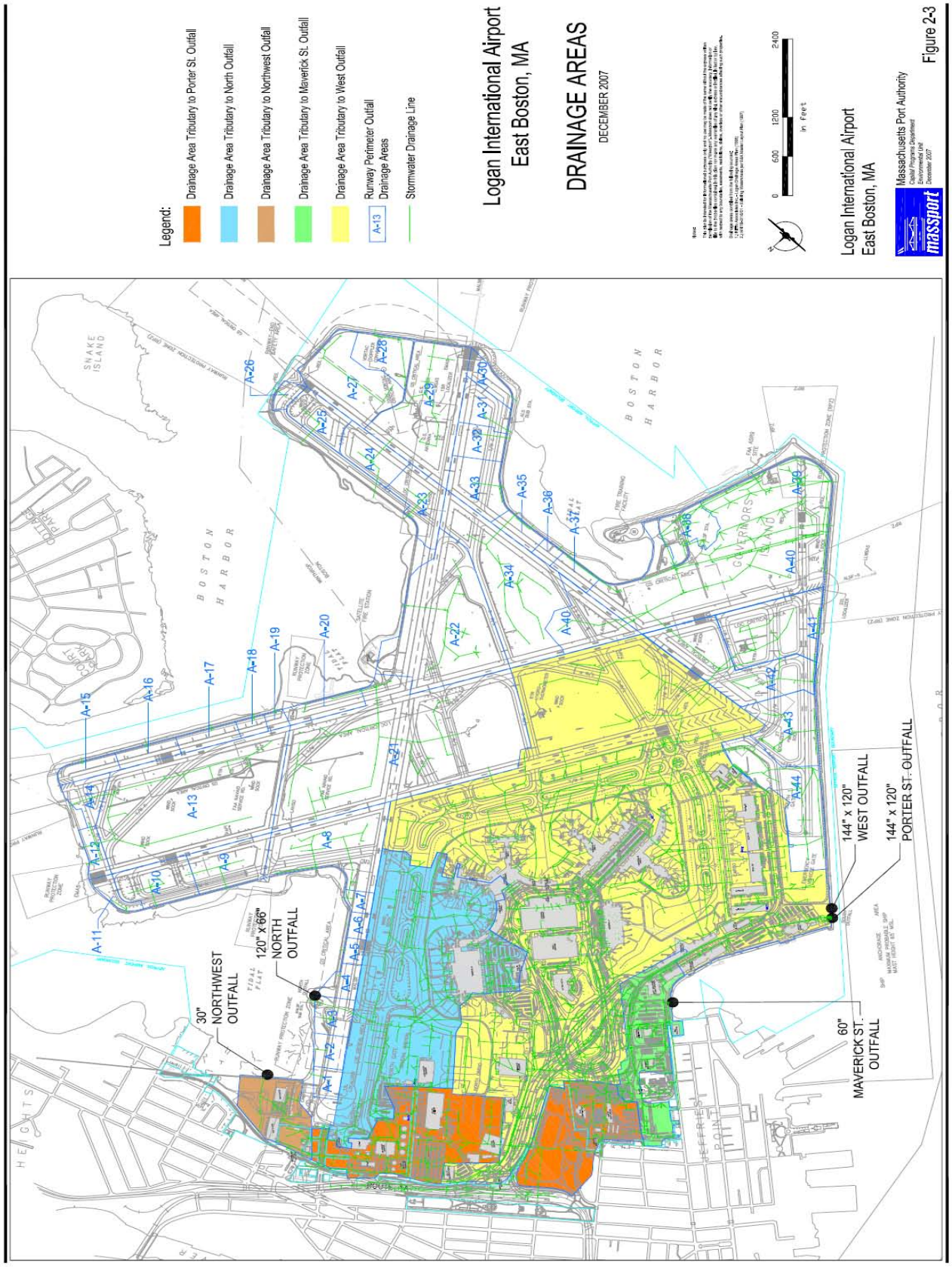
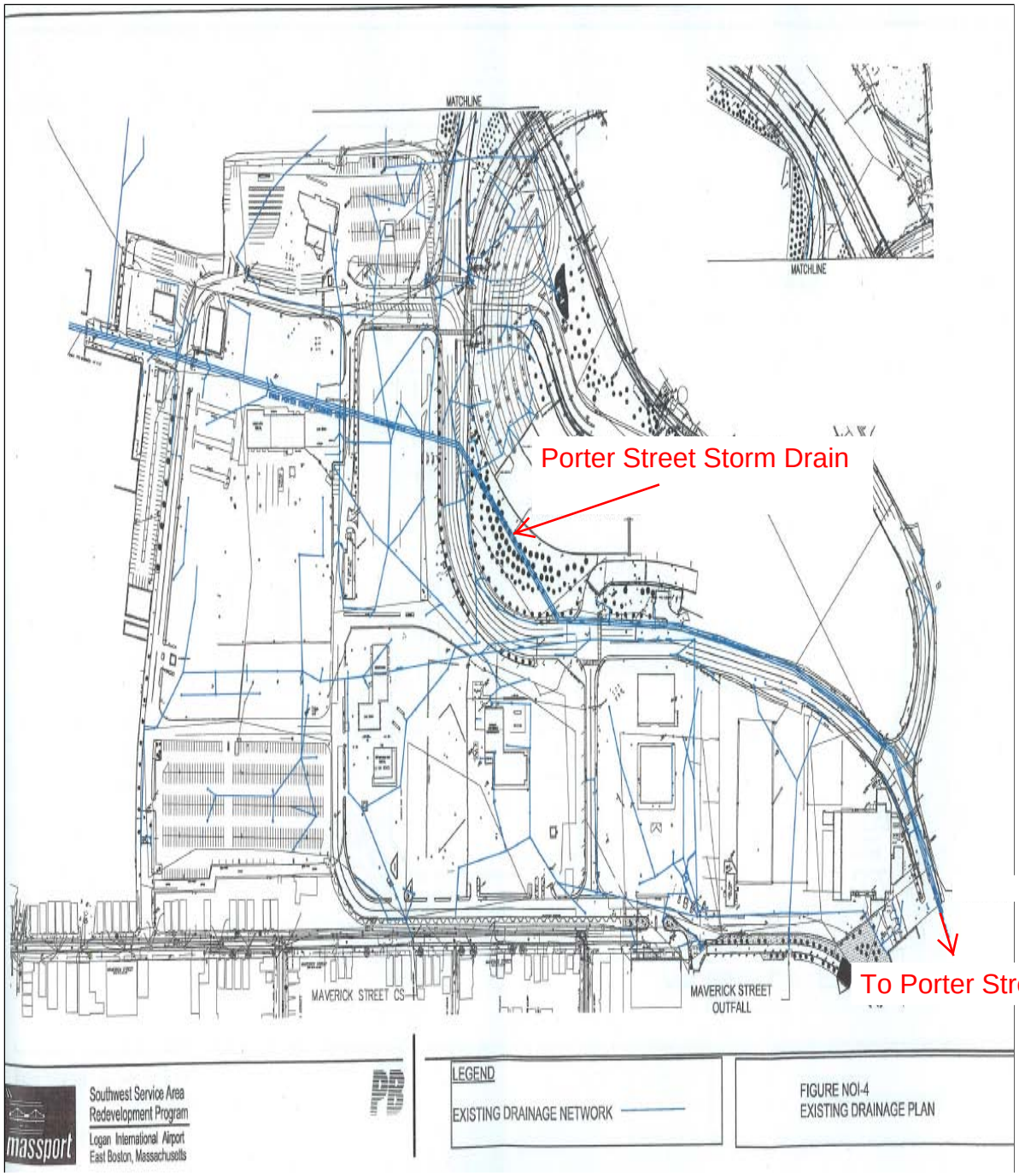


Figure 2 – Massport Stormwater Outfall Locations (Maverick and Porter)



2.0 Site History

The Site consisted of undeveloped marsh land prior to the 1930s, when the Site and surrounding areas were filled as part of Logan Airport expansions. Beginning in December 1970, A portion of the Site was leased by Hertz and operated as a car rental facility. Currently the 49-acre site is occupied by several car rental companies, the former Taxi Pool and Bus Limo Pool lots, additional parking areas and a building that contains a flight kitchen.

Based on data obtained during historical research and/or subsurface investigations by the Authority and its contractors, fill material within the majority of the project area is generally anticipated to contain contaminant levels that are either non-detected or below the most stringent MCP soil and groundwater standards. However, impacted soil conditions may exist at some locations as described below.

There are thirteen (13) RTNs within the proposed ConRAC facility area. All have been closed in accordance with the MCP through submittal of Response Action Outcome Statements (RAOs). The closed RTNs are primarily associated with elevated levels of petroleum hydrocarbons. Subsurface investigations to assess these sites also encountered arsenic, barium, beryllium, cadmium, and nickel, which have been attributed to historic fill within the area.. Two RAOs incorporate Activity and Use Limitations (AULs), which require that construction activities that will disturb the existing surface be performed in a manner which ensures that the MCP defined condition of No Significant Risk to human health, the environment and public welfare is maintained during and after construction. Subsurface construction activities are proposed to take place within both AUL areas. The AULs restrict future residential use of the property, as well as including other obligations regarding the handling and management of residually contaminated soil at the Site. Specifically, obligations of the AUL require work to be overseen under the supervision of an LSP and conducted as a Release Abatement Measure (RAM). RAM activities include the excavation, management and disposal of impacted soils excavated during construction activities and the management of dewatering activities. Table 1 includes a list of MADEP Sites with Release Tracking Numbers that are located within the 49-acre Project Site.

