



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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

MAR 30 2012

Johnny Hatem, Manager  
Hatem Enterprises  
94 East Falmouth Highway  
East Falmouth, MA 02536

Re: Authorization to discharge under the Remediation General Permit (RGP) –  
MAG910000. Proposed Fueling Facility site located at 43 Davis Straits Road, Falmouth,  
MA 02540, Barnstable County; Authorization # MAG910528

Dear Mr. Hatem:

Based on the review of a Notice of Intent (NOI) submitted on behalf of your firm Hatem Enterprises by the firm Vanasse Halgen Brustlin, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Owner and Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

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

Please note the enclosed checklist includes parameters that you have marked "Believed Present." The checklist also includes Chloride this is a pollutant required by the RGP regulations to be monitored in all Massachusetts sites. And the parameter Dioxane for which your laboratory reports indicated there was insufficient sensitivity to detect this parameter at the minimum levels established in Appendix VI of the RGP.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). With the absence of dilution to wetlands, EPA determined that the DFR for each parameter is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities)

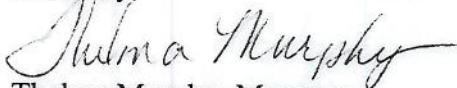
Therefore, the limits for copper of 5.2 ug/L, lead of 1.3 ug/L, nickel of 29 ug/L, and zinc of 66.6ug/L, are required to achieve permit compliance at your site.

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

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on April 27, 2012. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

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

Sincerely,



Thelma Murphy, Manager  
Storm Water and Construction  
Permits Section

Enclosure

cc: Kathleen Keohane, MassDEP  
Raymond A. Jack, Falmouth PWD  
William S. Taber, VHB



**2010 Remediation General Permit  
Summary of Monitoring Parameters<sup>[1]</sup>**

<b>NPDES Authorization Number:</b>		<b>MAG910528</b>
Authorization Issued:	March, 2012	
Facility/Site Name:	Proposed Fueling Facility	
Facility/Site Address:	Located at 43 Davis Straits Road corner with Spring Bars Road, Falmouth, Massachusetts, Barnstable County	
	Email address of owner: Not Provided	
Legal Name of Operator:	Hatem Enterprises	
Operator contact name, title, and Address:	Johnny Hatem, 94 East Falmouth Highway, East Falmouth, MA 02536, Barnstable County	
	Email: Not Provided	
Estimated date of Completion:	April 27, 2012	
Category and Sub-Category:	Category III- Contaminated Construction Dewatering. Sub-category B. Known Contaminated Sites	
RGP Termination Date:	September 10, 2015	
Receiving Water:	Wetland leading to Morse Pond	

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

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



	<b>Parameter</b>	<b>Effluent Limit/Method#/ML</b> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) <sup>4</sup>	100 ug/L/ Me#8260C/ ML 2ug/L
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	14. Naphthalene <sup>5</sup>	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
✓	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) <sup>6</sup>	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L



	<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)
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
	a. Benzo(a) Anthracene <sup>7</sup>	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	b. Benzo(a) Pyrene <sup>7</sup>	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	c. Benzo(b)Fluoranthene <sup>7</sup>	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	d. Benzo(k)Fluoranthene <sup>7</sup>	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	e. Chrysene <sup>7</sup>	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	f. Dibenzo(a,h)anthracene <sup>7</sup>	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	g. Indeno(1,2,3-cd) Pyrene <sup>7</sup>	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
	h. Acenaphthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	j. Anthracene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	l. Fluoranthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	m. Fluorene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene <sup>5</sup>	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	o. Phenanthrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	p. Pyrene	X/Me#8270D/ML5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) <sup>8, 9</sup>	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 <sup>10</sup> = 50 mg/l CaCO<sub>3</sub> for discharges in Massachusetts (ug/l)</u> <small>11/12</small>	<u>Minimum level=ML</u>



		<b>Freshwater</b>	<b>Saltwater</b>	
	39. Antimony	5.6/ML 10		
	40. Arsenic **	10/ML20	36/ML 20	
	41. Cadmium **	0.2/ML10	8.9/ML 10	
	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15	
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10	
✓	44. Copper **	5.2/ML15	3.7/ML 15	
✓	45. Lead **	1.3/ML20	8.5/ML 20	
	46. Mercury **	0.9/ML0.2	1.1/ML 0.2	
✓	47. Nickel **	29/ML20	8.2/ML 20	
	48. Selenium **	5/ML20	71/ML 20	
	49. Silver	1.2/ML10	2.2/ML 10	
✓	50. Zinc **	66.6/ML15	85.6/ML 15	
	51. Iron	1,000/ML 20		

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

Footnotes:

<sup>1</sup> 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).



<sup>2</sup> 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.

<sup>3</sup> 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).

<sup>4</sup> BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

<sup>5</sup> 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.

<sup>6</sup> 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.*

<sup>7</sup> 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.

<sup>8</sup> 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.

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

<sup>10</sup> Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

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

<sup>12</sup> 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).

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

<sup>14</sup> Temperature sampling per Method 170.1



Vanasse Hangen Brustlin, Inc.

