



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

BOSTON, MA 02109-3912

CERTIFIED MAIL

APR 4 2011

Marc Marrocco
Realestate Manager
Vanasse Hangen Brustlin, Inc.
1385 Hancock Street
Quincy, MA 02169

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. Former Mobil Station site located at 450 Southern Artery, Quincy, MA
02169, Norfolk County, Authorization # MAG910479

Dear Mr. Marrocco:

Based on the review of a Notice of Intent (NOI) submitted on behalf of owner Borderline Properties LLC by the firm Vanasse Hangen Brustlin, 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 check list 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 the parameter iron which you have marked "Believed Present". The checklist also includes 1, 4-Dioxane which your laboratory reports indicated there was insufficient sensitivity to detect this parameter at the minimum level established in Appendix VI of the RGP.

Also, the check list includes three parameters you have marked "Believed Absent": total petroleum hydrocarbons, BTX and lead. These are reported at levels below the RGP limits. However, EPA is requiring that these pollutants be monitored based on their

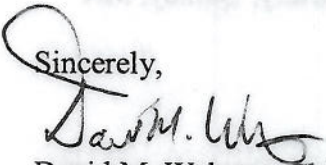
historic presence, and the possibility that they may appear in the intake flow above the RGP criteria limits in the future.

In addition please note that the metals included on the list are dilution dependent pollutants subject to limitations based on selected dilution ranges and technology-based ceiling limitations for facilities located in Massachusetts. With the absence of dilution of freshwater into tidal water, EPA determined that the Dilution Factor Range (DFR) for each parameter is in the one and five (1-5) range. (See Appendix IV of the RGP for Massachusetts facilities) Therefore, the limits for lead of 8.5ug/L and for iron of 1,000ug/L are required to achieve permit compliance at your site.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on December 31, 2011. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

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

Sincerely,


David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathylene Keohane

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

NPDES Authorization Number:	MAG910479 – New
Authorization Issued:	March, 2011
Facility/Site Name:	Former Mobil Station
Facility/Site Address:	Site located at 450 Southern Artery, Quincy, MA 02169, Norfolk County
	Email owner: waltersre@verizon.net; Phone n:781-848-6994
Legal Name of Operator:	
Operator contact name, title, and Address:	Marc Marrocco, Realestate Manager, 1385 Hancock Street Quincy, MA 02169
	Email Marc Marrocco@stopandshop.com
Estimated Date of Completion:	12/31/11
Category and Sub-Category:	Category II. Non petroleum Site Remediation. Sub-category A Volatile Organics (VOC) Only Sites
Receiving Water:	Town River to Hingham Bay

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

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily . Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/l) **, 50 mg/l for hydrostatic testing **, Me#60.2/5mL
	2. Total Residual Chlorine (TRC) ¹	Freshwater = 11 ug/l ** Saltwater = 7.5 ug/l **/ Me#330.5/ML 20ug/L
✓	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/l/ Me# 1664A/5.0mg/LmL
	4. Cyanide (CN) ^{2, 3}	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/l **/ Me#335.4/ML 5ug/L
	5. Benzene (B)	5ug/L /50.0 ug/l for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX))/ Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX))/ Me#8260C/ ML 2ug/L
✓	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴	100 ug/l)/ Me#8260C/ ML 2ug/L
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether	70.0 ug/l /Me#8260C/ ML 10ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	(MtBE)	
	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/ ML5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/l /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/l /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/l/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/l /Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/l/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/l /Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/l/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/l /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/l /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/l /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only (ug/L) /Me#8260C/ ML 50ug/L
✓	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML50 ug/L
	31. Total Phenols	300 ug/l Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML50 ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/l /Me#8270D/ML5ug/L, Me#604 &625/ML10ug/L
	33. Total Phthalates (Phthalate esters) ⁶	3.0 ug/L ** /Me#8270D/ML5ug/L, Me#606/ML10ug/L& Me#625/ML5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/l /Me#8270D/ML5ug/L, Me#606/ML10ug/L& Me#625/ML5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/l
	a. Benzo(a) Anthracene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L, Me#610/ML5ug/L& Me#625/ML5ug/L
	b. Benzo(a) Pyrene ⁷	0.0038 ug/l /Me#8270D/ ML5ug/L,

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

	<u>Metal parameter</u>	<u>Total Recoverable Metal Limit @ H ¹⁰ = 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) ¹¹</u>		<u>Total Recoverable Metal Limit @ H ¹⁰ = 25 mg/l CaCO3 for Discharges in New Hampshire (ug/l) ¹¹</u>	
		<u>Freshwater</u>	<u>Saltwater</u>	<u>Freshwater</u>	<u>Saltwater</u>
	39. Antimony	5.6/10mL		5.6/10mL	
	40. Arsenic **	10/20mL	36/20mL	10/20mL	36/20mL
	41. Cadmium **	0.2/10ml	8.9/10mL	0.8/10mL	9.3/10mL

	Metal parameter	Total Recoverable Metal Limit @ H¹⁰ = 50 mg/l CaCO₃ for discharges in Massachusetts (ug/l) ¹¹		Total Recoverable Metal Limit @ H¹⁰ = 25 mg/l CaCO₃ for Discharges in New Hampshire (ug/l) ¹¹	
		Freshwater	Saltwater	Freshwater	Saltwater
	42. Chromium III (trivalent) **	48.8/15mL	100/15mL	27.7/15mL	100/15mL
	43. Chromium VI (hexavalent) **	11.4/10mL	50.3/10mL	11.4/10mL	50.3/10mL
	44. Copper **	5.2/15mL	3.7/15mL	2.9/15mL	3.7/15mL
✓	45. Lead **	1.3/20mL	8.5/20mL	0.5/20mL	8.5/20mL
	46. Mercury **	0.9/0.2mL	1.1/0.2mL	0.9/0.2mL	1.1/0.2mL
	47. Nickel **	29/20mL	8.2/20mL	16.1/20mL	8.2/20mL
	48. Selenium **	5/20mL	71/20mL	5/20mL	71/20mL
	49. Silver	1.2/10mL	2.2/10mL	0.4/10mL	2.2/10mL
	50. Zinc **	66.6/15mL	85.6/15mL	37/15mL	85.6/15mL
✓	51. Iron	1,000/20mL		1,000/20mL	