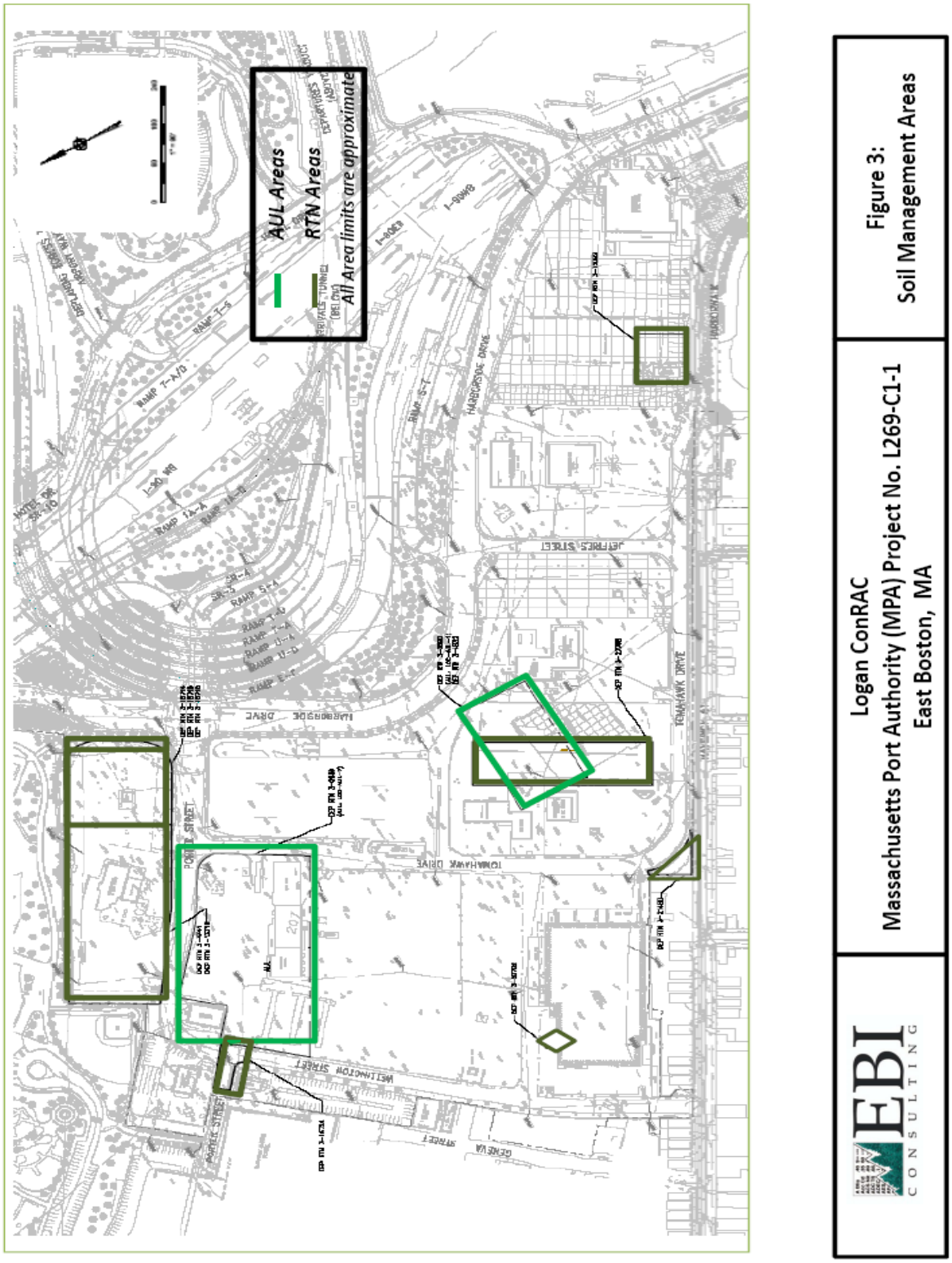
Based on the above activities and the variable groundwater conditions, the RGP must be in place in the event that contaminated groundwater is encountered and requires treatment prior to discharge to surface water. This NOI applies to the entire ConRAC Project Site and includes, at a minimum, the use of sedimentation tanks to reduce total suspended solids (TSS) prior to discharge to the stormwater drainage system. Additional treatment will be implemented if contaminated groundwater is encountered and will include the use of bag filters to enhance TSS removal and a granular activated carbon (GAC) unit to remove petroleum hydrocarbons.

Table 1 - MADEP Sites with Release Tracking Numbers (RTNs)

MassDEP Disposal Sites
Logan CONRAC SWSA Enabling Project
Logan Airport

RTN	Site Name and Address	RAO Class	AUL	Risk Assessment	Contaminant (Media)	GW Impacted	GW Standards Met	Soil Standards Met
3-0956	Hertz Rental, 207 Porter St.	A-3	Yes	Method 3	VPH, EPH, and lead (Soil) VPH (GW)	Yes	Method 3 GW-2 Method 3 GW-3	Site specific (commercial use)
3-2690 & 3-4832	Butler Aviation South/Alamo Former Butler Hangar Site, Harborside Dr.	A-3	Yes	Method 2	TPH and SVOCs (Soil) SVOCs and silver (GW)	Yes	Method 2 GW-2 Method 2 GW-3	Method 2 S-3
3-4741	Avis Rent-A Car, 202 Porter St.	A-2	No	Method 1	EPH, VPH, SVOCs (Soil & GW)	Yes	Method 1 GW-2 Method 1 GW-3	Method 1 S-3
3-15092	Bus/Limousine Pool, Tomahawk Dr.	A-2	No	Method 3	VPH, EPH, VOCs, and SVOCs (Soil) VPH and EPH (GW)	Yes	Method 3 GW-2 Method 3 GW-3	Method 3 S-3
3-15724	Venice/Porter Street, Intersection of Porter St. & Wellington St.	B-1	No	Method 3	VPH, EPH, VOCs, and SVOCs (Soil) VPH, EPH, and VOCs (GW)	Yes	Method 3 GW-2 Method 3 GW-3	Method 3 S-3
3-21460	Buffer Area 1, Maverick St.	B-1	No	Method 3	VPH, EPH, SVOCs, barium, lead and mercury (Soil) EPH and VPH (GW)	Yes	Method 3 GW-3	Method 3 S-2 Method 3 S-3
3-13718	Avis Rent-A-Car, 202 Porter St.	A-2	No	Method 2	EPH (Soil and GW)	Yes	Method 1 GW-2 Method 1 GW-3	Method 1 S-3
3-18794	Avis Rent-A-Car, 202 Porter St.	A-2	No	Method	EPH & lead (Soil) EPH (GW)	Yes	Method 1 GW-2 Method 1 GW-3	Method 1 S-3
3-18795 & 3-18798	Avis Rent-A-Car, 202 Porter St.	A-2	No	Method 1	EPH & lead (Soil) EPH (GW)	Yes	Method 1 GW-2 Method 1 GW-3	Method 1 S-3
3-27068	Enterprise Rent-A-Car, Tomahawk Drive	B-1	No	Method 3	VPH, EPH, chromium, nickel & beryllium (Soil) Lead (GW)	Yes	Method 3 GW-3	Method 3 S-3
3-28792	Logan Airport SWSA - NW Corner Overflow Lot, Tomahawk Drive	B-1	No	Method 1	Petroleum (Soil)	No	NA	Method 1 S-1/S-3

Figure 3 – RTN and AUL Areas



3.0 Active NPDES Permits for this Project Area

3.1 Logan Airport NPDES Stormwater Permit No. MA0000787

Logan Airport operates under an individual NPDES Stormwater Permit (No. MA0000787), which covers the stormwater outfalls that receive discharges from drainage areas within Logan Airport including the ConRAC Project Site. The outfalls monitored under this permit discharge to the Inner Boston Harbor through Massport's existing stormwater management systems. The EPA, through this permit has established the following discharge limits.

- Oil and Grease – 15 milligrams per liter (mg/L)
- pH – 6.0-8.5 standard units
- Total Suspended Solids (TSS) – 100 mg/L.

Prior to discharging water from dewatering operations it will be sampled, as it is contained within a sedimentation tank, and will be analyzed for the above parameters to ensure that it meets the stormwater discharge limits.

3.2 Logan Airport – ConRAC Construction Project, NPDES Stormwater CGP Permit No. MAR10DS837

The ConRAC Construction Project has obtained coverage under the NPDES Stormwater Construction General Permit (Permit Tracking No. MAR10DS837). A Storm Water Pollution Prevention Plan (SWPPP) has been prepared to address site work activities associated with the ConRAC Construction Project. The Construction General Permit allows the discharge of water from uncontaminated excavation dewatering.

3.3 Current Groundwater Data

The previous subsurface investigations and pre-characterization of soil for the ConRAC Construction Project detected contaminants that included total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs). The potential contaminants of concern are identified in the Notice of Intent form (Attachment 2) and are based on available data. In addition, groundwater samples were obtained on March 2, 2011 from a monitoring well installed at the location of a proposed deep excavation. The analytical data for these samples (identified as ATC-1) are presented in Table 2 along with the RGP effluent limits for dewatering within Sub-Category A – General Urban Fill Sites. Attachment 3 includes the Laboratory Report. A second round of groundwater samples were obtained on March 18, 2011 for the purpose of obtaining additional data on metals concentrations. The samples were filtered in the field and were analyzed in the laboratory for dissolved metals. As shown in Table 2, the dissolved metals concentrations for the filtered samples were significantly less than the total concentrations detected in the unfiltered samples.

TABLE 2 - Groundwater Data Summary Table

WELL ID **SAMPLING DATE** **LAB SAMPLE ID**	Remediation General Permit - Appendix III Effluent Limits and Monitoring Requirements by Sub-category Category III-Contaminated Construction Dewatering Sub-Category A - General Urban Fill Sites (ug/l)	ATC-1 3/2/2011 L1102731-01 (ug/l)	ATC-1 3/18/2011 L1103604 (ug/l)
General Chemistry			
Solids, Total Suspended	30 mg/l	**290 mg/l**	NS
Cyanide, Total	1*	**19**	NS
Chlorine, Total Residual	7.5*	*<20*	NS
Chloride	Monitor Only	2,200,000	NS
TPH	5.0 mg/l	<4.4 mg/l	NS
Phenolics, Total	300	**1,200**	NS
Chromium, Hexavalent	50.3*	<10	NS
Total Metals			**Dissolved Metals**
Antimony, Total	5.6	**9**	*<10*
Arsenic, Total	36*	**67.1**	7.6
Cadmium, Total	8.9*	2.6	NS
Chromium, Total	150.3*	114.2	NS
Copper, Total	3.7*	**477.7**	*<5*
Iron, Total	1,000	**110,000**	**7,900**
Lead, Total	8.5*	**2,086**	<5
Mercury, Total	1.1*	**12.7**	<0.2
Nickel, Total	8.2*	**80.9**	7.4
Selenium, Total	71*	15	NS
Silver, Total	2.2*	***<4***	*<4*
Zinc, Total	85.6*	**1,435**	<50
Pesticides by GC			
1,2-Dibromoethane	0.05	0.01	NS
Volatile Organics by GC/MS			
Benzene	100 ug/l (BTEX)	<1	NS
Ethylbenzene		<1	NS
Toluene		<1	NS
Xylene (Total)		<2	NS
Total BTEX		<2	NS
1,1,1-Trichloroethane	200	<2	NS
1,1,2-Trichloroethane	5	<1.5	NS
1,1-Dichloroethane	70	<1.5	NS
1,1-Dichloroethene	3.2	<1	NS
1,2-Dichlorobenzene	600	<5	NS
1,2-Dichloroethane	5	<1.5	NS
1,3-Dichlorobenzene	320	<5	NS
1,4-Dichlorobenzene	5	<5	NS
1,4-Dioxane	Monitor Only	<2,000	NS
Acetone	Monitor Only	26	NS
Carbon tetrachloride	4.4	<1	NS
cis-1,2-Dichloroethene	70	<1	NS
Dibromomethane	0.05	***<1***	NS
Methyl tert butyl ether	70	<20	NS
Methylene chloride	4.6	**<5**	NS
Tert-Butyl Alcohol	Monitor Only	<100	NS