TRANSMITTAL

Transportation
Land Development
Environmental Services

101 Walnut Street
Post Office Box 9151
Watertown, MA 02471-9151
617 924 1770
FAX 617 924 2286

Form with fields: Date: 3/15/2012, VHB Project No.: 11010.00, Re: Remediation General Permit NOI, Proposed Fuel Facility, 43 Davis Straits, Falmouth, MA 02540

To: Remediation General Permit Program
Environmental Protection Agency-Region 1
5 Post Office Square, OEP06-4
Boston, MA 02109-3912

We are sending you: [X] Attached [ ] Under Separate cover via Regular Mail the following items:
[ ] Shop drawings [ ] Prints [X] Plans [ ] Diskettes [ ] Specifications [ ] Copy of Letter [ ] Change Order
[ ] Other

Table with 4 columns: Copies, Date, No., Description. Row 1: 1, 3/15/2012, , Remediation General Permit NOI

These are transmitted as checked below:

- [X] For approval [ ] Approved as submitted [ ] Resubmit [ ] Copies for approval
[ ] For your use [ ] Approved as noted [ ] Submit [ ] Copies for distribution
[ ] As requested [ ] Return for corrections [ ] Return [ ] Corrected prints
[ ] For review and comment [ ] For bids due
[ ] Returned prints on loan to VHB

REMARKS:

If VHB provides materials to the Client that are stored electronically, the Client recognizes that data, plans, specifications, reports, documents, or other information recorded on or transmitted as electronic media ("CADD Documents") are subject to undetectable alteration, either intentional or unintentional, due to, among other causes, transmission, conversion, media degradation, software error, or human alteration.

The CADD Documents are instruments of professional service, and shall not be used, in whole or in part, for any project other than that for which they were created, without the express written consent of VHB and without suitable compensation to VHB.

Copy to: Hatem Enterprises
Massachusetts Department of Environmental Protection

By: Dylan M. Malynn





March 15, 2012

Vanasse Hangen Brustlin, Inc.

Ref: 11010.00

Remediation General Permit Program  
Environmental Protection Agency-Region 1  
5 Post Office Square, OEP06-4  
Boston, MA 02109-3912

Re: Remediation General Permit  
43 Davis Straits  
Falmouth, MA 02540

To Whom It May Concern,

On behalf of Hatem Enterprises, Vanasse Hangen Brustlin, Inc. has prepared the attached Remediation General Permit Notice of Intent (NOI) for the purposes of dewatering during the construction of a fuel facility in Falmouth, Massachusetts. The proposed discharge is to a nearby storm drain that flows to a wetland and ultimately to Morse Pond.

A copy of the NOI was submitted to the Massachusetts Department of Environmental Protection Southeast Region. If you have any questions or require any additional information regarding this submission, please feel free to call me at (617) 924-1770 ext. 1318 or email at WTaber@VHB.com. Thank you for your time and attention to this matter.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

*William S. Taber*  
William S. Taber, PE  
Senior Project Manager

Cc: MassDEP-SE Region  
Hatem Enterprises



**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: Proposed Fuel Facility		Facility/site mailing address:	
Location of facility/site:		Street: 43 Davis Straits	
longitude: 70°35'58.35"	Facility SIC code(s): 5541		
latitude: 41°33'25.40"			
b) Name of facility/site owner: Hatem Enterprises		Town: Falmouth	
Email address of facility/site owner: N/A		State: Massachusetts	County: USA
Telephone no. of facility/site owner: 508-246-7937		Zip: 02540	
Fax no. of facility/site owner: N/A		Owner is (check one): 1. Federal <input type="radio"/> 2. State/Tribal <input type="radio"/>	
Address of owner (if different from site):		3. Private <input checked="" type="radio"/> 4. Other <input type="radio"/> if so, describe:	
Street: 94 East Falmouth Highway			
Town: East Falmouth	State: MA	Zip: 02536	County: USA
c) Legal name of operator: Hatem Enterprises		Operator telephone no: 508-246-7937	
Operator contact name and title: Johnny Hatem		Operator fax no.:	
Address of operator (if different from owner):		Operator email: N/A	
Street: 94 East Falmouth Highway			
Town: East Falmouth	State: MA	Zip: 02536	County: USA



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

- Has a prior NPDES permit exclusion been granted for the discharge? Y  N , if Y, number:
- Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y  N , if Y, date and tracking #:
- Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y  N
- 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:

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

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

- Multi-Sector General Permit? Y  N , if Y, number:
- Final Dewatering General Permit? Y  N , if Y, number:
- EPA Construction General Permit? Y  N , if Y, number:
- Individual NPDES permit? Y  N , if Y, number:
- any other water quality related individual or general permit? Y  N , if Y, number:

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

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

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



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

Discharge of groundwater encountered during construction/excavation activities

b) Provide the following information about each discharge:

1) Number of discharge points: 1	2) What is the <b>maximum</b> and <b>average flow rate of discharge</b> (in cubic feet per second, ft <sup>3</sup> /s)? Max. flow: 0.58 cfs Average flow (include units): 0.22 cfs Is maximum flow a design value? Y <input checked="" type="radio"/> N <input type="radio"/> Is average flow a design value or estimate? estimate
3) Latitude and longitude of each discharge within 100 feet:	
pt. 1: lat: 70.599540 long: 41.557060	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): None	5) Is the discharge intermittent <input checked="" type="radio"/> or seasonal <input type="radio"/> Is discharge ongoing? Y <input checked="" type="radio"/> N <input type="radio"/>
c) Expected dates of discharge (mm/dd/yy): start 03/26/12 end 04/27/12	
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.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g. grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
2. Total Residual Chlorine (TRC)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	Grab	4500 Cl-D	N/A	570 ug/l	0.808kg	570 ug/l	0.307kg
3. Total Petroleum Hydrocarbons (TPH)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
4. Cyanide (CN)	57125	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
5. Benzene (B)	71432	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
6. Toluene (T)	108883	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
7. Ethylbenzene (E)	100414	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
9. Total BTEX <sup>2</sup>	n/a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) <sup>3</sup>	106934	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
11. Methyl-tert-Butyl Ether (MTBE)	1634044	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						

\* 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.  
<sup>2</sup> BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.  
<sup>3</sup> EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.