	Other Parameters	Limit
✓	52. Instantaneous Flow	Site specific in CFS
✓	53. Total Flow	Site specific in CFS
	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab ¹³
✓	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab ¹³
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab ¹³
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab ¹⁴
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹⁴
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹⁴
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹⁴
	61. Maximum Change in Temperature in MA - Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹⁴
	62. Maximum Change in Temperature in MA - Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹⁴
	63. Maximum Change in Temperature in MA - Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹⁴
	64. Maximum Change in Temperature in MA - Any Class SB water body - October to June	4°F; 1/Month/Grab ¹⁴

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Footnotes:

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

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

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

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

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

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

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

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

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

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

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

¹¹ For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF 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

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 :		Facility/site mailing address:	
Location of facility/site : longitude: _____ latitude: _____	Facility SIC code(s):	Street:	
b) Name of facility/site owner : Borderline Properties LLC		Town:	
Email address of facility/site owner:	State:	Zip:	County:
Telephone no. of facility/site owner :			
Fax no. of facility/site owner :	Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private____ 4. Other ____ if so, describe:		
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator :	Operator telephone no:		
	Operator fax no.:		Operator email: Marc.Marrocco@stopandshop.com
Operator contact name and title:			
Address of operator (if different from owner):	Street:		
Town:	State:	Zip:	County:

d) Check Y for “yes” or N for “no” for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Y___ N___, if Y, number:_____ 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y___ N___, if Y, date and tracking #:_____ 3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Y___ N___ 4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y___ N___	
e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y___ N___ If Y, please list: 1. site identification # assigned by the state of NH or MA: _____ 2. permit or license # assigned: _____ 3. state agency contact information: name, location, and telephone number: _____	f) Is the site/facility covered by any other EPA permit, including: 1. Multi-Sector General Permit? Y___ N___, if Y, number: _____ 2. Final Dewatering General Permit? Y___ N___, if Y, number: _____ 3. EPA Construction General Permit? Y___ N___, if Y, number: _____ 4. Individual NPDES permit? Y___ N___, if Y, number: _____ 5. any other water quality related individual or general permit? Y___ N___, if Y, number: _____
g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y___ N___	
h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.	
<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites _____ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) _____ C. Petroleum Sites with Additional Contamination _____
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites _____ B. VOC Sites with Additional Contamination _____ C. Primarily Heavy Metal Sites _____
III - Contaminated Construction Dewatering	A. General Urban Fill Sites _____ B. Known Contaminated Sites _____

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ____ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ____ C. Hydrostatic Testing of Pipelines and Tanks ____ D. Long-Term Remediation of Contaminated Sumps and Dikes ____ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ____
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:	
b) Provide the following information about each discharge:	
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow _____ Is maximum flow a design value ? Y ____ N ____ Average flow (include units) _____ Is average flow a design value or estimate? _____
3) Latitude and longitude of each discharge within 100 feet: pt.1: lat. _____ long. _____; 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): _____	5) Is the discharge intermittent ____ or seasonal ____? Is discharge ongoing? Y ____ N ____
c) Expected dates of discharge (mm/dd/yy): start _____ end _____	
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).	

3. Contaminant information.

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

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1. Total Suspended Solids (TSS)											
2. Total Residual Chlorine (TRC)											
3. Total Petroleum Hydrocarbons (TPH)											
4. Cyanide (CN)	57125										
5. Benzene (B)	71432										
6. Toluene (T)	108883										
7. Ethylbenzene (E)	100414										
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207										
9. Total BTEX ²	n/a										
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934										
11. Methyl-tert-Butyl Ether (MtBE)	1634044										
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650										

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

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

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

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

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

⁴The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329										
i. Acenaphthylene	208968										
j. Anthracene	120127										
k. Benzo(ghi) Perylene	191242										
l. Fluoranthene	206440										
m. Fluorene	86737										
n. Naphthalene	91203										
o. Phenanthrene	85018										
p. Pyrene	129000										
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.										
38. Chloride	16887006										
39. Antimony	7440360										
40. Arsenic	7440382										
41. Cadmium	7440439										
42. Chromium III (trivalent)	16065831										
43. Chromium VI (hexavalent)	18540299										
44. Copper	7440508										
45. Lead	7439921										
46. Mercury	7439976										
47. Nickel	7440020										
48. Selenium	7782492										
49. Silver	7440224										
50. Zinc	7440666										
51. Iron	7439896										
Other (describe):											

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

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

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal:_____ 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:

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:						
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):			

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

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

Design flow rate of treatment system _____ gpm

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

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:					
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.					
d) Provide the state water quality classification of the receiving water _____					
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs Please attach any calculation sheets used to support stream flow and dilution calculations.					
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y____ N____ If yes, for which pollutant(s)? _____					
Is there a final TMDL? Y____ N____ If yes, for which pollutant(s)? _____					

6. ESA and NHPA Eligibility.

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

- a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?
A ____ B ____ C ____ D ____ E ____ F ____
- b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ____ N ____ Underway ____
- c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is “not likely to adversely affect” listed species or critical habitat received? Y ____ N ____
- d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.
- e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?
1 ____ 2 ____ 3 ____
- f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. Supplemental information.

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

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

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	Former Mobil Station, 450 Southern Artery, Quincy MA
Operator signature:	
Printed Name & Title:	MARC A. MARZOCCHIO / REAL ESTATE MGR.
Date:	03.09.11