WELL ID **SAMPLING DATE** **LAB SAMPLE ID**	Remediation General Permit - Appendix III Effluent Limits and Monitoring Requirements by Sub-category Category III-Contaminated Construction Dewatering Sub-Category A - General Urban Fill Sites (ug/l)	ATC-1 3/2/2011 L1102731-01 (ug/l)	ATC-1 3/18/2011 L1103604 (ug/l)
Volatile Organics by GC/MS			
Tertiary-Amyl Methyl Ether	Monitor Only	<20	NS
Tetrachloroethene	5	<1.5	NS
Trichloroethene	5	<1	NS
Vinyl chloride	2	<2	NS
Semivolatile Organics by GC/MS-SIM			
Naphthalene	20	0.22	NS
Acenaphthene	100 ug/l (Group II PAHs)	<0.21	NS
Acenaphthylene		<0.2	NS
Anthracene		<0.2	NS
Benzo(ghi)perylene		<0.2	NS
Fluoranthene		<0.2	NS
Fluorene		<0.2	NS
Phenanthrene		0.34	NS
Pyrene		0.5	NS
Benzo(a)anthracene	10.0 ug/l (Group I PAHs)	0.22	NS
Benzo(a)pyrene		<0.2	NS
Benzo(b)fluoranthene		0.24	NS
Benzo(k)fluoranthene		<0.2	NS
Chrysene		0.21	NS
Dibenzo(a,h)anthracene		<0.2	NS
Indeno(1,2,3-cd)Pyrene		<0.2	NS
Polychlorinated Biphenyls by GC			
Aroclor 1016	0.000064 ug/l (Total PCBs)	*<0.258*	NS
Aroclor 1221		*<0.258*	NS
Aroclor 1232		*<0.258*	NS
Aroclor 1242		*<0.258*	NS
Aroclor 1248		*<0.258*	NS
Aroclor 1254		*<0.258*	NS
Aroclor 1260		*<0.258*	NS
Total PCBs		*<0.258*	NS

Notes:
Bold/Center Justified = Exceeds RGP Effluent Limit
Italics = Not detected above noted lab reporting limit exceeds RGP Effluent Limit
* - Effluent Standards for Salt Water
< - Not detected above the noted laboratory reporting limit
NS = Not sampled/tested

4.0 Management of Dewatered Groundwater

Dewatering of the construction site will be necessary in certain areas for installation of underground storage tanks and deeper foundation excavations. If dewatered groundwater is not recharged on-site and requires discharge to the stormwater drainage system, then dewatered groundwater will managed and monitored in accordance with Massport's Individual NPDES Permit, Project specific Construction General Permit, Massport's Contract Specifications and EPA's Authorization Letter to discharge under NPDES-RGP (to be issued as a result of this RGP-NOI).

4.1 General Discharge Monitoring and Compliance

Determination of groundwater conditions will be based on location of area to be dewatered, field observations and screening of both soil and groundwater conditions. Dewatered groundwater will be placed into sedimentation tanks and/or frac tanks per contract specifications for de-siltation, and will be sampled for the parameters included in Massport's Individual NPDES Permit. Areas of known contamination will be managed in accordance with the NPDES RGP. Section 4.1.1 describes RGP discharge monitoring and compliance.

4.1.1 RGP Discharge Monitoring and Compliance

Discharge monitoring and compliance will include regular sampling and testing of influent to the system and the treated effluent. This includes chemical testing required within days 1and 3 of initial discharge 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. Flow will be maintained by monitoring flow and adjusting the amount of construction dewatering, as needed. Monthly monitoring and compliance reports will be compiled and maintained at the site.

4.2 Dewatered Groundwater Treatment System

Construction dewatering effluent is anticipated to be pumped from localized sumps and trenches within the excavation and directly into a sedimentation and/or Frac tank(s). The effluent will then flow through necessary treatment systems and discharge through hoses to the existing stormwater drainage system. At a minimum, dewatered effluent treatment will consist of using a sedimentation and/or frac tank and may include the use of bag filters and a granular activated carbon (GAC) system, as required. Treatment scenarios will be determined in the field based on discharge monitoring that includes the discharge limits contained in the Massport Individual NPDES Permit, and EPA's Authorization Letter to discharge under NPDES-RGP.

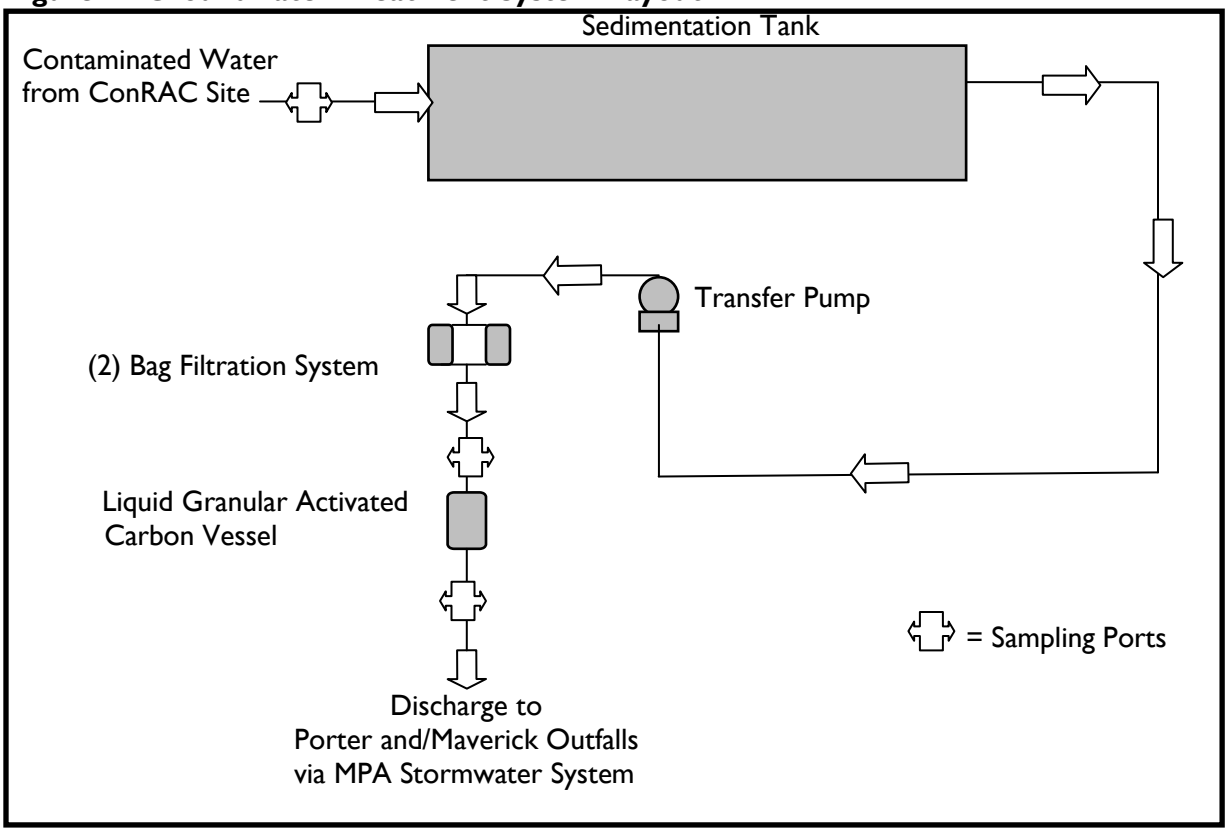
4.2.1 System Design

The construction dewatering and treatment system has been designed for a continuous throughput of up to 40-gallons per minute. The excavation may have vertical sheeting to minimize groundwater inflow. The system is designed to treat water contaminated with organic compounds, total suspended solids, and petroleum hydrocarbons as outlined in contract specifications section 02140, see Attachment 4. At a minimum, the treatment system will include a sedimentation tank or frac tank to collect groundwater. Additional treatment components shall be added if discharge standards are exceeded in the tanks. The system components may consist of two (2) pumps, one (1) sedimentation tank, two (2) canister

filtration units with bag filters and (1) 1,000-pound liquid phase granular activated carbon filter unit will be onsite.

The first pump will transfer water from the excavation to the sedimentation/frac tank. The second pump will transfer water from the sedimentation tank to the filters and/or effluent pipe for discharge. Three sampling ports will be utilized to collect samples from the influent (before sedimentation tank), mid-point (after bag filter units) and effluent (post-treatment, prior to discharge to stormwater system) The effluent pipe from the groundwater treatment system will be suspended in a storm drain that discharges to the Maverick and Porter Street Outfalls. Both the influent and effluent monitoring will be carried out to ensure that there will be no breakthrough of various contaminants. The mid-point sampling port will be utilized to determine if the treatment system components are required to be removed or added. Below is Figure 4, which includes the schematic of the proposed treatment system process.

Figure 4 - Groundwater Treatment System Layout



Attachment 2
RGP Notice of Intent (NOI)

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 MGD x 30 mg/l TSS x 8.34 = 625.5 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 freshwater[1], 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.

[1]Dilution 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 = [(Qd + Qs)/Qd] x 0.9

Where:

DF	**=**	**Dilution Factor**
Qd	**=**	**Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)**
Qs	**=**	**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 = (Qd + Qs)/Qd

Where:
DF = Dilution Factor
Qd = Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)
Qs = 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**: Logan Airport/ConRAC		**Facility/site** mailing address:		
Location of **facility/site**: longitude: -71.03 latitude: 42.37	Facility SIC code(s):	Street: Harborside Drive		
b) Name of **facility/site owner:** Massport		Town: East Boston MA		
Email address of facility/site owner: jstolecki@massport.com		State: MA	Zip: 02128	County: Suffolk
Telephone no. of facility/site **owner**: 617.568.3552				
Fax no. of facility/site **owner**: 617.568.3515		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ○ 4. Other ◉ if so, describe:		
Address of **owner** (if different from site):		Massachusetts Port Authority (Massport)		
Street: One Harborside Drive				
Town: East Boston MA	State: MA	Zip: 02128	County: Suffolk	
c) Legal name of **operator**:	**Operator** telephone no: 617-445-3843			
Suffolk Construction	**Operator** fax no.: 617-427-3843	**Operator** email: rgreenhalgh@suffolkconstuctio		
Operator contact name and title: Roy Greenhalgh, General Superintendent (email: rgreenhalgh@suffolkconstruction.com				
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: See Attached Table 1 for a list of assigned Release Tracking Numbers
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: MAR10DS83
4. Individual NPDES permit? Y ◉ N ○,
if Y, number: MA0000787
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	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☒
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☒ B. Known Contaminated Sites ☒

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

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

This NOI will support construction-dewatering activities to be conducted on the 49-Acre Project Site (aka ConRAC Project). Dewatered groundwater will be treated and discharged to Boston's Inner Harbor through MPAs Stormwater system via the Maverick and West Outfalls

b) Provide the following information about each discharge:

1) Number of discharge points: up to 2

2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)?
Max. flow 0.114 cfs Is maximum flow a **design value**? Y ○ N ○
Average flow (include units) 0.089 Is average flow a design value or estimate? estimate

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat	42.36	long	-71.03	;	
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): n/a

5) Is the discharge intermittent ◉ or seasonal ○ ?
Is discharge ongoing? Y ◉ N ○

c) Expected dates of discharge (mm/dd/yy): start 6/1/2011 end 12/31/2014

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). This NOI is part of a RGP Plan prepared for this project and includes requested information. Monitoring will be performe in accordance with EPA's Authorization Letter.