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

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

\* The sum of individual phthalate compounds.



Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
i. Acenaphthylene	208968	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
j. Anthracene	120127	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
k. Benzo(ghi) Perylene	191242	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
l. Fluoranthene	206440	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
m. Fluorene	86737	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
n. Naphthalene	91203	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
o. Phenanthrene	85018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
p. Pyrene	129000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
	85687;										
	84742;										
	117840;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
	84662;										
	131113;										
	117817.										
37. Total Polychlorinated Biphenyls (PCBs)											
38. Chloride	16887006	<input type="checkbox"/>	<input type="checkbox"/>								
39. Antimony	7440360	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
40. Arsenic	7440382	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
41. Cadmium	7440439	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
42. Chromium III (trivalent)	16065831	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
43. Chromium VI (hexavalent)	18540299	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
44. Copper	7440508	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	Grab	200.7	15 ug/l	0.9 ug/l	0.001277	0.9 ug/l	0.000484
45. Lead	7439921	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	Grab	200.7	20 ug/l	0.7 ug/l	0.000993	0.7 ug/l	0.000377
46. Mercury	7439976	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
47. Nickel	7440020	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	Grab	200.7	20 ug/l	0.9 ug/l	0.001277	0.9 ug/l	0.000484
48. Selenium	7782492	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
49. Silver	7440224	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab						
50. Zinc	7440666	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	Grab						
51. Iron	7439896	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Grab	200.7	15 ug/l	16.8 ug/l	0.023839	16.8 ug/l	0.009043
Other (describe):		<input type="checkbox"/>	<input type="checkbox"/>								

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

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

<p><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 <input type="radio"/> N <input checked="" type="radio"/></p> <p><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?</p> <p>Metal: _____ DF: _____</p> <p>Metal: _____ DF: _____</p> <p>Metal: _____ DF: _____</p> <p>Metal: _____ DF: _____</p> <p>Etc.</p>	<p>If yes, which metals?</p> <p>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)?</p> <p>Y <input type="radio"/> N <input type="radio"/> If Y, list which metals:</p>
--	---

**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:

Treated water will be discharged into the existing stormwater drainage systems which outlets to a wetland that drains into Morse Pond.

b) Identify each applicable treatment unit (check all that apply):

Frac. tank <input checked="" type="checkbox"/>	Air stripper <input type="checkbox"/>	Oil/water separator <input type="checkbox"/>	Equalization tanks <input type="checkbox"/>	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
Chlorination <input type="checkbox"/>	De-chlorination <input type="checkbox"/>	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 <input type="checkbox"/>	Within facility (sewer) <input type="checkbox"/>	Storm drain <input checked="" type="checkbox"/>	Wetlands <input type="checkbox"/>	Other (describe): <input type="text"/>
--	--	---	-----------------------------------	--

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:  
 Treated water will be discharged into the existing stormwater drainage system which outlets to a wetland that drains into Morse Pond.

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

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.

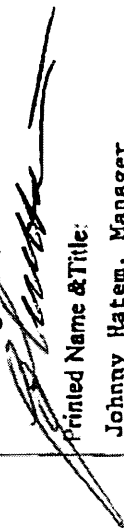
This RGP application is being submitted as a conservative measure given the presence of contaminants in proximity to the area where dewatering will be occurring.