Source: USGS Quadrangles

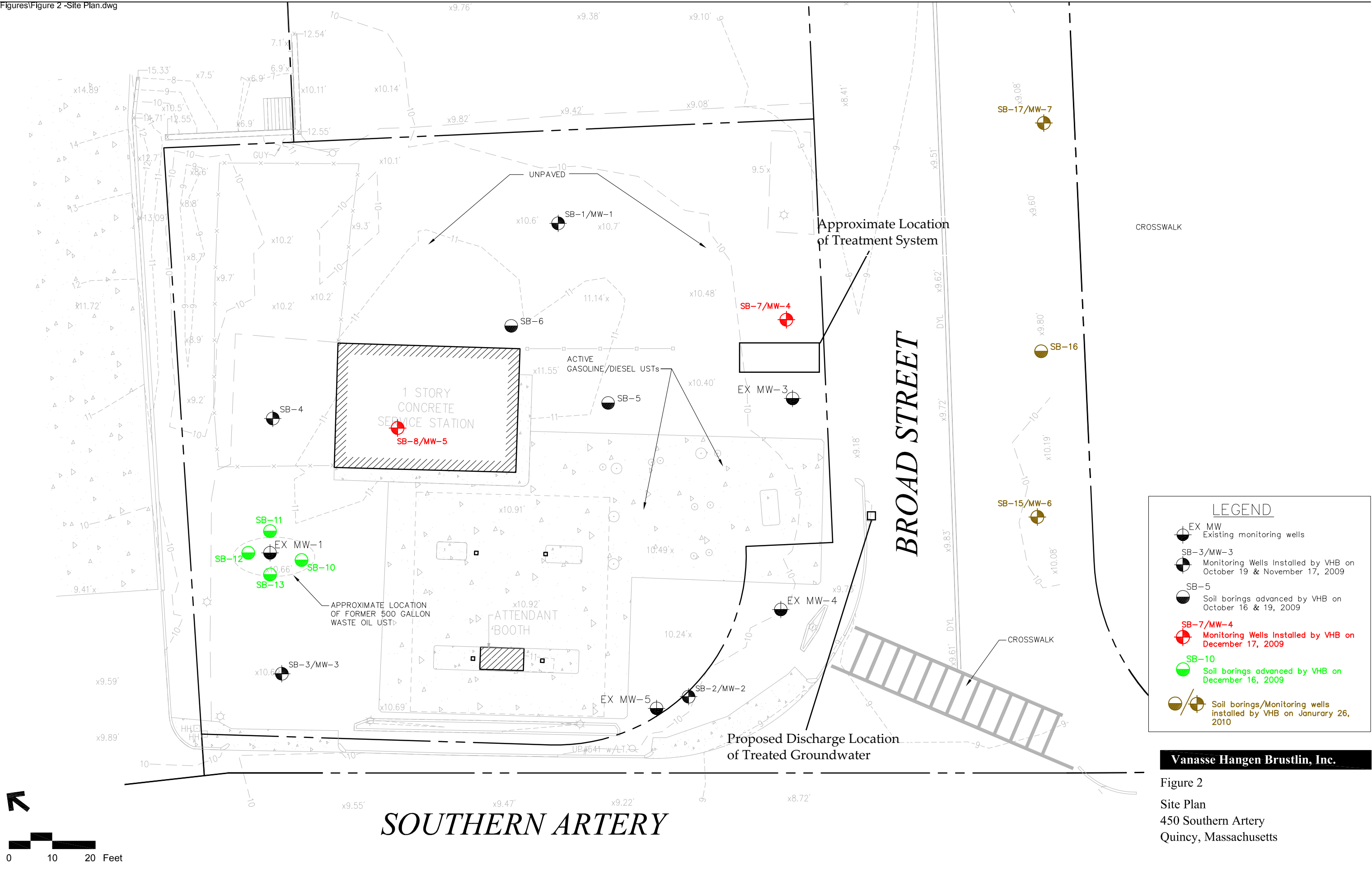
Vanasse Hangen Brustlin, Inc.

Site Locus Map
450 Southern Artery
Quincy, Massachusetts

Figure 1



0 1000 2000 Feet

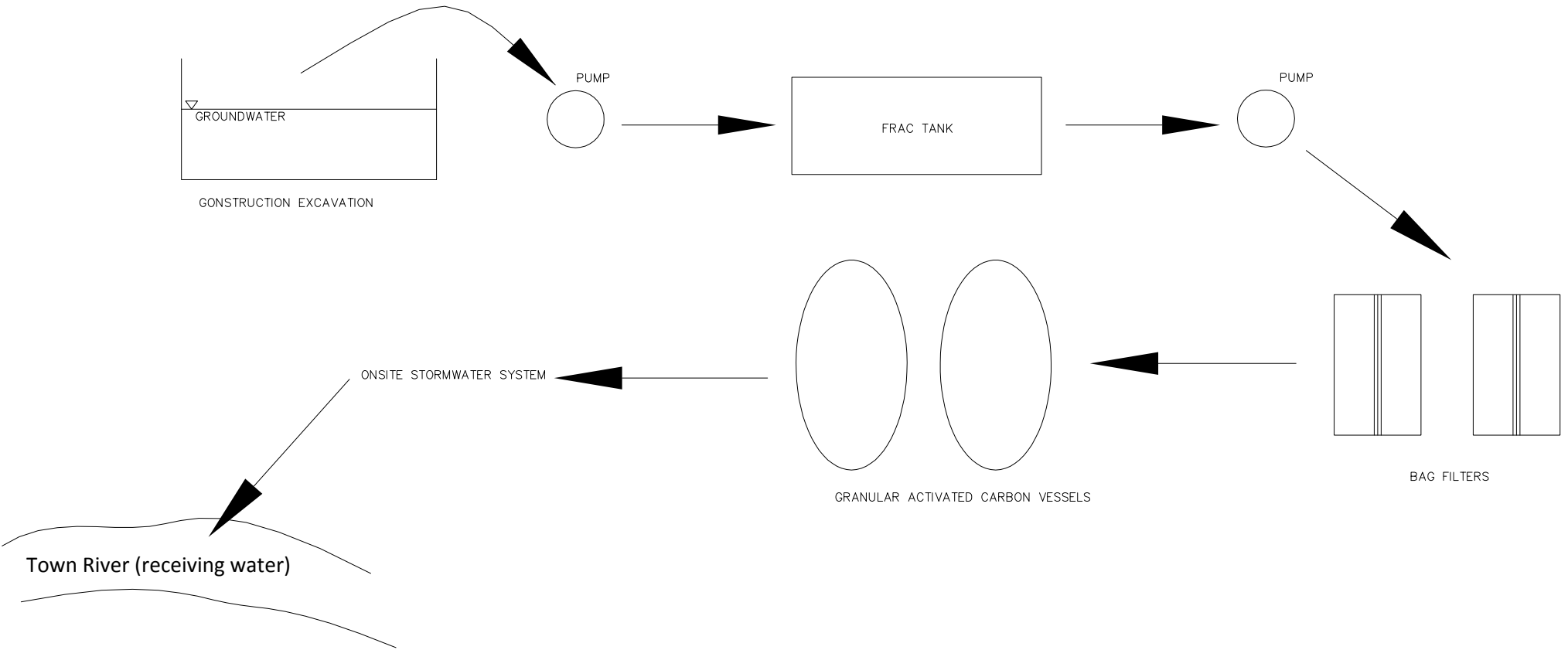


LEGEND

- EX MW
Existing monitoring wells
- SB-3/MW-3
Monitoring Wells Installed by VHB on October 19 & November 17, 2009
- SB-5
Soil borings advanced by VHB on October 16 & 19, 2009
- SB-7/MW-4
Monitoring Wells Installed by VHB on December 17, 2009
- SB-10
Soil borings advanced by VHB on December 16, 2009
- SB-15/MW-6
Soil borings/monitoring wells installed by VHB on January 26, 2010

Vanasse Hangen Brustlin, Inc.