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	2540D	50000	290000		290000	
2. Total Residual Chlorine (TRC)		☒	☐	1	grab	4500cl-d	20	ND		ND	
3. Total Petroleum Hydrocarbons (TPH)		☐	☒	1	grab	1664A	4400	ND		ND	
4. Cyanide (CN)	57125	☐	☒	1	grab	4500-CN	5	19		19	
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		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	2	ND		ND	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	1	grab	504.1	1	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.

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)
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	1	GRAB	624	20	ND		ND	
14. Naphthalene	91203	☐	☒	1	GRAB	624	0.20	0.22		0.22	
15. Carbon Tetrachloride	56235	☒	☐	1	GRAB	624	20	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	15	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	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	

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)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	1	GRAB	624	2	ND		ND	
29. Acetone	67641	☒	☐	1	GRAB	624	10	26		26	
30. 1,4 Dioxane	123911	☒	☐	1	GRAB	624	2000	ND			
31. Total Phenols	108952	☒	☐	1	GRAB	420.1	2000	1200		1200	
32. Pentachlorophenol (PCP)	87865	☒	☐	1	GRAB	8270C	0.8	ND		ND	
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	GRAB	8270C	2000	ND		ND	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	GRAB	8270C	5	ND		ND	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☐	☒	1	GRAB	8270C	0.2	0.67		0.67	
a. Benzo(a) Anthracene	56553	☐	☒	1	GRAB	8270C	0.2	0.22		0.22	
b. Benzo(a) Pyrene	50328	☐	☒	1	GRAB	8270C	0.2	ND		ND	
c. Benzo(b)Fluoranthene	205992	☐	☒	1	GRAB	8270C	0.2	0.24		0.24	
d. Benzo(k)Fluoranthene	207089	☒	☐	1	GRAB	8270C	0.2	ND		ND	
e. Chrysene	21801	☐	☒	1	GRAB	8270C	0.2	0.21		0.21	
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	1.27		1.27	

[4] The sum of individual phthalate compounds.

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)
h. Acenaphthene	83329	☐	☒	1	GRAB	8270c	0.2	0.21		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	0.22		0.22	
o. Phenanthrene	85018	☐	☒	1	GRAB	8270c	0.2	0.34		0.34	
p. Pyrene	129000	☐	☒		GRAB	8270c	0.2	0.5		0.5	
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	GRAB	608	0.258	ND		ND	
38. Chloride	16887006	☐	☒	1	GRAB	9251	25000	2200000		2200000	
39. Antimony	7440360	☐	☒	2	GRAB	6020	5	9, <10		9, <10	
40. Arsenic	7440382	☐	☒	2	GRAB	6020	5	67.1, 7.6		67.1,7.6	
41. Cadmium	7440439	☒	☐	2	GRAB	6020	2	2.6		2.6	
42. Chromium III (trivalent)	16065831	☒	☐	1	GRAB	6020	5	114.2		114.2	
43. Chromium VI (hexavalent)	18540299	☒	☐	1	GRAB	6020	5	114.2		114.2	
44. Copper	7440508	☐	☒	2	GRAB	6020	5	477.7, <5		477.7, <5	
45. Lead	7439921	☐	☒	2	GRAB	6020	5	2086, <5		2086, <5	
46. Mercury	7439976	☐	☒	2	GRAB	245.1	0.4	12.7, <0.2		12.7, <0.2	
47. Nickel	7440020	☐	☒	2	GRAB	6020	5	80.9, 7.4		80.9, 7.4	
48. Selenium	7782492	☐	☒	1	GRAB	6020	10	15		15	
49. Silver	7440224	☐	☐	2	GRAB	6020	4	ND, <4		ND, <4	
50. Zinc	7440666	☐	☒	2	GRAB	6020	50	1435, <50		1435, <50	
51. Iron	7439896	☐	☒	2	GRAB	6020	50	110000, 7900		110000, 7900	
Other (describe):		☐	☐	1	GRAB	6020					

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):

Step 1: 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? Cu, As, Fe, Hg, Ni, Ag, Zn
Step 2: 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? Metal: Not applicable, discharge to Salt w DF: Metal: DF: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ◉ N ○ If Y, list which metals: Not applicable, discharge to Salt water

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:

The system consists of a settling tank, 2-bag filters and a GAC canister sized to meet flow requirements and monitoring schedule.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☐	Equalization tanks ☐	Bag filter ☒	GAC filter ☐
	Chlorination ☐	De-chlorination ☐	Other (please describe):	GAC will be used 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 <40 gpm Maximum flow rate of treatment system 40 gpm
Design flow rate of treatment system 40 gpm

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

None.

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:
Discharges will be conveyed via MPA's stormwater system to Inner Boston Harbor

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 SB

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)? Pathogens

Is there a final TMDL? Y ◉ N ○ If yes, for which pollutant(s)? Microbial (pathogens)

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 ○ **According to Fact Sheet for NPDES Permit #MA0000787

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.

The discharge will go directly to Inner Boston Harbor through Massport's existing Stormwater Management System. Effluent Levels will be in compliance with discharge limits.
-Oil and Grease - 15-mg/L
-pH - 6.0-8.5
-Total Suspended Solids (TSS) - 100 mg/L

The attached RGP Plan provides supplemental information in support of this RGP-NOI.

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:	Massport Logan Airport / ConRAC
Operator signature:	X Roy Greenhalgh
Printed Name &Title:	Roy Greenhalgh, General Superintendent
Date:	X 5/27/2011

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.

Attachment 3
Laboratory Analytical

ANALYTICAL REPORT

Lab Number:	L1103604
Client:	ATC Associates, Inc. 600 West Cummings Park Suite 5450 Woburn, MA 01801
ATTN:	Andy Fiedler
Phone:	(781) 932-9400
Project Name:	NPDES RGP/LOGAN
Project Number:	060.08859.0003
Report Date:	03/24/11

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: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1103604
Report Date: 03/24/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1103604-01	ATC-1	EAST BOSTON, MA	03/18/11 14:30

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1103604
Report Date: 03/24/11

Case Narrative

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

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

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

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

Sample Receipt

The sample was Field Filtered for Dissolved Metals only.

Metals

L1103604-01 has elevated detection limits for all analytes, except Iron and Mercury, due to the dilution required by the high concentrations of non-target analytes. The requested reporting limits were not achieved.

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: 03/24/11

METALS

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1103604
Report Date: 03/24/11

SAMPLE RESULTS

Lab ID: L1103604-01
Client ID: ATC-1
Sample Location: EAST BOSTON, MA
Matrix: Water
Date Collected: 03/18/11 14:30
Date Received: 03/18/11
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	ND		mg/l	0.0100	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM
Arsenic, Dissolved	0.0076		mg/l	0.0050	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM
Copper, Dissolved	ND		mg/l	0.0050	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM
Iron, Dissolved	7.9		mg/l	0.05	--	1	03/19/11 12:50	03/21/11 17:39	EPA 3005A	19,200.7	AI
Lead, Dissolved	ND		mg/l	0.0050	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM
Mercury, Dissolved	ND		mg/l	0.0002	--	1	03/21/11 15:00	03/22/11 10:14	EPA 245.1	3,245.1	AH
Nickel, Dissolved	0.0074		mg/l	0.0050	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM
Silver, Dissolved	ND		mg/l	0.0040	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM
Zinc, Dissolved	ND		mg/l	0.0500	--	10	03/19/11 12:50	03/23/11 22:25	EPA 3005A	1,6020	BM

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1103604
Report Date: 03/24/11

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: WG459378-1										
Antimony, Dissolved	ND		mg/l	0.0010	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM
Arsenic, Dissolved	ND		mg/l	0.0005	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM
Copper, Dissolved	ND		mg/l	0.0005	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM
Lead, Dissolved	ND		mg/l	0.0005	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM
Nickel, Dissolved	ND		mg/l	0.0005	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM
Silver, Dissolved	ND		mg/l	0.0004	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM
Zinc, Dissolved	ND		mg/l	0.0050	--	1	03/19/11 12:50	03/23/11 20:48	1,6020	BM

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: WG459436-1										
Iron, Dissolved	ND		mg/l	0.05	--	1	03/19/11 12:50	03/21/11 17:26	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: WG459563-1										
Mercury, Dissolved	ND		mg/l	0.0002	--	1	03/21/11 15:00	03/22/11 10:11	3,245.1	AH

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1103604

Report Date: 03/24/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG459378-2								
Antimony, Dissolved	96		-		80-120	-		
Arsenic, Dissolved	102		-		80-120	-		
Copper, Dissolved	102		-		80-120	-		
Lead, Dissolved	101		-		80-120	-		
Nickel, Dissolved	102		-		80-120	-		
Silver, Dissolved	97		-		80-120	-		
Zinc, Dissolved	104		-		80-120	-		
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG459436-2								
Iron, Dissolved	100		-		85-115	-		
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG459563-2								
Mercury, Dissolved	93		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1103604
Report Date: 03/24/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG459378-4 QC Sample: L1103604-01 Client ID: ATC-1												
Antimony, Dissolved	ND	0.5	0.5148	103		-	-		80-120	-		20
Arsenic, Dissolved	0.0076	0.12	0.1374	108		-	-		80-120	-		20
Copper, Dissolved	ND	0.25	0.2521	101		-	-		80-120	-		20
Lead, Dissolved	ND	0.51	0.5497	108		-	-		80-120	-		20
Nickel, Dissolved	0.0074	0.5	0.4925	97		-	-		80-120	-		20
Silver, Dissolved	ND	0.05	0.0465	93		-	-		80-120	-		20
Zinc, Dissolved	ND	0.5	0.4882	98		-	-		80-120	-		20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG459436-4 QC Sample: L1103604-01 Client ID: ATC-1												
Iron, Dissolved	7.9	1	8.7	80		-	-		75-125	-		20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG459563-4 QC Sample: L1103604-01 Client ID: ATC-1												
Mercury, Dissolved	ND	0.001	0.0008	84		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1103604
Report Date: 03/24/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG459378-3 QC Sample: L1103604-01 Client ID: ATC-1						
Antimony, Dissolved	ND	ND	mg/l	NC		20
Arsenic, Dissolved	0.0076	0.0081	mg/l	6		20
Copper, Dissolved	ND	ND	mg/l	NC		20
Lead, Dissolved	ND	ND	mg/l	NC		20
Nickel, Dissolved	0.0074	0.0074	mg/l	0		20
Silver, Dissolved	ND	ND	mg/l	NC		20
Zinc, Dissolved	ND	ND	mg/l	NC		20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG459436-3 QC Sample: L1103604-01 Client ID: ATC-1						
Iron, Dissolved	7.9	7.5	mg/l	5		20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG459563-3 QC Sample: L1103604-01 Client ID: ATC-1						
Mercury, Dissolved	ND	ND	mg/l	NC		20

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1103604
Report Date: 03/24/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1103604-01A	Plastic 500ml HNO3 preserved	A	<2	6	Y	Absent	CU-6020S(180),FE-RI(180),ZN-6020S(180),NI-6020S(180),PB-6020S(180),AG-6020S(180),AS-6020S(180),HG-R(28),SB-6020S(180)

*Values in parentheses indicate holding time in days

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1103604
Project Number:	060.08859.0003	**Report Date:**	03/24/11

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.