NPDES Permit No. MAG910000  
NPDDES Permit No. NHG910000

**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.*

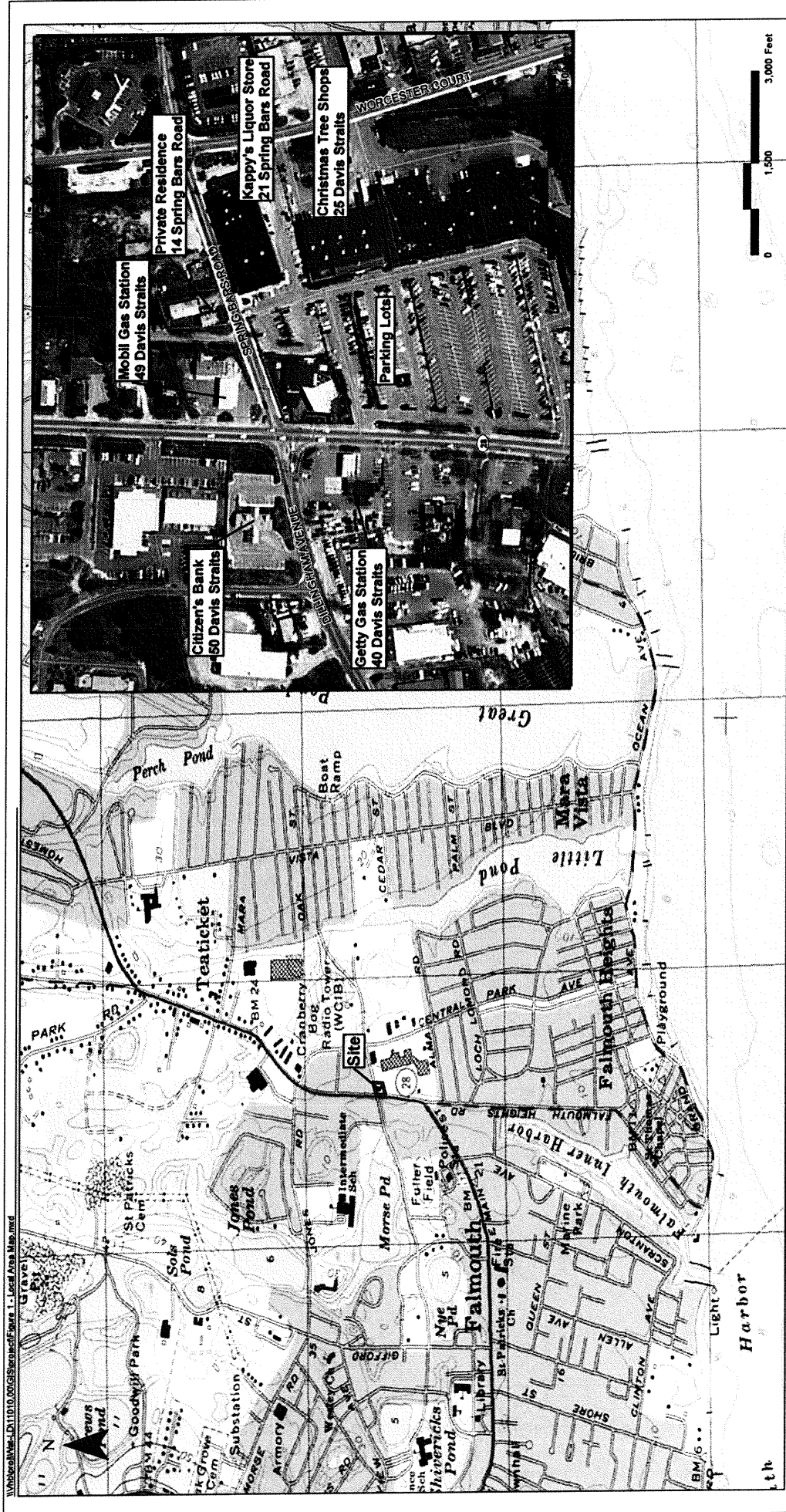
Facility/Site Name: Hatem Enterprises

Operator signature: 