Figure 2
Site Plan
450 Southern Artery
Quincy, Massachusetts



PROPOSED TREATMENT SYSTEM SCHEMATIC

NOTE: SCHEMATIC IS MOST LIKELY TREATMENT SYSTEM. FINAL TREATMENT TO BE DETERMINED BY OPERATOR/CONTRACTOR AND RCP EFFLUENT LIMITS.

Summary of Groundwater Analytical Results
EPA Remediation General Permit for Category II, Sub-Category A
450 Southern Artery, Quincy, Massachusetts
Sample Collected on February 9, 2011

Parameter	EPA Effluent Limit	Analytical Result	
		SB-1/MW-1	
Total Petroleum Hydrocarbons	5,000	4,000	U
Total Phenols	300	30	U
Total Iron	100,000	850	
Polychlorinated Biphenyls (PCBs)			
Aroclor 1016	NE	0.272	U
Aroclor 1221	NE	0.272	U
Aroclor 1232	NE	0.272	U
Aroclor 1242	NE	0.272	U
Aroclor 1248	NE	0.272	U
Aroclor 1254	NE	0.272	U
Aroclor 1260	NE	0.272	U
Total PCBs	0.000064		
Semivolatile Organic Compounds			
Bis(2-ethylhexyl)phthalate	6	5	U
Butyl benzyl phthalate	NE	5	U
Di-n-butylphthalate	NE	5	U
Di-n-octylphthalate	NE	5	U
Diethyl phthalate	NE	5	U
Dimethyl phthalate	NE	5	U
Total Phthalate	3		
Pentachlorophenol	1	0.8	U
Volatile Organic Compounds			
Methylene chloride	4.6	4	U
1,1-Dichloroethane	70	1.5	U
Carbon tetrachloride	4.4	1	U
1,1,2-Trichloroethane	5	1.5	U
Tetrachloroethene	5	1.5	U
1,2-Dichloroethane	5	1.5	U
1,1,1-Trichloroethane	200	2	U
Vinyl chloride	2	2	U
1,1-Dichloroethene	3.2	1	U
cis-1,2-Dichloroethene	70	1	U
Trichloroethene	5	1	U
1,2-Dichlorobenzene	600	5	U
1,3-Dichlorobenzene	320	5	U
1,4-Dichlorobenzene	5	5	U
Benzene	NE	1	U
Toluene	NE	1	U
Ethylbenzene	NE	1	U
p/ m-Xylene	NE	2	U
o-xylene	NE	1	U
Total xylenes	NE	2	U
Total BTEX	100		
Acetone	Monitor Only	10	U
1,4-Dioxane	Monitor Only	2,000	U

Notes:

All units given in micrograms per liter (ug/ l).

NE = Effluent not established

U = Undetected above laboratory reporting limit which is provided to the left of the "U".



ANALYTICAL REPORT

Lab Number:	L1101865
Client:	VHB Environmental Engineering 101 Walnut Street PO Box 9151 Watertown, MA 02471
ATTN:	Paul McKinlay
Phone:	(617) 924-1770
Project Name:	450 SOUTHERN ARTERY
Project Number:	10762.00
Report Date:	02/18/11

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

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

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



Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1101865-01	SB-1/MW-1	QUINCY, MA	02/09/11 11:25

Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

Case Narrative

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

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

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

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

Report Submission

This report replaces the report issued February 17, 2011. At the client's request, the Pesticide results have been removed.

Semivolatile Organics

The surrogate recoveries for L1101865-01 are above the acceptance criteria for 2,4,6-Tribromophenol (140%) and 4-Terphenyl-d14 (144%). Since the sample was non-detect for all target analytes, re-analysis was not required.

Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

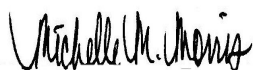
Case Narrative (continued)

Semivolatile Organics by SIM

The WG454881-3 LCSD recovery, associated with L1101865-01, was above the acceptance criteria for Pentachlorophenol (106%); however, the associated sample was non-detect for this target compound. The results of the original analysis are reported.

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

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 02/18/11

ORGANICS

VOLATILES

Project Name: 450 SOUTHERN ARTERY**Lab Number:** L1101865**Project Number:** 10762.00**Report Date:** 02/18/11**SAMPLE RESULTS**

Lab ID: L1101865-01
Client ID: SB-1/MW-1
Sample Location: QUINCY, MA
Matrix: Water
Analytical Method: 5,624
Analytical Date: 02/11/11 11:15
Analyst: TT

Date Collected: 02/09/11 11:25
Date Received: 02/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	4.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.5	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	10	--	1
1,4-Dioxane	ND		ug/l	2000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	91		80-120
Fluorobenzene	100		80-120
4-Bromofluorobenzene	111		80-120

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624

Analytical Date: 02/11/11 07:11

Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG454683-4					
Methylene chloride	ND		ug/l	4.0	--
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	1.0	--
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: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624