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

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

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.

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

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1103604
Project Number:	060.08859.0003	**Report Date:**	03/24/11

Data Qualifiers

the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

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

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

Report Format: Data Usability Report

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1103604
Project Number:	060.08859.0003	**Report Date:**	03/24/11

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

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.

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 February 23, 2011 - Westboro Facility

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

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

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

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

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

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

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

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
*Drinking Water (*Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

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

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

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

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

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

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

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

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

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

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

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

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

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Organic Parameters: EPA 524.2)

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

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

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

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NY-DOH.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

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

Department of Defense Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

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

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

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 Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/18/11

ALPHA Job #: L1103004

Client Information

Client: ATC Associates
Address: 600 W. Cummings Park
Woburn, MA 01801
Phone: 781-932-9400
Fax: 781-932-6211
Email: Andrew.Fiedler@ATCAssociates.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: UP.DES RGP / Logan
Project Location: East Boston, MA
Project #: 600.08859.0003
Project Manager: Andy Fiedler
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 3/25/11 (5 Day) Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program: MA MCP Criteria: RCGW-2

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
US EPA RGP Detection Limits

Also Email to: Chris.Amarel@ATCAssociates.com

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: Dissolved Metals: Sb, As, Cu, Fe, Pb, Hg, Ni, Ag, Zn	SAMPLE HANDLING: Filtration ☒ Done ☐ Not needed ☐ Lab to do; Preservation ☐ Lab to do (Please specify below)	Sample Specific Comments	TOTAL # BOTTLES
3004.1	ATC-1	3/18/11	230p	GW	CA	X		9 metals only US EPA RGP Detection Limits	1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

	Container Type	P												
	Preservative	C												

Relinquished By:	Date/Time	Received By:	Date/Time
	3/18/11 445p		3/18/11 1645

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

FORM NO: 01-01 (rev. 14-OCT-07)

ANALYTICAL REPORT

Lab Number:	L1102731
Client:	ATC Associates, Inc. 600 West Cummings Park Suite 5450 Woburn, MA 01801
ATTN:	Andy Fiedler
Phone:	(781) 932-9400
Project Name:	NPDES RGP/LOGAN
Project Number:	060.08859.0003
Report Date:	03/09/11

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: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1102731-01	ATC-1	EAST BOSTON, MA	03/02/11 11:30

Project Name: NPDES RGP/LOGAN **Lab Number:** L1102731
Project Number: 060.08859.0003 **Report Date:** 03/09/11

Case Narrative

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

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

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

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

Semivolatile Organics

The WG457315-2 LCS recovery, associated with L1102731-01, was above the acceptance criteria for 2,4-Dinitrotoluene (104%); however, the associated sample was non-detect for this target compound. The results of the original analysis are reported.

PCB

WG457980: An LCS/LCSD was performed in lieu of an MS/Sample Duplicate due to insufficient sample volume available for analysis.

Metals

L1102731-01 has elevated detection limit for all analytes with the exception of Iron and Mercury due to the dilution required by the high concentrations of target and non-target analytes. The requested reporting limit

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1102731
Project Number:	060.08859.0003	**Report Date:**	03/09/11

Case Narrative (continued)

was not achieved for Silver.

L1102731-01 has an elevated detection limit for Mercury due to the dilution required to quantitate the result within the calibration range.

The WG457228-4 MS recoveries, performed on L1102731-01, are below the acceptance criteria for Antimony (54%) and Selenium (38%). A post digestion spike was performed with acceptable recoveries of Antimony (111%) and Selenium (104%).

Solids, Total Suspended

L1102731-01 has an elevated detection limit due to the dilution required by the sample matrix.

Chloride

L1102731-01 has an elevated detection limit due to the dilution required to quantitate the result within the calibration range.

Phenolics, Total

L1102731-01 has an elevated detection limit due to the dilution required by the sample matrix.

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

Authorized Signature:  Elizabeth Simmons

Title: Technical Director/Representative Date: 03/09/11

ORGANICS

VOLATILES

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID:	L1102731-01	Date Collected:	03/02/11 11:30
Client ID:	ATC-1	Date Received:	03/02/11
Sample Location:	EAST BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	14,504.1	Extraction Date:	03/09/11 09:30
Analytical Date:	03/09/11 13:30		
Analyst:	SS		

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

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID:	L1102731-01	Date Collected:	03/02/11 11:30
Client ID:	ATC-1	Date Received:	03/02/11
Sample Location:	EAST BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	5,624		
Analytical Date:	03/03/11 14:17		
Analyst:	TT		

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: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID: L1102731-01
Client ID: ATC-1
Sample Location: EAST BOSTON, MA
Date Collected: 03/02/11 11:30
Date Received: 03/02/11
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	26		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	88		80-120
Fluorobenzene	99		80-120
4-Bromofluorobenzene	114		80-120

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,624
Analytical Date: 03/03/11 07:45
Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG457154-2					
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: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,624
Analytical Date: 03/03/11 07:45
Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG457154-2					
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	91		80-120
Fluorobenzene	96		80-120
4-Bromofluorobenzene	112		80-120

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 03/09/11 10:34
Analyst: SS

Extraction Date: 03/09/11 09:30

Parameter	Result	Qualifier	Units	RL	MDL
Pesticides by GC - Westborough Lab for sample(s): 01 Batch: WG458012-1					
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: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG457154-1								
Methylene chloride	87		-		1-221	-		30
1,1-Dichloroethane	112		-		59-155	-		30
Chloroform	112		-		51-138	-		30
Carbon tetrachloride	131		-		70-140	-		30
1,2-Dichloropropane	110		-		1-210	-		30
Dibromochloromethane	120		-		53-149	-		30
1,1,2-Trichloroethane	121		-		52-150	-		30
2-Chloroethylvinyl ether	136		-		1-305	-		30
Tetrachloroethene	138		-		64-148	-		30
Chlorobenzene	119		-		37-160	-		30
Trichlorofluoromethane	103		-		17-181	-		30
1,2-Dichloroethane	102		-		49-155	-		30
1,1,1-Trichloroethane	112		-		52-162	-		30
Bromodichloromethane	122		-		35-155	-		30
trans-1,3-Dichloropropene	114		-		17-183	-		30
cis-1,3-Dichloropropene	114		-		1-227	-		30
Bromoform	112		-		45-169	-		30
1,1,2,2-Tetrachloroethane	112		-		46-157	-		30
Benzene	113		-		37-151	-		30
Toluene	119		-		47-150	-		30
Ethylbenzene	128		-		37-162	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG457154-1								
Chloromethane	153		-		1-273	-		30
Bromomethane	127		-		1-242	-		30
Vinyl chloride	75		-		1-251	-		30
Chloroethane	87		-		14-230	-		30
1,1-Dichloroethene	108		-		1-234	-		30
trans-1,2-Dichloroethene	126		-		54-156	-		30
cis-1,2-Dichloroethene	112		-		60-140	-		30
Trichloroethene	114		-		71-157	-		30
1,2-Dichlorobenzene	118		-		18-190	-		30
1,3-Dichlorobenzene	118		-		59-156	-		30
1,4-Dichlorobenzene	122		-		18-190	-		30
p/m-Xylene	122		-		40-160	-		30
o-Xylene	114		-		40-160	-		30
XYLENE (TOTAL)	120		-		40-160	-		30
Styrene	108		-		40-160	-		30
Acetone	78		-		40-160	-		30
Carbon disulfide	94		-		40-160	-		30
2-Butanone	96		-		40-160	-		30
Vinyl acetate	143		-		40-160	-		30
4-Methyl-2-pentanone	112		-		40-160	-		30
2-Hexanone	111		-		40-160	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG457154-1								
Acrolein	64		-		40-160	-		30
Acrylonitrile	92		-		40-160	-		30
Dibromomethane	129		-		70-130	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	96				80-120
Fluorobenzene	100				80-120
4-Bromofluorobenzene	108				80-120

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG458012-2								
1,2-Dibromoethane	92		-		70-130	-		20
1,2-Dibromo-3-chloropropane	88		-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457154-3 QC Sample: L1102736-01 Client ID: MS Sample												
Methylene chloride	ND	20	17	84		-	-		1-221	-		30
1,1-Dichloroethane	ND	20	21	106		-	-		59-155	-		30
Chloroform	ND	20	22	108		-	-		51-138	-		30
Carbon tetrachloride	ND	20	25	127		-	-		70-140	-		30
1,2-Dichloropropane	ND	20	22	108		-	-		1-210	-		30
Dibromochloromethane	ND	20	24	119		-	-		53-149	-		30
1,1,2-Trichloroethane	ND	20	24	121		-	-		52-150	-		30
2-Chloroethylvinyl ether	ND	20	19	94		-	-		1-305	-		30
Tetrachloroethene	ND	20	26	128		-	-		64-148	-		30
Chlorobenzene	ND	20	22	108		-	-		37-160	-		30
Trichlorofluoromethane	ND	20	19	96		-	-		17-181	-		30
1,2-Dichloroethane	ND	20	20	102		-	-		49-155	-		30
1,1,1-Trichloroethane	ND	20	22	108		-	-		52-162	-		30
Bromodichloromethane	ND	20	23	117		-	-		35-155	-		30
trans-1,3-Dichloropropene	ND	20	22	108		-	-		17-183	-		30
cis-1,3-Dichloropropene	ND	20	20	99		-	-		1-227	-		30
Bromoform	ND	20	22	112		-	-		45-169	-		30
1,1,2,2-Tetrachloroethane	ND	20	23	115		-	-		46-157	-		30
Benzene	ND	20	22	110		-	-		35-151	-		30
Toluene	ND	20	22	112		-	-		47-150	-		30
Ethylbenzene	ND	20	23	116		-	-		37-162	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457154-3 QC Sample: L1102736-01 Client ID: MS Sample												
Chloromethane	ND	20	26	130		-	-		1-273	-		30
Bromomethane	ND	20	20	102		-	-		1-242	-		30
Vinyl chloride	ND	20	14	72		-	-		1-251	-		30
Chloroethane	ND	20	16	82		-	-		14-230	-		30
1,1-Dichloroethene	ND	20	20	100		-	-		1-234	-		30
trans-1,2-Dichloroethene	ND	20	24	120		-	-		54-156	-		30
cis-1,2-Dichloroethene	ND	20	22	108		-	-		60-140	-		30
Trichloroethene	ND	20	22	108		-	-		71-157	-		30
1,2-Dichlorobenzene	ND	20	22	113		-	-		18-190	-		30
1,3-Dichlorobenzene	ND	20	22	109		-	-		59-156	-		30
1,4-Dichlorobenzene	ND	20	23	116		-	-		18-190	-		30
p/m-Xylene	ND	40	44	111		-	-		40-160	-		30
o-Xylene	ND	20	21	105		-	-		40-160	-		30
XYLENE (TOTAL)	ND	60	65	109		-	-		40-160	-		30
Styrene	ND	20	20	100		-	-		40-160	-		30
Acetone	17	50	54	74		-	-		40-160	-		30
Carbon disulfide	ND	20	18	93		-	-		40-160	-		30
2-Butanone	ND	50	44	89		-	-		40-160	-		30
Vinyl acetate	ND	40	24	60		-	-		40-160	-		30
4-Methyl-2-pentanone	ND	50	52	104		-	-		40-160	-		30
2-Hexanone	ND	50	51	103		-	-		40-160	-		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457154-3 QC Sample: L1102736-01 Client ID: MS Sample												
Acrolein	ND	40	20	49		-	-		40-160	-		30
Acrylonitrile	ND	40	35	88		-	-		40-160	-		30
Dibromomethane	ND	20	18	92		-	-			-		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
4-Bromofluorobenzene	104				80-120
Fluorobenzene	99				80-120
Pentafluorobenzene	96				80-120