Printed Name & Title: Johnny Hatem, Manager

Date: March 14, 2012





Source: USGS 2011 Quadrangle/MassGIS 2005 Aerial Imagery

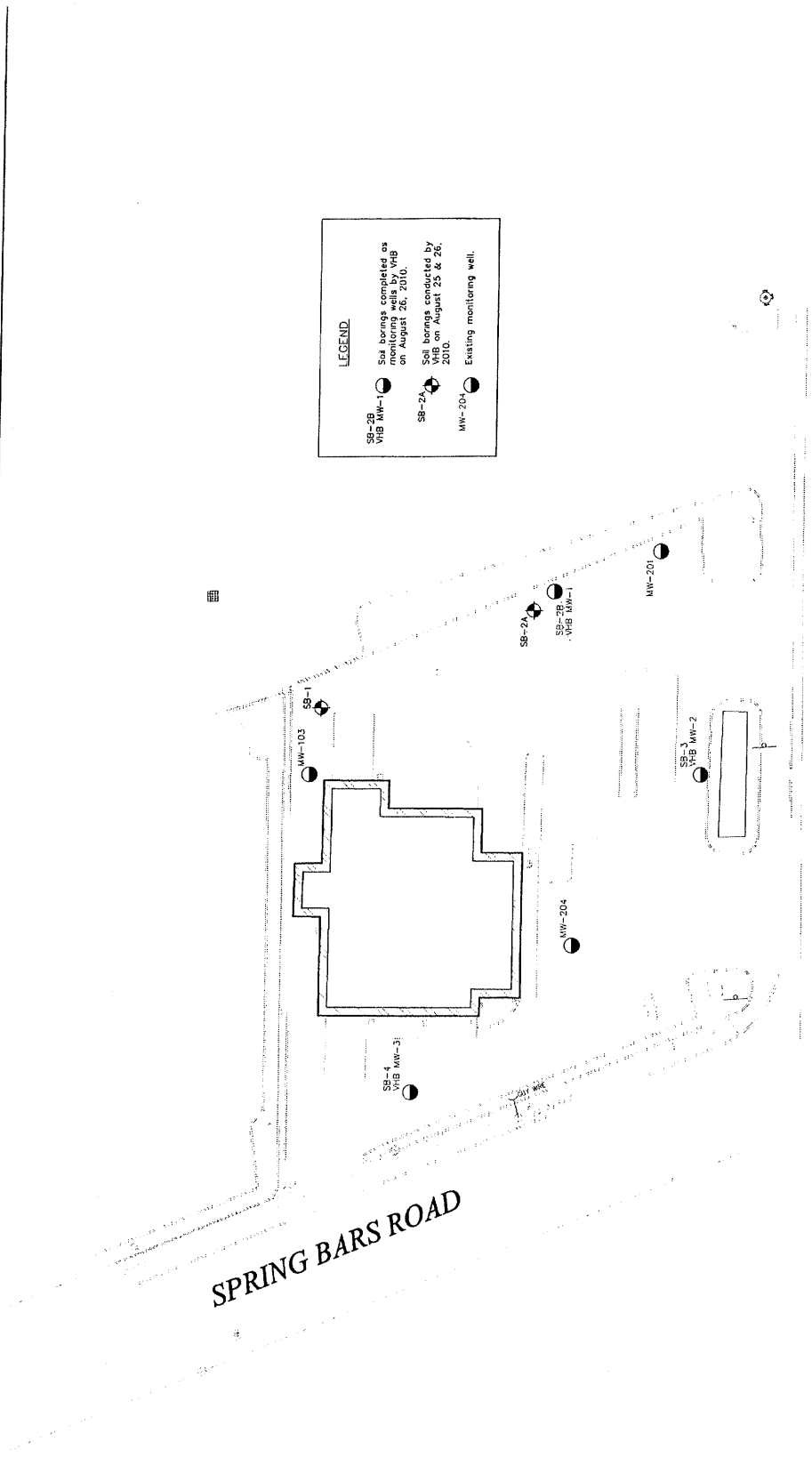
**Legend**

- Approximate Site Boundary

Amass Hagen Brastlin, Inc.

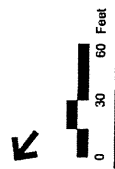
**FIGURE 1**

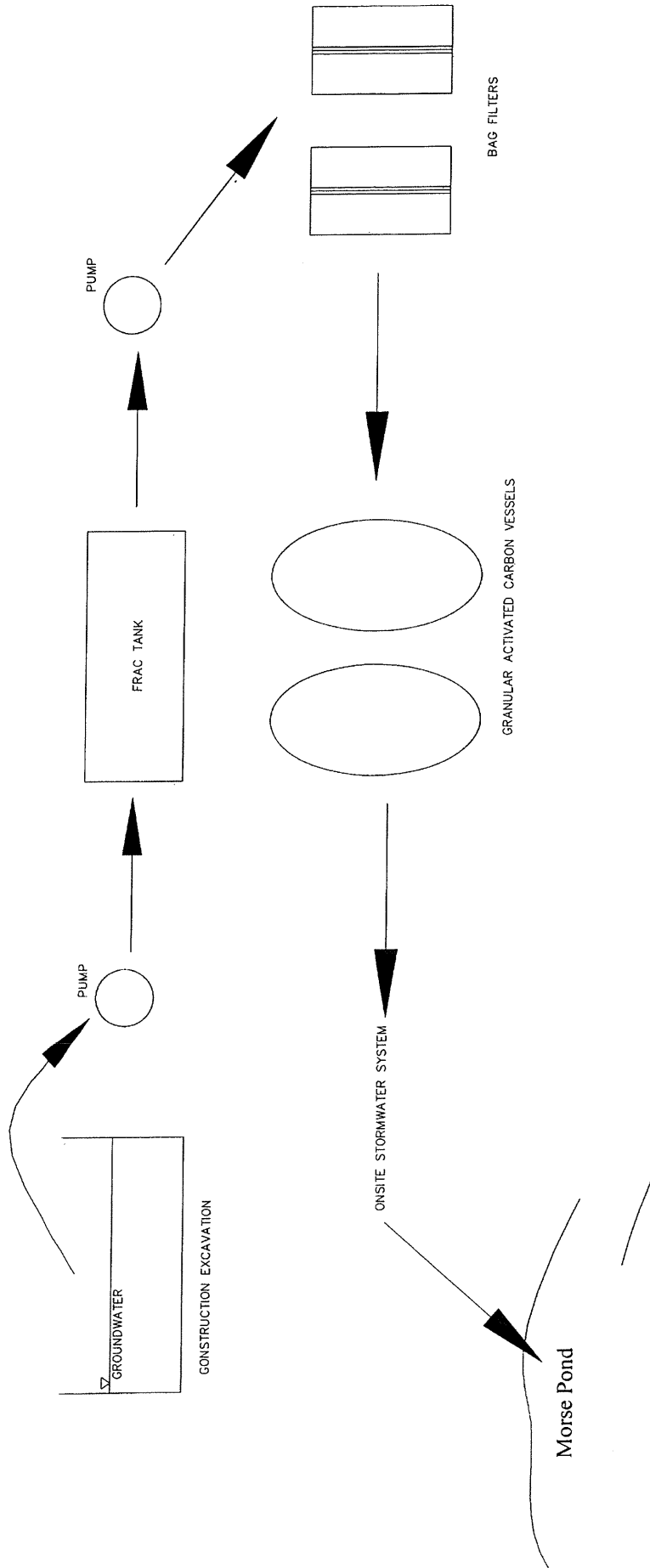
Site Location and Local Area Map  
 Proposed Stop & Shop Fuel Facility  
 43 Davis Straits  
 Falmouth, Massachusetts