Analytical Date: 02/11/11 07:11

Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG454683-4					
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	89		80-120
Fluorobenzene	97		80-120
4-Bromofluorobenzene	113		80-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454683-3								
Methylene chloride	86		-		1-221	-		30
1,1-Dichloroethane	104		-		59-155	-		30
Chloroform	100		-		51-138	-		30
Carbon tetrachloride	111		-		70-140	-		30
1,2-Dichloropropane	101		-		1-210	-		30
Dibromochloromethane	108		-		53-149	-		30
1,1,2-Trichloroethane	113		-		52-150	-		30
2-Chloroethylvinyl ether	94		-		1-305	-		30
Tetrachloroethene	112		-		64-148	-		30
Chlorobenzene	101		-		37-160	-		30
Trichlorofluoromethane	93		-		17-181	-		30
1,2-Dichloroethane	97		-		49-155	-		30
1,1,1-Trichloroethane	100		-		52-162	-		30
Bromodichloromethane	107		-		35-155	-		30
trans-1,3-Dichloropropene	105		-		17-183	-		30
cis-1,3-Dichloropropene	101		-		1-227	-		30
Bromoform	101		-		45-169	-		30
1,1,2,2-Tetrachloroethane	103		-		46-157	-		30
Benzene	104		-		37-151	-		30
Toluene	104		-		47-150	-		30
Ethylbenzene	108		-		37-162	-		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454683-3								
Chloromethane	165		-		1-273	-		30
Bromomethane	95		-		1-242	-		30
Vinyl chloride	73		-		1-251	-		30
Chloroethane	87		-		14-230	-		30
1,1-Dichloroethene	102		-		1-234	-		30
trans-1,2-Dichloroethene	110		-		54-156	-		30
cis-1,2-Dichloroethene	100		-		60-140	-		30
Trichloroethene	100		-		71-157	-		30
1,2-Dichlorobenzene	103		-		18-190	-		30
1,3-Dichlorobenzene	100		-		59-156	-		30
1,4-Dichlorobenzene	106		-		18-190	-		30
p/m-Xylene	104		-		40-160	-		30
o-Xylene	96		-		40-160	-		30
XYLENE (TOTAL)	101		-		40-160	-		30
Styrene	93		-		40-160	-		30
Acetone	78		-		40-160	-		30
Carbon disulfide	90		-		40-160	-		30
2-Butanone	88		-		40-160	-		30
Vinyl acetate	106		-		40-160	-		30
4-Methyl-2-pentanone	101		-		40-160	-		30
2-Hexanone	103		-		40-160	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454683-3								
Acrolein	65		-		40-160	-		30
Acrylonitrile	98		-		40-160	-		30
Dibromomethane	92		-		70-130	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	95				80-120
Fluorobenzene	100				80-120
4-Bromofluorobenzene	104				80-120

Matrix Spike Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454683-5 QC Sample: L1101858-01 Client ID: MS Sample												
Methylene chloride	ND	20	18	91		-	-		1-221	-		30
1,1-Dichloroethane	ND	20	22	108		-	-		59-155	-		30
Chloroform	ND	20	22	108		-	-		51-138	-		30
Carbon tetrachloride	ND	20	25	125		-	-		70-140	-		30
1,2-Dichloropropane	ND	20	21	107		-	-		1-210	-		30
Dibromochloromethane	ND	20	23	114		-	-		53-149	-		30
1,1,2-Trichloroethane	ND	20	23	116		-	-		52-150	-		30
2-Chloroethylvinyl ether	ND	20	ND	0		-	-		1-305	-		30
Tetrachloroethene	ND	20	25	124		-	-		64-148	-		30
Chlorobenzene	ND	20	20	99		-	-		37-160	-		30
Trichlorofluoromethane	ND	20	21	106		-	-		17-181	-		30
1,2-Dichloroethane	ND	20	20	101		-	-		49-155	-		30
1,1,1-Trichloroethane	ND	20	22	109		-	-		52-162	-		30
Bromodichloromethane	ND	20	23	115		-	-		35-155	-		30
trans-1,3-Dichloropropene	ND	20	23	114		-	-		17-183	-		30
cis-1,3-Dichloropropene	ND	20	22	110		-	-		1-227	-		30
Bromoform	ND	20	20	100		-	-		45-169	-		30
1,1,2,2-Tetrachloroethane	ND	20	22	108		-	-		46-157	-		30
Benzene	ND	20	22	110		-	-		35-151	-		30
Toluene	4.6	20	28	118		-	-		47-150	-		30
Ethylbenzene	13	20	38	124		-	-		37-162	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454683-5 QC Sample: L1101858-01 Client ID: MS Sample												
Chloromethane	ND	20	32	162		-	-		1-273	-		30
Bromomethane	ND	20	21	104		-	-		1-242	-		30
Vinyl chloride	ND	20	16	79		-	-		1-251	-		30
Chloroethane	ND	20	18	89		-	-		14-230	-		30
1,1-Dichloroethene	ND	20	22	110		-	-		1-234	-		30
trans-1,2-Dichloroethene	ND	20	23	117		-	-		54-156	-		30
cis-1,2-Dichloroethene	ND	20	22	109		-	-		60-140	-		30
Trichloroethene	ND	20	21	106		-	-		71-157	-		30
1,2-Dichlorobenzene	ND	20	20	101		-	-		18-190	-		30
1,3-Dichlorobenzene	ND	20	21	107		-	-		59-156	-		30
1,4-Dichlorobenzene	ND	20	21	105		-	-		18-190	-		30
p/m-Xylene	89	40	140	128		-	-		40-160	-		30
o-Xylene	38	20	61	116		-	-		40-160	-		30
XYLENE (TOTAL)	130	60	200	124		-	-		40-160	-		30
Styrene	ND	20	18	92		-	-		40-160	-		30
Acetone	ND	50	150	101		-	-		40-160	-		30
Carbon disulfide	ND	20	19	94		-	-		40-160	-		30
2-Butanone	ND	50	68	111		-	-		40-160	-		30
Vinyl acetate	ND	40	65	162	Q	-	-		40-160	-		30
4-Methyl-2-pentanone	ND	50	68	136		-	-		40-160	-		30
2-Hexanone	ND	50	55	110		-	-		40-160	-		30

Matrix Spike Analysis Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454683-5 QC Sample: L1101858-01 Client ID: MS Sample												
Acrolein	ND	40	29	72		-	-		40-160	-		30
Acrylonitrile	ND	40	39	97		-	-		40-160	-		30
Dibromomethane	ND	20	18	90		-	-			-		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
4-Bromofluorobenzene	97				80-120
Fluorobenzene	97				80-120
Pentafluorobenzene	94				80-120

Lab Duplicate Analysis Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG454683-6 QC Sample: L1101858-02 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: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG454683-6 QC Sample: L1101858-02 Client ID: DUP Sample					
Toluene	2.6	2.5	ug/l	4	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
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

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	91		88		80-120
Fluorobenzene	99		98		80-120
4-Bromofluorobenzene	111		114		80-120