Pesticides by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG458012-3 QC Sample: L1102945-01 Client ID: MS Sample												
1,2-Dibromoethane	ND	0.246	0.213	86		-	-		70-130	-		20
1,2-Dibromo-3-chloropropane	ND	0.246	0.205	83		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457154-4 QC Sample: L1102736-01 Client ID: DUP Sample						
Methylene chloride	ND	ND	ug/l	NC		30
1,1-Dichloroethane	ND	ND	ug/l	NC		30
Chloroform	ND	ND	ug/l	NC		30
Carbon tetrachloride	ND	ND	ug/l	NC		30
1,2-Dichloropropane	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: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457154-4 QC Sample: L1102736-01 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	17	18	ug/l	6	30
Carbon disulfide	ND	ND	ug/l	NC	30

Lab Duplicate Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457154-4 QC Sample: L1102736-01 Client ID: DUP Sample					
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	91		90		80-120
Fluorobenzene	97		98		80-120
4-Bromofluorobenzene	115		109		80-120

SEMIVOLATILES

Project Name: NPDES RGP/LOGAN **Lab Number:** L1102731

Project Number: 060.08859.0003 **Report Date:** 03/09/11

SAMPLE RESULTS

Lab ID:	L1102731-01	Date Collected:	03/02/11 11:30
Client ID:	ATC-1	Date Received:	03/02/11
Sample Location:	EAST BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C	Extraction Date:	03/03/11 21:32
Analytical Date:	03/09/11 12:17		
Analyst:	HL		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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: NPDES RGP/LOGAN **Lab Number:** L1102731

Project Number: 060.08859.0003 **Report Date:** 03/09/11

SAMPLE RESULTS

Lab ID: L1102731-01 Date Collected: 03/02/11 11:30

Client ID: ATC-1 Date Received: 03/02/11

Sample Location: EAST BOSTON, MA Field Prep: Not Specified

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	43		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	77		15-120
2,4,6-Tribromophenol	105		10-120
4-Terphenyl-d14	104		33-120

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID:	L1102731-01	Date Collected:	03/02/11 11:30
Client ID:	ATC-1	Date Received:	03/02/11
Sample Location:	EAST BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270C-SIM	Extraction Date:	03/03/11 21:35
Analytical Date:	03/04/11 20:52		
Analyst:	AS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.21		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	0.22		ug/l	0.20	--	1
Benzo(a)anthracene	0.22		ug/l	0.20	--	1
Benzo(a)pyrene	ND		ug/l	0.20	--	1
Benzo(b)fluoranthene	0.24		ug/l	0.20	--	1
Benzo(k)fluoranthene	ND		ug/l	0.20	--	1
Chrysene	0.21		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	0.34		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	0.50		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: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID: L1102731-01
Client ID: ATC-1
Sample Location: EAST BOSTON, MA
Date Collected: 03/02/11 11:30
Date Received: 03/02/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	117		10-120
4-Terphenyl-d14	114		33-120

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 03/05/11 14:24
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 03/03/11 21:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG457315-1					
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: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 03/05/11 14:24
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 03/03/11 21:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG457315-1					
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: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 03/05/11 14:24
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 03/03/11 21:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG457315-1					
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	48		21-120
Phenol-d6	32		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	93		33-120

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/04/11 19:23
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 03/03/11 21:35

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG457316-1					
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: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C-SIM
Analytical Date: 03/04/11 19:23
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 03/03/11 21:35

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG457316-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	83		15-120
2,4,6-Tribromophenol	84		10-120
4-Terphenyl-d14	112		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG457315-2 WG457315-3								
Acenaphthene	86		68		37-111	23		30
1,2,4-Trichlorobenzene	80		67		39-98	18		30
2-Chloronaphthalene	97		89		40-140	9		30
1,2-Dichlorobenzene	73		66		40-140	10		30
1,4-Dichlorobenzene	76		66		36-97	14		30
2,4-Dinitrotoluene	**104**	Q	90		24-96	14		30
2,6-Dinitrotoluene	95		89		40-140	7		30
Fluoranthene	105		88		40-140	18		30
4-Chlorophenyl phenyl ether	95		85		40-140	11		30
n-Nitrosodi-n-propylamine	81		90		41-116	11		30
Butyl benzyl phthalate	108		101		40-140	7		30
Anthracene	95		85		40-140	11		30
Pyrene	102		82		26-127	22		30
P-Chloro-M-Cresol	96		96		23-97	0		30
2-Chlorophenol	83		79		27-123	5		30
2-Nitrophenol	89		83		30-130	7		30
4-Nitrophenol	48		46		10-80	4		30
2,4-Dinitrophenol	78		71		20-130	9		30
Pentachlorophenol	78		73		9-103	7		30
Phenol	41		38		12-110	8		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG457315-2 WG457315-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		57		21-120
Phenol-d6	38		40		10-120
Nitrobenzene-d5	82		81		23-120
2-Fluorobiphenyl	93		87		15-120
2,4,6-Tribromophenol	109		95		10-120
4-Terphenyl-d14	117		97		33-120

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG457316-2 WG457316-3								
Acenaphthene	83		72		37-111	14		40
2-Chloronaphthalene	131		94		40-140	33		40
Fluoranthene	98		90		40-140	9		40
Anthracene	93		84		40-140	10		40
Pyrene	92		86		26-127	7		40
Pentachlorophenol	87		99		9-103	13		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG457316-2 WG457316-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	70		61		21-120
Phenol-d6	59		44		10-120
Nitrobenzene-d5	98		86		23-120
2-Fluorobiphenyl	98		79		15-120
2,4,6-Tribromophenol	106		90		10-120
4-Terphenyl-d14	107		94		33-120

PCBS

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID:	L1102731-01	Date Collected:	03/02/11 11:30
Client ID:	ATC-1	Date Received:	03/02/11
Sample Location:	EAST BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 608
Analytical Method:	5,608	Extraction Date:	03/09/11 03:02
Analytical Date:	03/09/11 10:11	Cleanup Method1:	EPA 3660B
Analyst:	SH	Cleanup Date1:	03/09/11
		Cleanup Method2:	EPA 3660B
		Cleanup Date2:	03/09/11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/l	0.258	--	1
Aroclor 1221	ND		ug/l	0.258	--	1
Aroclor 1232	ND		ug/l	0.258	--	1
Aroclor 1242	ND		ug/l	0.258	--	1
Aroclor 1248	ND		ug/l	0.258	--	1
Aroclor 1254	ND		ug/l	0.258	--	1
Aroclor 1260	ND		ug/l	0.258	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	60		30-150	A

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,608
Analytical Date: 03/09/11 10:23
Analyst: SH

Extraction Method: EPA 608
Extraction Date: 03/09/11 03:02
Cleanup Method1: EPA 3660B
Cleanup Date1: 03/09/11
Cleanup Method2: EPA 3660B
Cleanup Date2: 03/09/11

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG457911-1					
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	83		30-150	A
Decachlorobiphenyl	92		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG457911-2 WG457911-3								
Aroclor 1016	87		83		40-126	4		30
Aroclor 1260	100		93		40-127	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		81		30-150	A
Decachlorobiphenyl	96		88		30-150	A

METALS

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID: L1102731-01
Client ID: ATC-1
Sample Location: EAST BOSTON, MA
Matrix: Water
Date Collected: 03/02/11 11:30
Date Received: 03/02/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.0090		mg/l	0.0050	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Arsenic, Total	0.0671		mg/l	0.0050	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Cadmium, Total	0.0026		mg/l	0.0020	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Chromium, Total	0.1142		mg/l	0.0050	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Copper, Total	0.4777		mg/l	0.0050	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Iron, Total	110		mg/l	0.05	--	1	03/03/11 11:00	03/04/11 09:57	EPA 3005A	19,200.7	AI
Lead, Total	2.086		mg/l	0.0050	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Mercury, Total	0.0127		mg/l	0.0004	--	2	03/07/11 15:40	03/08/11 15:33	EPA 245.1	3,245.1	AH
Nickel, Total	0.0809		mg/l	0.0050	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Selenium, Total	0.015		mg/l	0.010	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0040	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM
Zinc, Total	1.435		mg/l	0.0500	--	10	03/03/11 11:00	03/04/11 17:26	EPA 3005A	1,6020	BM

Project Name: NPDES RGP/LOGAN **Lab Number:** L1102731

Project Number: 060.08859.0003 **Report Date:** 03/09/11

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG457215-1										
Iron, Total	ND		mg/l	0.05	--	1	03/03/11 11:00	03/04/11 09:37	19,200.7	AI

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG457228-1										
Antimony, Total	ND		mg/l	0.0005	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Arsenic, Total	ND		mg/l	0.0005	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Chromium, Total	ND		mg/l	0.0005	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Copper, Total	ND		mg/l	0.0005	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Lead, Total	ND		mg/l	0.0005	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Nickel, Total	ND		mg/l	0.0005	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Selenium, Total	ND		mg/l	0.001	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Silver, Total	ND		mg/l	0.0004	--	1	03/03/11 11:00	03/04/11 16:55	1,6020	BM
Zinc, Total	ND		mg/l	0.0050	--	1	03/03/11 11:00	03/04/11 16:55	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: WG457662-1										
Mercury, Total	ND		mg/l	0.0002	--	1	03/07/11 15:40	03/08/11 10:46	3,245.1	AH