**DAVIS STRAITS ROAD (ROUTE 28)**

**Vanasse Hangen Brustlin, Inc.**  
Figure 2  
Site Plan  
43 Davis Straits Road  
Falmouth, Massachusetts



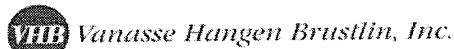


PROPOSED TREATMENT SYSTEM SCHEMATIC

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



**Table 1**  
**Summary of Groundwater Analytical Results**  
**43 Davis Straits**  
**Falmouth, Massachusetts**



LOCATION SAMPLING DATE LAB SAMPLE ID DEPTH TO GROUNDWATER (FT.)	EPA RGP Effluent Limit	Limit Type	Units	MW-103	
				2/10/2012	
				L1202479-01	
<b>General Chemistry</b>					
Solids, Total Suspended	30000	Monthly Average	ug/l	5000	U
Chlorine, Total Residual	11	Monthly Average	ug/l	<b>570</b>	
TPH	5000	Daily Maximum	ug/l	4000	U
Cyanide, Total	5.2	Monthly Average	ug/l	5	U
Phenolics, Total	300	Daily Maximum	ug/l	30	U
Chromium, Hexavalent	11.4	Monthly Average	ug/l	10	U
<b>Pesticides by GC</b>					
1,2-Dibromoethane	0.05	Daily Maximum	ug/l	0.01	U
1,2-Dibromo-3-chloropropane	NE	NA	ug/l	0.01	U
<b>Polychlorinated Biphenyls by GC</b>					
Aroclor 1016	NE	NA	ug/l	0.263	U
Aroclor 1221	NE	NA	ug/l	0.263	U
Aroclor 1232	NE	NA	ug/l	0.263	U
Aroclor 1242	NE	NA	ug/l	0.263	U
Aroclor 1248	NE	NA	ug/l	0.263	U
Aroclor 1254	NE	NA	ug/l	0.263	U
Aroclor 1260	NE	NA	ug/l	0.263	U
<b>Total Polychlorinated Biphenyls</b>	0.000064	Daily Maximum	ug/l	-	
<b>Semivolatile Organics by GC/MS</b>					
Benzidine	NE	NA	ug/l	20	U
1,2,4-Trichlorobenzene	NE	NA	ug/l	5	U
Bis(2-chloroethyl)ether	NE	NA	ug/l	2	U
1,2-Dichlorobenzene	NE	NA	ug/l	2	U
1,3-Dichlorobenzene	320	Daily Maximum	ug/l	2	U
1,4-Dichlorobenzene	5.0	Daily Maximum	ug/l	2	U
3,3'-Dichlorobenzidine	NE	NA	ug/l	5	U
2,4-Dinitrotoluene	NE	NA	ug/l	5	U
2,6-Dinitrotoluene	NE	NA	ug/l	5	U
Azobenzene	NE	NA	ug/l	2	U
4-Chlorophenyl phenyl ether	NE	NA	ug/l	2	U
4-Bromophenyl phenyl ether	NE	NA	ug/l	2	U
Bis(2-chloroisopropyl)ether	NE	NA	ug/l	2	U
Bis(2-chloroethoxy)methane	NE	NA	ug/l	5	U
Hexachlorocyclopentadiene	NE	NA	ug/l	20	U
Isophorone	NE	NA	ug/l	5	U
Nitrobenzene	NE	NA	ug/l	2	U
NitrosoDiPhenylAmine(NDPA)/DP	NE	NA	ug/l	2	U
Bis(2-Ethylhexyl)phthalate	6.0	Daily Maximum	ug/l	3	U
Butyl benzyl phthalate	NE	NA	ug/l	5	U
Di-n-butylphthalate	NE	NA	ug/l	5	U
Di-n-octylphthalate	NE	NA	ug/l	5	U

Diethyl phthalate	NE	NA	ug/l	5	U
Dimethyl phthalate	NE	NA	ug/l	5	U
<b>Total Phthalates</b>	3.0	Monthly Average			
Aniline	NE	NA	ug/l	2	U
4-Chloroaniline	NE	NA	ug/l	5	U
2-Nitroaniline	NE	NA	ug/l	5	U
3-Nitroaniline	NE	NA	ug/l	5	U
4-Nitroaniline	NE	NA	ug/l	5	U
Dibenzofuran	NE	NA	ug/l	2	U
n-Nitrosodimethylamine	NE	NA	ug/l	2	U
2,4,6-Trichlorophenol	NE	NA	ug/l	5	U
P-Chloro-M-Cresol	NE	NA	ug/l	2	U
2-Chlorophenol	NE	NA	ug/l	2	U
2,4-Dichlorophenol	NE	NA	ug/l	5	U
2,4-Dimethylphenol	NE	NA	ug/l	5	U
2-Nitrophenol	NE	NA	ug/l	10	U
4-Nitrophenol	NE	NA	ug/l	10	U
2,4-Dinitrophenol	NE	NA	ug/l	20	U
4,6-Dinitro-o-cresol	NE	NA	ug/l	10	U
Phenol	NE	NA	ug/l	5	U
2-Methylphenol	NE	NA	ug/l	5	U
3-Methylphenol/4-Methylphenol	NE	NA	ug/l	5	U
2,4,5-Trichlorophenol	NE	NA	ug/l	5	U
Benzoic Acid	NE	NA	ug/l	50	U
Benzyl Alcohol	NE	NA	ug/l	2	U
Carbazole	NE	NA	ug/l	2	U
Pyridine	NE	NA	ug/l	5	U
<b>Semivolatile Organics by GC/MS-SIM</b>					
Acenaphthene	NE	NA	ug/l	0.2	U
Acenaphthylene	NE	NA	ug/l	0.2	U
Anthracene	NE	NA	ug/l	0.2	U
Benzo(ghi)perylene	NE	NA	ug/l	0.2	U
Fluoranthene	NE	NA	ug/l	0.2	U
Fluorene	NE	NA	ug/l	0.2	U
Phenanthrene	NE	NA	ug/l	0.2	U
Pyrene	NE	NA	ug/l	0.2	U
<b>Total Group II PAHs</b>	100	Daily Maximum	ug/l	-	
Benzo(a)anthracene	NE	NA	ug/l	0.2	U
Benzo(a)pyrene	NE	NA	ug/l	0.2	U
Benzo(b)fluoranthene	NE	NA	ug/l	0.2	U
Benzo(k)fluoranthene	NE	NA	ug/l	0.2	U
Chrysene	NE	NA	ug/l	0.2	U
Dibenzo(a,h)anthracene	NE	NA	ug/l	0.2	U
Indeno(1,2,3-cd)Pyrene	NE	NA	ug/l	0.2	U
<b>Total Group I PAHs</b>	10.0	Daily Maximum	ug/l	-	
2-Chloronaphthalene	NE	NA	ug/l	0.2	U
Hexachlorobutadiene	NE	NA	ug/l	0.5	U
Naphthalene	20	Daily Maximum	ug/l	0.2	U
1-Methylnaphthalene	NE	NA	ug/l	0.2	U
2-Methylnaphthalene	NE	NA	ug/l	0.2	U
Pentachlorophenol	1.0	Daily Maximum	ug/l	0.8	U
Hexachlorobenzene	NE	NA	ug/l	0.8	U