SEMIVOLATILES

Project Name: 450 SOUTHERN ARTERY**Lab Number:** L1101865**Project Number:** 10762.00**Report Date:** 02/18/11**SAMPLE RESULTS**

Lab ID: L1101865-01
Client ID: SB-1/MW-1
Sample Location: QUINCY, MA
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 02/16/11 00:14
Analyst: JB

Date Collected: 02/09/11 11:25
Date Received: 02/10/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/13/11 17:13

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	104		15-120
2,4,6-Tribromophenol	140	Q	10-120
4-Terphenyl-d14	144	Q	33-120

Project Name: 450 SOUTHERN ARTERY**Lab Number:** L1101865**Project Number:** 10762.00**Report Date:** 02/18/11**SAMPLE RESULTS**

Lab ID: L1101865-01
Client ID: SB-1/MW-1
Sample Location: QUINCY, MA
Matrix: Water
Analytical Method: 1,8270C-SIM
Analytical Date: 02/15/11 14:16
Analyst: JC

Date Collected: 02/09/11 11:25
Date Received: 02/10/11
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/13/11 17:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	0.80	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	96		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	103		10-120
4-Terphenyl-d14	96		33-120

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C-SIM
 Analytical Date: 02/15/11 10:02
 Analyst: JC

Extraction Method: EPA 3510C
 Extraction Date: 02/13/11 17:11

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG454881-1					
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: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C-SIM
 Analytical Date: 02/15/11 10:02
 Analyst: JC

Extraction Method: EPA 3510C
 Extraction Date: 02/13/11 17:11

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG454881-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	71		10-120
4-Terphenyl-d14	86		33-120

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 02/15/11 19:05
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 02/13/11 17:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG454882-1					
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: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 02/15/11 19:05
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 02/13/11 17:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG454882-1					
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: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 02/15/11 19:05
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 02/13/11 17:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG454882-1					
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	46		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	106		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454881-2 WG454881-3								
Acenaphthene	59		70		37-111	17		40
2-Chloronaphthalene	79		94		40-140	17		40
Fluoranthene	93		101		40-140	8		40
Anthracene	81		88		40-140	8		40
Pyrene	87		94		26-127	8		40
Pentachlorophenol	97		106	Q	9-103	9		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	54		61		21-120
Phenol-d6	40		47		10-120
Nitrobenzene-d5	86		97		23-120
2-Fluorobiphenyl	61		73		15-120
2,4,6-Tribromophenol	82		93		10-120
4-Terphenyl-d14	84		93		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454882-2 WG454882-3								
Acenaphthene	72		88		37-111	20		30
1,2,4-Trichlorobenzene	59		70		39-98	17		30
2-Chloronaphthalene	78		96		40-140	21		30
1,2-Dichlorobenzene	58		69		40-140	17		30
1,4-Dichlorobenzene	57		68		36-97	18		30
2,4-Dinitrotoluene	98	Q	111	Q	24-96	12		30
2,6-Dinitrotoluene	93		111		40-140	18		30
Fluoranthene	99		108		40-140	9		30
4-Chlorophenyl phenyl ether	87		103		40-140	17		30
n-Nitrosodi-n-propylamine	65		79		41-116	19		30
Butyl benzyl phthalate	106		119		40-140	12		30
Anthracene	93		107		40-140	14		30
Pyrene	91		100		26-127	9		30
P-Chloro-M-Cresol	83		102	Q	23-97	21		30
2-Chlorophenol	63		76		27-123	19		30
2-Nitrophenol	71		84		30-130	17		30
4-Nitrophenol	48		49		10-80	2		30
2,4-Dinitrophenol	92		105		20-130	13		30
Pentachlorophenol	84		95		9-103	12		30
Phenol	33		38		12-110	14		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 450 SOUTHERN ARTERY**Lab Number:** L1101865**Project Number:** 10762.00**Report Date:** 02/18/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG454882-2 WG454882-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	42		53		21-120
Phenol-d6	32		39		10-120
Nitrobenzene-d5	68		81		23-120
2-Fluorobiphenyl	73		91		15-120
2,4,6-Tribromophenol	107		124	Q	10-120
4-Terphenyl-d14	98		110		33-120

PCBS

Project Name: 450 SOUTHERN ARTERY**Lab Number:** L1101865**Project Number:** 10762.00**Report Date:** 02/18/11**SAMPLE RESULTS**

Lab ID: L1101865-01
Client ID: SB-1/MW-1
Sample Location: QUINCY, MA
Matrix: Water
Analytical Method: 5,608
Analytical Date: 02/17/11 08:25
Analyst: SH

Date Collected: 02/09/11 11:25
Date Received: 02/10/11
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 02/15/11 07:11
Cleanup Method1: EPA 3665A
Cleanup Date1: 02/16/11
Cleanup Method2: EPA 3660B
Cleanup Date2: 02/16/11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Polychlorinated Biphenyls by GC - Westborough Lab

Aroclor 1016	ND		ug/l	0.272	--	1
Aroclor 1221	ND		ug/l	0.272	--	1
Aroclor 1232	ND		ug/l	0.272	--	1
Aroclor 1242	ND		ug/l	0.272	--	1
Aroclor 1248	ND		ug/l	0.272	--	1
Aroclor 1254	ND		ug/l	0.272	--	1
Aroclor 1260	ND		ug/l	0.272	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		30-150	A
Decachlorobiphenyl	39		30-150	A

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

Method Blank Analysis Batch Quality Control

Analytical Method: 5,608
 Analytical Date: 02/17/11 07:35
 Analyst: SH

Extraction Method: EPA 608
 Extraction Date: 02/15/11 07:11
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 02/16/11
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 02/16/11

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG455046-1					
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	86		30-150	A
Decachlorobiphenyl	58		30-150	A

Matrix Spike Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG455046-3 QC Sample: L1101865-01 Client ID: SB-1/MW-1												
Aroclor 1016	ND	2	2.44	122		-	-		40-126	-		30
Aroclor 1260	ND	2	2.25	113		-	-		40-127	-		30

Surrogate	MS		MSD		Acceptance Criteria	Column
	% Recovery	Qualifier	% Recovery	Qualifier		
2,4,5,6-Tetrachloro-m-xylene	96				30-150	A
Decachlorobiphenyl	35				30-150	A