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG457215-2								
Iron, Total	99		-		85-115	-		
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG457228-2								
Antimony, Total	95		-		80-120	-		
Arsenic, Total	103		-		80-120	-		
Cadmium, Total	109		-		80-120	-		
Chromium, Total	101		-		80-120	-		
Copper, Total	107		-		80-120	-		
Lead, Total	106		-		80-120	-		
Nickel, Total	106		-		80-120	-		
Selenium, Total	102		-		80-120	-		
Silver, Total	97		-		80-120	-		
Zinc, Total	106		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG457662-2								
Mercury, Total	112		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457215-4 QC Sample: L1102736-02 Client ID: MS Sample												
Iron, Total	2.2	1	3.3	110		-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457228-4 QC Sample: L1102731-01 Client ID: ATC-1												
Antimony, Total	0.0090	0.5	0.2771	**54**	Q	-	-		80-120	-		20
Arsenic, Total	0.0671	0.12	0.1881	101		-	-		80-120	-		20
Cadmium, Total	0.0026	0.051	0.0560	105		-	-		80-120	-		20
Chromium, Total	0.1142	0.2	0.3066	96		-	-		80-120	-		20
Copper, Total	0.4777	0.25	0.7075	92		-	-		80-120	-		20
Lead, Total	2.086	0.51	2.598	100		-	-		80-120	-		20
Nickel, Total	0.0809	0.5	0.5642	97		-	-		80-120	-		20
Selenium, Total	0.015	0.12	0.061	**38**	Q	-	-		80-120	-		20
Silver, Total	ND	0.05	0.0485	97		-	-		80-120	-		20
Zinc, Total	1.435	0.5	1.890	91		-	-		80-120	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457662-4 QC Sample: L1102747-01 Client ID: MS Sample												
Mercury, Total	ND	0.001	0.0011	113		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457228-3 QC Sample: L1102731-01 Client ID: ATC-1						
Antimony, Total	0.0090	ND	mg/l	NC		20
Arsenic, Total	0.0671	0.0633	mg/l	6		20
Cadmium, Total	0.0026	0.0027	mg/l	2		20
Chromium, Total	0.1142	0.1109	mg/l	3		20
Copper, Total	0.4777	0.4518	mg/l	6		20
Lead, Total	2.086	1.994	mg/l	5		20
Nickel, Total	0.0809	0.0771	mg/l	5		20
Selenium, Total	0.015	0.013	mg/l	19		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	1.435	1.370	mg/l	5		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457662-3 QC Sample: L1102747-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

SAMPLE RESULTS

Lab ID: L1102731-01
Client ID: ATC-1
Sample Location: EAST BOSTON, MA
Matrix: Water
Date Collected: 03/02/11 11:30
Date Received: 03/02/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	290		mg/l	50	NA	10	-	03/04/11 15:15	30,2540D	DW
Cyanide, Total	0.019		mg/l	0.005	--	1	03/08/11 13:15	03/08/11 17:16	30,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	03/02/11 21:20	30,4500CL-D	KK
Chloride	2200		mg/l	25	--	25	-	03/04/11 20:28	30,4500CL-E	LA
TPH	ND		mg/l	4.40	--	1.1	03/07/11 11:30	03/08/11 13:15	74,1664A	JO
Phenolics, Total	1.2		mg/l	0.75	--	25	03/02/11 19:30	03/03/11 23:22	4,420.1	TP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	03/02/11 21:10	03/02/11 21:26	30,3500CR-D	TP

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003
Lab Number: L1102731
Report Date: 03/09/11

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457106-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	03/02/11 21:10	03/02/11 21:22	30,3500CR-D	TP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457110-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	03/02/11 21:20	30,4500CL-D	KK
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457320-1										
Phenolics, Total	ND		mg/l	0.03	--	1	03/02/11 19:30	03/03/11 23:19	4,420.1	TP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457344-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	03/04/11 15:15	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457441-1										
Chloride	ND		mg/l	1.0	--	1	-	03/04/11 19:24	30,4500CL-E	LA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457612-2										
TPH	ND		mg/l	4.00	--	1	03/07/11 11:30	03/08/11 13:15	74,1664A	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG457798-2										
Cyanide, Total	ND		mg/l	0.005	--	1	03/08/11 13:15	03/08/11 17:11	30,4500CN-CE	JO

Lab Control Sample Analysis

Batch Quality Control

Project Name: NPDES RGP/LOGAN

Project Number: 060.08859.0003

Lab Number: L1102731

Report Date: 03/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG457106-2								
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG457110-2								
Chlorine, Total Residual	109		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG457320-2								
Phenolics, Total	100		-		82-111	-		12
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG457441-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG457612-1								
TPH	90		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG457798-1								
Cyanide, Total	109		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457106-3 QC Sample: L1102731-01 Client ID: ATC-1												
Chromium, Hexavalent	ND	0.1	0.102	102		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457320-3 QC Sample: L1102805-01 Client ID: MS Sample												
Phenolics, Total	ND	4	4.0	99		-	-		77-124	-		12
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457441-3 QC Sample: L1102805-01 Client ID: MS Sample												
Chloride	180	40	220	98		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457612-3 QC Sample: L1102882-01 Client ID: MS Sample												
TPH	ND	20.4	15.6	76		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457798-3 QC Sample: L1102824-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.112	**56**	Q	-	-		90-110	-		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457106-4 QC Sample: L1102731-01 Client ID: ATC-1						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457110-3 QC Sample: L1102731-01 Client ID: ATC-1						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457320-4 QC Sample: L1102805-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		12
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457344-2 QC Sample: L1102726-06 Client ID: DUP Sample						
Solids, Total Suspended	1900	1900	mg/l	0		32
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457441-4 QC Sample: L1102805-01 Client ID: DUP Sample						
Chloride	180	190	mg/l	5		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457612-4 QC Sample: L1102731-01 Client ID: ATC-1						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG457798-4 QC Sample: L1102814-02 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30

Project Name: NPDES RGP/LOGAN
Project Number: 060.08859.0003

Lab Number: L1102731
Report Date: 03/09/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1102731-01A	Vial Na2S2O3 preserved	A	N/A	3.3	Y	Absent	624(7)
L1102731-01B	Vial Na2S2O3 preserved	A	N/A	3.3	Y	Absent	624(7)
L1102731-01C	Vial Na2S2O3 preserved	A	N/A	3.3	Y	Absent	504(14)
L1102731-01D	Vial Na2S2O3 preserved	A	N/A	3.3	Y	Absent	504(14)
L1102731-01E	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1102731-01F	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1102731-01G	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	PCB-608(7)
L1102731-01H	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	PCB-608(7)
L1102731-01I	Amber 1000ml HCl preserved	A	<2	3.3	Y	Absent	TPH-1664(28)
L1102731-01J	Amber 1000ml HCl preserved	A	<2	3.3	Y	Absent	TPH-1664(28)
L1102731-01K	Amber 1000ml H2SO4 preserved	A	<2	3.3	Y	Absent	TPHENOL-420(28)
L1102731-01M	Plastic 1000ml unpreserved	A	7	3.3	Y	Absent	TSS-2540(7)
L1102731-01N	Plastic 1000ml unpreserved	A	7	3.3	Y	Absent	CL-4500(28),HEXCR-3500(1),TRC-4500(1)
L1102731-01O	Plastic 1000ml unpreserved	A	7	3.3	Y	Absent	CL-4500(28),HEXCR-3500(1),TRC-4500(1)
L1102731-01P	Plastic 250ml NaOH preserved	A	>12	3.3	Y	Absent	TCN-4500(14)
L1102731-01Q	Plastic 250ml HNO3 preserved	A	<2	3.3	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)

*Values in parentheses indicate holding time in days

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1102731
Project Number:	060.08859.0003	**Report Date:**	03/09/11

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.

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

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

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.

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

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1102731
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Data Qualifiers

the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

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

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

Report Format: Data Usability Report

Project Name:	NPDES RGP/LOGAN	**Lab Number:**	L1102731
Project Number:	060.08859.0003	**Report Date:**	03/09/11

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

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

5 Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

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

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

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 February 23, 2011 - Westboro Facility

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

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

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

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

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

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

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

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
*Drinking Water (*Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

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

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

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

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

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

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

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

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

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

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

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

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

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Organic Parameters: EPA 524.2)

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

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

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

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NY-DOH.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

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

Department of Defense Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

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

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

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 Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

CHAIN OF CUSTODY

PAGE _____ OF _____

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/2/11

ALPHA Job #: L1102731

Client Information

Client: ATC Associates
Address: 600 W Cummings Park, Suite 5450, Woburn MA 01801
Phone: 781-404-1423
Fax:
Email: brian.cooke@atcassociates.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NPDES RGP/LOGAN
Project Location: East Boston, MA
Project #: 060.08859.0005
Project Manager: Andy Fiedler
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 5-day Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #: 11-060-0580

Regulatory Requirements/Report Limits

State /Fed Program: USEPA RGP Criteria: RGP USEPA

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

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

Other Project Specific Requirements/Comments/Detection Limits:

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

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EDB (504)	624	RGP Metals	Hex Cr, TRC, Cl	Phenol	TCN	PCB	8270	TPH-1664	TSS	Total # Bottles	Sample Specific Comments
02731. 1	ATC-1	3/2/2011	11:30	GW	BC	X	X	X	X	X	X	X	X	X	X		* RGP Sampling and RGP Detection Limits.

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

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	3/2/11 1455	[signature]	3/2/11 1455
[signature]	3-2-11 1720	[signature]	3/2/11 1730

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

FORM NO: 01-01 (rev. 18-Jan-2010)

Attachment 4
Contract Specification Section 02140

SECTION 02140

TREATMENT OF GROUNDWATER FROM DEWATERING ACTIVITIES

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

A. Attention is directed to the General Requirements and Covenants - Division I, Special Provisions - Division IIA and IIB, and Sample Contract Forms – Division IV, which are hereby made a part of this Specification Section.

B. Examine all drawings and all Sections of the Specifications for requirements and provisions affecting the work of this Section.

1.02 WORK INCLUDED

A. This Section specifies the management of groundwater from construction related dewatering activities under this Contract. Specifically, this Section specifies procedures for the monitoring, sampling, reporting, treatment and discharge of groundwater from dewatering activities.

B. This Section specifies work that will be performed in accordance with the requirements of the United States Environmental Protection Agency's (USEPA) National Pollutant Discharge Elimination System (NPDES) Stormwater Program Construction General Permit (CGP). The Authority also has USEPA NPDES Permit No. MA0000787 for general Airport operations. It is the Contractor's responsibility to conduct work in full compliance with the CGP, the Authority's NPDES Permit as well as with the Authority's contract.

C. Dewatering within former Massachusetts Department of Environmental Protection (MassDEP)-listed Disposal Sites and within Activity and Use Limitation (AUL) sites, at a minimum, will be performed in accordance with the requirements of the USEPA 2010 Remediation General Permit (RGP) MAG910000. It is the Contractor's responsibility to conduct work in full compliance with the RGP, where applicable at the Construction Site.

D. Activities for which the Contractor shall be responsible and which are covered by this Section include:

1. Provide, operate, maintain and remove a temporary groundwater dewatering and treatment system as necessary to dewater the excavation for construction purposes and to treat water discharged from the dewatering system prior to discharge to the Logan storm drainage system.

E. The Contractor has the option of discharging to an unpaved surface in close proximity to the excavation provided that groundwater recharges into the ground and runoff does not occur, as allowed by the CGP and/or RGP. If this method cannot be effectively managed, then the Contractor shall do the following:

1. Groundwater shall be pumped into sedimentation tank prior to discharge to the airport's storm drainage system. Prior to discharge to the storm drainage system, the Contractor shall demonstrate through the Sampling and Testing Protocol provided in Section 1.08 that the groundwater meets the Authority's NPDES Permit limits. If petroleum sheen is present, the

Contractor is required to mobilize groundwater treatment equipment prior to discharging groundwater to the storm drainage system.