Hexachloroethane	NE	NA	ug/l	0.8	U
<b>Total Metals</b>					
Antimony, Total	5.6	Monthly Average	ug/l	1	U
Arsenic, Total	10	Monthly Average	ug/l	0.5	U
Cadmium, Total	0.2	Monthly Average	ug/l	0.2	U
Chromium, Total	48.8	Monthly Average	ug/l	0.5	U
Copper, Total	5.2	Monthly Average	ug/l	0.9	
Iron, Total	1000	Monthly Average	ug/l	50	U
Lead, Total	1.3	Monthly Average	ug/l	0.7	
Mercury, Total	0.9	Monthly Average	ug/l	0.2	U
Nickel, Total	29	Monthly Average	ug/l	0.9	
Selenium, Total	5	Monthly Average	ug/l	1	U
Silver, Total	1.2	Daily Maximum	ug/l	0.4	U
Zinc, Total	66.6	Monthly Average	ug/l	16.8	
<b>Volatile Organics by GC/MS</b>					
Benzene	NE	NA	ug/l	0.5	U
Toluene	NE	NA	ug/l	0.75	U
Ethylbenzene	NE	NA	ug/l	0.5	U
p/m-Xylene	NE	NA	ug/l	1	U
o-Xylene	NE	NA	ug/l	1	U
<b>Total BTEX</b>	100	Daily Maximum	ug/l	-	
Methylene chloride	4.6	Daily Maximum	ug/l	3	U
1,1-Dichloroethane	70	Daily Maximum	ug/l	0.75	U
Chloroform	NE	NA	ug/l	0.75	U
Carbon tetrachloride	4.4	Daily Maximum	ug/l	0.5	U
1,2-Dichloropropane	NE	NA	ug/l	1.8	U
Dibromochloromethane	NE	NA	ug/l	0.5	U
1,1,2-Trichloroethane	5.0	Daily Maximum	ug/l	0.75	U
Tetrachloroethene	5.0	Daily Maximum	ug/l	0.5	U
Chlorobenzene	NE	NA	ug/l	0.5	U
Trichlorofluoromethane	NE	NA	ug/l	2.5	U
1,2-Dichloroethane	5.0	Daily Maximum	ug/l	0.5	U
1,1,1-Trichloroethane	200	Daily Maximum	ug/l	0.5	U
Bromodichloromethane	NE	NA	ug/l	0.5	U
trans-1,3-Dichloropropene	NE	NA	ug/l	0.5	U
cis-1,3-Dichloropropene	NE	NA	ug/l	0.5	U
1,1-Dichloropropene	NE	NA	ug/l	2.5	U
Bromoform	NE	NA	ug/l	2	U
1,1,2,2-Tetrachloroethane	NE	NA	ug/l	0.5	U
Chloromethane	NE	NA	ug/l	2.5	U
Bromomethane	NE	NA	ug/l	1	U
Vinyl chloride	2.0	Daily Maximum	ug/l	1	U
Chloroethane	NE	NA	ug/l	1	U
1,1-Dichloroethene	3.2	Daily Maximum	ug/l	0.5	U
trans-1,2-Dichloroethene	NE	NA	ug/l	0.75	U
Trichloroethene	5.0	Daily Maximum	ug/l	0.5	U
1,2-Dichlorobenzene	600	Daily Maximum	ug/l	2.5	U
1,3-Dichlorobenzene	320	Daily Maximum	ug/l	2.5	U
1,4-Dichlorobenzene	5.0	Daily Maximum	ug/l	2.5	U
Methyl tert butyl ether	70	Daily Maximum	ug/l	1	U
cis-1,2-Dichloroethene	70	Daily Maximum	ug/l	0.5	U
Dibromomethane	NE	NA	ug/l	5	U