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 450 SOUTHERN ARTERY**Project Number:** 10762.00**Lab Number:** L1101865**Report Date:** 02/18/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG455046-2								
Aroclor 1016	103		-		40-126	-		30
Aroclor 1260	122		-		40-127	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82				30-150	A
Decachlorobiphenyl	41				30-150	A

Lab Duplicate Analysis Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG455046-4 QC Sample: L1101865-01 Client ID: SB-1/MW-1						
Aroclor 1016	ND	ND	ug/l	NC		30
Aroclor 1221	ND	ND	ug/l	NC		30
Aroclor 1232	ND	ND	ug/l	NC		30
Aroclor 1242	ND	ND	ug/l	NC		30
Aroclor 1248	ND	ND	ug/l	NC		30
Aroclor 1254	ND	ND	ug/l	NC		30
Aroclor 1260	ND	ND	ug/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		97		30-150	A
Decachlorobiphenyl	39		44		30-150	A

METALS

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

SAMPLE RESULTS

Lab ID: L1101865-01

Date Collected: 02/09/11 11:25

Client ID: SB-1/MW-1

Date Received: 02/10/11

Sample Location: QUINCY, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Iron, Total	0.85		mg/l	0.05	--	1	02/11/11 11:15	02/15/11 10:26	EPA 3005A	19,200.7	AI



Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

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: WG454747-1										
Iron, Total	ND		mg/l	0.05	--	1	02/11/11 11:15	02/15/11 10:03	19,200.7	AI

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 450 SOUTHERN ARTERY**Project Number:** 10762.00**Lab Number:** L1101865**Report Date:** 02/18/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG454747-2								
Iron, Total	100		-		85-115	-		

Matrix Spike Analysis Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

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: WG454747-4 QC Sample: L1101852-01 Client ID: MS Sample												
Iron, Total	0.06	1	1.0	94		-	-		75-125	-		20

INORGANICS & MISCELLANEOUS

Project Name: 450 SOUTHERN ARTERY

Lab Number: L1101865

Project Number: 10762.00

Report Date: 02/18/11

SAMPLE RESULTS

Lab ID: L1101865-01

Date Collected: 02/09/11 11:25

Client ID: SB-1/MW-1

Date Received: 02/10/11

Sample Location: QUINCY, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
TPH	ND		mg/l	4.00	--	1	02/14/11 10:30	02/15/11 16:00	74,1664A	JO
Phenolics, Total	ND		mg/l	0.03	--	1	02/15/11 17:00	02/15/11 23:03	4,420.1	TP



Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

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: WG454943-2										
TPH	ND		mg/l	4.00	--	1	02/14/11 10:30	02/15/11 16:00	74,1664A	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG455206-1										
Phenolics, Total	ND		mg/l	0.03	--	1	02/15/11 17:00	02/15/11 22:57	4,420.1	TP

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 450 SOUTHERN ARTERY**Project Number:** 10762.00**Lab Number:** L1101865**Report Date:** 02/18/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG454943-1								
TPH	90		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG455206-2								
Phenolics, Total	101		-		82-111	-		12

Matrix Spike Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

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: WG454943-3 QC Sample: L1101865-01 Client ID: SB-1/MW-1												
TPH	ND	20.8	15.7	75		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG455206-3 QC Sample: L1101895-01 Client ID: MS Sample												
Phenolics, Total	ND	0.8	0.79	99		-	-		77-124	-		12

Lab Duplicate Analysis

Batch Quality Control

Project Name: 450 SOUTHERN ARTERY

Project Number: 10762.00

Lab Number: L1101865

Report Date: 02/18/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG454943-4 QC Sample: L1101858-02 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG455206-4 QC Sample: L1101805-01 Client ID: DUP Sample						
Phenolics, Total	0.03	ND	mg/l	NC		12

Project Name: 450 SOUTHERN ARTERY**Project Number:** 10762.00**Lab Number:** L1101865**Report Date:** 02/18/11**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(*)
L1101865-01A	Vial Na2S2O3 preserved	A	N/A	4	Y	Absent	624(7)
L1101865-01B	Vial Na2S2O3 preserved	A	N/A	4	Y	Absent	624(7)
L1101865-01C	Vial Na2S2O3 preserved	A	N/A	4	Y	Absent	624(7)
L1101865-01D	Vial Na2S2O3 preserved	A	N/A	4	Y	Absent	624(7)
L1101865-01E	Amber 1000ml Na2S2O3	A	7	4	Y	Absent	PCB-608(7)
L1101865-01F	Amber 1000ml Na2S2O3	A	7	4	Y	Absent	PCB-608(7)
L1101865-01G	Amber 1000ml unpreserved	A	7	4	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1101865-01H	Amber 1000ml unpreserved	A	7	4	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1101865-01I	Amber 1000ml HCl preserved	A	N/A	4	Y	Absent	TPH-1664(28)
L1101865-01J	Amber 1000ml HCl preserved	A	N/A	4	Y	Absent	TPH-1664(28)
L1101865-01K	Amber 500ml H2SO4preserved	A	<2	4	Y	Absent	TPHENOL-420(28)
L1101865-01L	Plastic 500ml HNO3 preserved	A	<2	4	Y	Absent	FE-UI(180)

*Values in parentheses indicate holding time in days

Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

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

Report Format: Data Usability Report



Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

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.

Project Name: 450 SOUTHERN ARTERY
Project Number: 10762.00

Lab Number: L1101865
Report Date: 02/18/11

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 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).
- 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.
- 74 Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

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

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

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

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

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

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

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

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

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

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

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

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

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

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

Non-Potable Water

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

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

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

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

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

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH₃-H, 4500NH₃-E, 4500NO₂-B, 4500P-E, 4500-S₂-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. *Organic Parameters:* SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

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

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

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

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B₅+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. *Organic Parameters:* SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

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

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. *Organic Parameters:* EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH₃-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO₃-F, 4500-NO₂-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. *Organic Parameters:* EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. *Organic Parameters:* EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

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

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

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

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. *Organic Parameters:* 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

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

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

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

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

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

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

Department of Defense Certificate/Lab ID: L2217.