2. Other groundwater management approaches as allowed by the Contractor-obtained CGP and/or RGP.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02081 - Emergency Response Activities

B. Section 02224 - Initial Classification and Disposition of Excavated Material

C. Section 13505 – Removal of Underground Storage Tanks

D. Section 13510 – Gasoline Storage Tanks and Earthworks

1.04 QUALITY CONTROL

A. The Contractor is responsible for Quality Control and shall perform all testing necessary to ensure dewatering discharges to storm drains meets the CGP, RGP, and Authority's NPDES Permit limits.

B. The detection limits for the field testing procedures shall be a minimum of one-half the discharge limits specified in the CGP, RGP, Authority's NPDES or other applicable discharge limit(s).

C. The Authority will employ quality assurance procedures to ensure the Contractor's compliance with this specification section, permit limits, and other applicable regulations or requirements.

1.05 SUBMITTALS

A. The Contractor shall submit in writing, the following for review and approval by the Engineer and the Authority:

1. Notice of Intent prepared in accordance with the USEPA CGP and RGP requirements prior to submittal to the USEPA.

2. A Stormwater Pollution Prevention Plans (SWPPP) developed in accordance with USEPA CGP and RGP requirements to prevent sediment and other pollutants associated with construction sites from being discharged in stormwater runoff.

3. Layout drawings of the treatment system, if required, to be employed by the Contractor for treating groundwater from dewatering. Included on drawings shall be all equipment sizes and capacities. At a minimum, the designed system shall comply with the requirements established in this specification.

4. The entire submittal must be approved by the Engineer and the Authority prior to the start of excavation and dewatering activities. The Engineer and the Authority will need approximately one week to review and approve submittals.

5. A quality control program for all sampling and field screening analyses that shall be implemented by the Contractor.

6. The Contract shall submit copies of results of all field tests within one week of testing to the Engineer and the Authority.

1.06 RESPONSIBILITY OF THE CONTRACTOR

A. The Contractor shall be responsible for adhering to regulations, specifications, and recognized standard practices within the industry, and environmental regulations related to the management and discharge of groundwater. The Authority shall not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers, passers-by or any others.

B. In the event that the applicable discharge standards are not met, the Contractor shall immediately suspend dewatering operations until corrective actions have been taken to bring the effluent quality into compliance with the standards.

C. The Contractor's dewatering management activities must not adversely or otherwise affect any Airport operations or equipment. Any damage or adverse impact to the Authority's storm drainage system or equipment shall be repaired or corrected immediately at the Contractor's expense.

D. Minimum requirements noted in this Section shall in no way relieve the Contractor of his/her responsibility for implementing additional treatment should it be warranted by the work.

E. The Authority shall not be held negligent or liable for any inadequacies or deficiencies in the treatment of water discharged by the Contractor, including penalties incurred for failure to meet the applicable limits.

F. The Contractor shall be responsible for the proper decommissioning of groundwater monitoring wells within the Construction Site by a licensed well driller in accordance with the MassDEP Publication 313 CMR Standard References for Monitoring Wells. This applies to monitoring wells installed in association with CGP and/or RGP groundwater sample collection, along with monitoring wells associated with former MassDEP Disposal Sites. .

1.07 MANAGEMENT AND TREATMENT OF GROUNDWATER FROM DEWATERING

A. The concentration and nature of contamination may vary depending on location and/or depth of dewatering.

B. The specific treatment system to be employed by the Contractor for the treatment of groundwater from the dewatering system shall be designed by the Contractor. However, the minimum treatment scheme presented in Section 1.07 paragraph C shall be included in the system design. The Contractor shall be responsible for implementing appropriate measures and/or using appropriate equipment to capture and remove solids, separate phase hydrocarbons, and dissolved contaminants deemed unsuitable for discharge under Logan Airport's NPDES Permit.

C. The following program has been developed as a minimum basis for the collection and treatment of groundwater from dewatering:

1. Groundwater from dewatering shall be pumped directly from the excavation to a sedimentation tank or fractionation (Frac) tank (regardless of whether groundwater treatment is needed). The tank storage capacity shall allow for (a) temporary treatment system shutdowns without adversely affecting the construction excavation progress and (b)

temporary storage of water so that laboratory analytical data can be obtained to ensure the NPDES Permit limits are achieved in the event additional treatment equipment is not installed. Costs associated with any stoppage of excavation due to insufficient storage capacity shall be the Contractor's responsibility.

2. The purpose of the tanks is to allow samples to be collected prior to discharge and to settle out sediment. Effluent from the fractionation tanks must comply with the total suspended solids (TSS) discharge limit of 100 mg/L. If there is a potential for the TSS limit to be exceeded, a filtration system must be added to filter the solids from the discharge. Sediment must be removed from the tanks and filters as needed to assure proper operation. The Contractor shall sample the sediment material upon removal and identify disposal options in accordance with the procedures in specification Section 02224 Initial Classification and Disposition of Excavated Material.

3. In areas where separate phase hydrocarbons (SPH) or other dissolved constituents are suspected to be present, the Contractor is responsible for assuring that all SPH is captured in a Frac tank and removed for off-site disposal. The Contractor is required to store sediments and SPH in designated areas which are approved by the Authority and/or the Authority's LSP. The Contractor is responsible for the collection of the samples for the identification of the disposal facility including the preparation of the necessary paperwork for the disposal of the material. The disposal facilities must be approved by the Authority to receive the material before the materials are shipped off-site.

D. The collected groundwater will be discharged to the Logan Storm Drainage System for eventual discharge to Boston Harbor provided that the water quality meets the NPDES Permit limits. A sampling port shall be built into the system to allow for the collection of effluent samples to satisfy the NPDES Permit monitoring requirements.

E. In the event pH is measured that exceeds the NPDES Permit discharge limit of 6.0 to 8.5, the Contractor shall treat the groundwater so that the pH of the effluent meets the discharge standard.

F. Any costs incurred as a result of delays by malfunctioning or capacity of the Frac tank and/or groundwater treatment system(s) are the sole responsibility of the Contractor.

G. In addition to the contaminants identified during the various subsurface investigations, there have been reports of various odors that have been encountered during subsurface activities in and around Logan airport. The odors have been described as "musty", "onion", "garlicky" and based on some reports appear to be associated with the presence of glycol de-icers in the groundwater. Previous studies have indicated that air, water and soil samples taken in the areas where the odors have been encountered contain various organic sulfides and aldehydes including hydrogen sulfide and formaldehyde.

1. In the event that odors become a nuisance, the Contractor shall employ appropriate treatment techniques to control nuisance odors in excavated soils and in groundwater.

1.08 SAMPLING PROTOCOL

A. The Contractor shall be responsible for sampling each tank prior to discharge to the stormwater system. One sample of tank contents is required to evaluate whether contents can be discharged into the Authority's storm drain system, or if additional treatment is necessary.

B. If groundwater treatment is employed, the Contractor shall also be responsible for ensuring that influent to and effluent from the temporary groundwater treatment system are adequately to ensure that NPDES, CGP, and/or RGP discharge limits and reporting requirements are met.

C. The NPDES Permit, issued by the USEPA for stormwater from Logan Airport, has the following standards:

1. Oil & Grease – 15 mg/L
2. pH - 6.0 - 8.5 standard units
3. Total Suspended Solids (TSS) - 100 mg/L

D. All dewatering effluent discharged to the Authority's storm drain system must meet these standards. If the standards cannot be met the discharge must be immediately discontinued until corrective action is taken.

E. Contractor is responsible for any additional sampling and analysis required by the CGP or RGP.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

A. The Contractor shall provide a temporary groundwater treatment system. At a minimum the treatment system shall contain a sedimentation tanks or Fractionation tank (or equivalent) to collect the groundwater. Additional treatment system components shall be added if the NPDES discharge standards (CGP, RGP or Authority's NPDES Permit) are exceeded in the tank.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

A. The Contractor shall perform sampling of the tank's contents and if a groundwater treatment system is required, the Contractor shall field screen influent and effluent streams of the treatment system. The Contractor shall provide written documentation of all sampling procedures and analytical results required by this specification.

B. Treatment of Groundwater Generated by Dewatering

1. All groundwater generated by dewatering on the site shall be subjected to a minimum treatment scheme consisting of a sedimentation tank or Fractionation tank. Additional treatment components shall be added when necessary, to comply with the NPDES discharge standards outlined in Section 1.08 prior to discharge to the Logan storm drainage system. All designs must be approved by the Engineer and the Authority prior to commencement of excavation activities.

2. The Contractor shall be responsible for the proper operation and maintenance of treatment system and associated equipment throughout all dewatering activities.

PART 4- COMPENSATION

4.01 METHODS OF MEASUREMENT

A. No separate measurement will be made for groundwater monitoring, sampling, equipment for groundwater storage, settling, filtration, chemical analysis, or compliance reporting, which shall be incidental to the work of this Section.

B. Measurement for operation of a single groundwater treatment system for the removal of dissolved chemical constituents and separate-phase hydrocarbons, to comply with the NPDES Permit discharge standards (CGP, RGP and Authority's NPDES Permit) will be made on the basis of each day that system is operating. No separate measurement will be made of labor, equipment and materials for the supply and operation of the groundwater treatment system, which shall be considered to be fully compensated under the contract unit price for this item

C. Measurement for mobilization and demobilization of the groundwater treatment system shall be made on the basis of first time the Contractor is required to locate the groundwater treatment system and each subsequent time the Contractor is required to relocate that system to a new location where its operation is required in order to comply with the Authority's NPDES Permit discharge standards referenced in Paragraph 1.08.C and the NPDES CGP or RGP Permit discharge standards. No separate measurement will be made for additional groundwater treatment systems

4.02 BASIS OF PAYMENT

A. Provisions of Fractionation tanks and associated sediment filtration equipment is incidental to the work to be performed; no separate payment will be made for the equipment, labor and materials necessary for furnishing, operating and maintaining fractionation tanks and sediment filtration equipment.

B. Groundwater monitoring, sampling, analysis, discharge/disposal, and reporting are incidental to the work to be performed; no separate payment will be made for the equipment, labor and materials necessary for these activities.

C. Payment for one distinct groundwater treatment system consisting of carbon filtration for the removal of dissolved chemical constituents and separate-phase hydrocarbons will be made at the contract unit bid price per day that the system is in operation. This item will include all labor and all materials required for the proper operation of the system, inclusive of regeneration and/or disposal of spent carbon.

D. Payment for each mobilization and demobilization of the groundwater treatment system will be made at the contract unit price per mobilization / demobilization, which shall be full compensation for all efforts required to bring the system to the Site, relocations to various areas of the Site as required, and removal from the Site upon conclusion of the Work

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02140-1	Mobilization and Demobilization of Groundwater Treatment System	Each
02140-2	Operation of Groundwater Treatment System	per Day

END OF SECTION

Attachment 5
EPA NPDES RGP Authorization to Discharge
(Date of Issue:)