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

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO₄-E, 426C, 4500NH₃-B, 4500NH₃-H, 4500NO₃-F, 4500NO₂-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S₂-AD, 3005A, 3015, 9010B, 9030B. *Organic Parameters:* EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

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

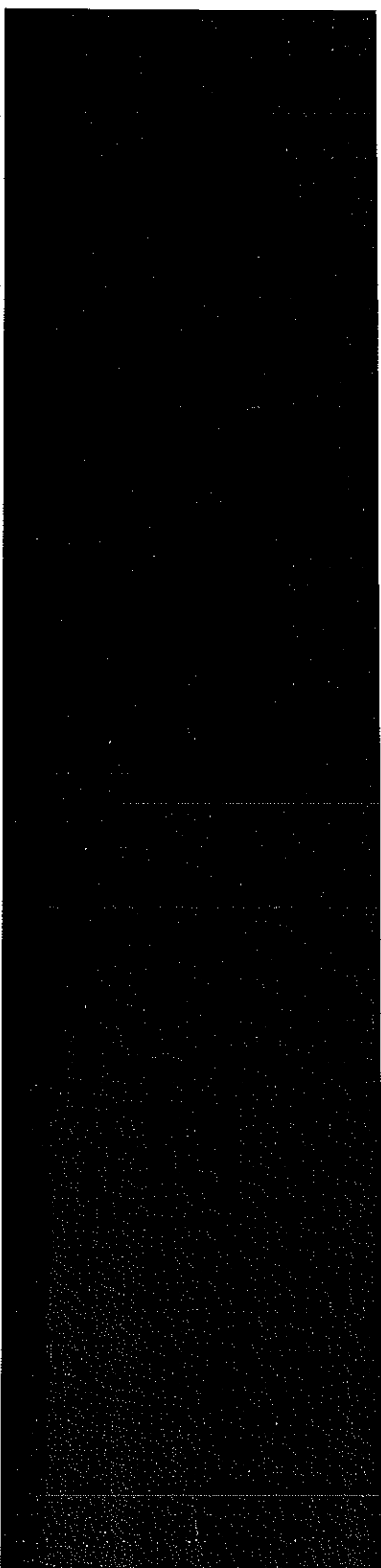
Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

Category II - Non Petroleum Site Remediation				
Sub-category A - Volatile Organic Compound (VOC) Only Sites				
Parameter	CAS Number(s)	Effluent Limit	Limit type based on monthly sample	Sample Type
3. Total Petroleum Hydrocarbons (TPH)		5.0 ug/l	daily maximum	grab
9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴		100 ug/l	daily maximum	grab
15. Carbon Tetrachloride	56-23-5	4.4 ug/l	daily maximum	grab
16. 1,2 Dichlorobenzene (o-DCB)	95-50-1	600 ug/l	daily maximum	grab
17. 1,3 Dichlorobenzene (m-DCB)	541-73-1	320 ug/l	daily maximum	grab
18. 1,4 Dichlorobenzene (p-DCB)	106-46-7	5.0 ug/l	daily maximum	grab
18a. Total dichlorobenzene		763 ug/l - NH only	daily maximum	grab
19. 1,1 Dichloroethane (DCA)	75-34-3	70 ug/l	daily maximum	grab
20. 1,2 Dichloroethane (DCA)	107-06-2	5.0 ug/l	daily maximum	grab
21. 1,1 Dichloroethene (DCE)	75-35-4	3.2 ug/l	daily maximum	grab
22. cis-1,2 Dichloroethene (DCE)	156-59-2	70 ug/l	daily maximum	grab
23. Methylene Chloride	75-09-2	4.6 ug/l	daily maximum	grab
24. Tetrachloroethene (PCE)	127-18-4	5.0 ug/l	daily maximum	grab
25. 1,1,1 Trichloro-ethane (TCA)	71-55-6	200 ug/l	daily maximum	grab
26. 1,1,2 Trichloro-ethane (TCA)	79-00-5	5.0 ug/l	daily maximum	grab
27. Trichloroethene (TCE)	79-01-6	5.0 ug/l	daily maximum	grab
28. Vinyl Chloride (Chloroethene)	75-01-4	2.0 ug/l	daily maximum	grab
29. Acetone	67-64-1	Monitor Only (ug/L)	daily maximum	grab
30. 1,4 Dioxane	123-91-1	Monitor Only (ug/L)	daily maximum	grab
31. Total Phenols	108-95-2	300 ug/l	daily maximum	grab
32. Pentachlorophenol (PCP)	87-86-5	1.0 ug/l	daily maximum	grab
33. Total Phthalates (Phthalate esters) ⁶		3.0 ug/L	monthly average	grab
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117-81-7	6.0 ug/l	daily maximum	grab

Category II - Non Petroleum Site Remediation				
Sub-category A - Volatile Organic Compound (VOC) Only Sites				
Parameter	CAS Number(s)	Effluent Limit	Limit type based on monthly sample	Sample Type
37. Total Polychlorinated Biphenyls (PCBs) ^{8,9}	85-68-7; 84-74-2; 117-84-0; 84-66-2; 131-11-3; 117-81-7.	0.000064 ug/L	daily maximum	grab

Category II - Non Petroleum Site Remediation				
Sub-category A - Volatile Organic Compound (VOC) Only Sites				
		Total Recoverable Metal Limit @ H ¹⁰ = 50 mg/l CaCO ₃ for discharges in Massachusetts (ug/l) ¹¹	Total Recoverable Metal Limit @ H ¹⁰ = 25 mg/l CaCO ₃ for Discharges in New Hampshire (ug/l) ¹¹	Limit type based on monthly sample
Metal parameters	CAS Number(s)	Freshwater Saltwater	Freshwater Saltwater	Sample Type
51. Iron	7439896	1,000	1,000	daily maximum grab





CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab:

ALPHA Job #:

Project Information

Project Name: 450 Southern Ave

Project Location: Quincy, MA

Project #: 16762.00

Project Manager: Paul McKinley

ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

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)

EPA 816 methods required. Please analyze for the attached list only.

Report Information - Data Deliverables

☐ FAX ☐ EMAIL

☒ ADEX ☐ Add'l Deliverables

Regulatory Requirements/Report Limits

State / Fed Program EPA RGP Criteria RGP

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?

504

524

Total / Vol Metals

PCBs

Total Phenols

5070 w/PAH

TPH - 1664

SAMPLE HANDLING

Filtration ☐ Done ☐ Not needed

☐ Lab to do ☐ Preservation

☐ Lab to do

(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MAMCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

Container Type
Preservative

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.