1,4-Dichlorobutane	NE	NA	ug/l	5	U
1,2,3-Trichloropropane	NE	NA	ug/l	5	U
Styrene	NE	NA	ug/l	1	U
Dichlorodifluoromethane	NE	NA	ug/l	5	U
Acetone	Monitor Only	Daily Maximum	ug/l	5	U
Carbon disulfide	NE	NA	ug/l	5	U
2-Butanone	NE	NA	ug/l	5	U
Vinyl acetate	NE	NA	ug/l	5	U
4-Methyl-2-pentanone	NE	NA	ug/l	5	U
2-Hexanone	NE	NA	ug/l	5	U
Ethyl methacrylate	NE	NA	ug/l	5	U
Acrylonitrile	NE	NA	ug/l	5	U
Bromochloromethane	NE	NA	ug/l	2.5	U
Tetrahydrofuran	NE	NA	ug/l	5	U
2,2-Dichloropropane	NE	NA	ug/l	2.5	U
1,2-Dibromoethane	0.05	Daily Maximum	ug/l	<b>2</b>	U
1,3-Dichloropropane	NE	NA	ug/l	2.5	U
1,1,1,2-Tetrachloroethane	NE	NA	ug/l	0.5	U
Bromobenzene	NE	NA	ug/l	2.5	U
n-Butylbenzene	NE	NA	ug/l	0.5	U
sec-Butylbenzene	NE	NA	ug/l	0.5	U
tert-Butylbenzene	NE	NA	ug/l	2.5	U
o-Chlorotoluene	NE	NA	ug/l	2.5	U
p-Chlorotoluene	NE	NA	ug/l	2.5	U
1,2-Dibromo-3-chloropropane	NE	NA	ug/l	2.5	U
Hexachlorobutadiene	NE	NA	ug/l	0.5	U
Isopropylbenzene	NE	NA	ug/l	0.5	U
p-Isopropyltoluene	NE	NA	ug/l	0.5	U
Naphthalene	20	Daily Maximum	ug/l	2.5	U
n-Propylbenzene	NE	NA	ug/l	0.5	U
1,2,3-Trichlorobenzene	NE	NA	ug/l	2.5	U
1,2,4-Trichlorobenzene	NE	NA	ug/l	2.5	U
1,3,5-Trimethylbenzene	NE	NA	ug/l	2.5	U
1,2,4-Trimethylbenzene	NE	NA	ug/l	2.5	U
trans-1,4-Dichloro-2-butene	NE	NA	ug/l	2.5	U
Ethyl ether	NE	NA	ug/l	2.5	U
Tert-Butyl Alcohol	Monitor Only	Daily Maximum	ug/l	10	U
Tertiary-Amyl Methyl Ether	Monitor Only	Daily Maximum	ug/l	2	U
1,4-Dioxane	Monitor Only	Daily Maximum	ug/l	250	U

**Notes:**

RGP = Remedial General Permit

Bolded, shaded, and underlined results exceed the EPA RGP Effluent Limits set forth in Appendix III

Bolded results are laboratory detection limits that exceed the applicable regulatory thresholds

ug/L = Micrograms per liter, also known as parts per billion (ppb)

U = Analyte was not detected above indicated laboratory reporting threshold

NE = Standard has not been established.

NA = Not applicable

- = Sum is not provided because all constituents were not detected above the individual laboratory detection limits



ANALYTICAL REPORT

Lab Number:	L1202479
Client:	VHB Environmental Engineering 101 Walnut Street PO Box 9151 Watertown, MA 02471
ATTN:	Paul McKinlay
Phone:	(617) 924-1770
Project Name:	43 DAVIS STRAITS
Project Number:	11010.00
Report Date:	02/23/12

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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



**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

### 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. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. 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.

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#### Sample Receipt

All analyses performed were verified with the client.

The sample was received below the appropriate pH for the Total Cyanide analysis. The laboratory added additional NaOH to a pH >12.

#### Volatile Organics

The WG518817-1/-2 LCS/LCSD recoveries, associated with L1202479-01, are outside the individual acceptance criteria for Chloromethane (45%/39%) and Vinyl acetate (135%/148%), but within the overall method allowances. The results of the associated sample are reported.



# ORGANICS

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

**SAMPLE RESULTS**

**Lab ID:** L1202479-01  
**Client ID:** MW-103  
**Sample Location:** FALMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 1,8260B  
**Analytical Date:** 02/16/12 10:38  
**Analyst:** PD

**Date Collected:** 02/10/12 11:45  
**Date Received:** 02/13/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

**SAMPLE RESULTS**

**Lab ID:** L1202479-01  
**Client ID:** MW-103  
**Sample Location:** FALMOUTH, MA

**Date Collected:** 02/10/12 11:45  
**Date Received:** 02/13/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1
Tert-Butyl Alcohol	ND		ug/l	10	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	99		70-130



Project Name: 43 DAVIS STRAITS  
Project Number: 11010.00

Lab Number: L1202479  
Report Date: 02/23/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 02/16/12 09:59  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG518817-3					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Chloroform	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	1.8	--
Dibromochloromethane	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
Tetrachloroethene	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	2.5	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.5	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	2.5	--
Bromomethane	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.75	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	2.5	--
1,3-Dichlorobenzene	ND		ug/l	2.5	--
1,4-Dichlorobenzene	ND		ug/l	2.5	--



Project Name: 43 DAVIS STRAITS  
 Project Number: 11010.00

Lab Number: L1202479  
 Report Date: 02/23/12

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 1,8260B  
 Analytical Date: 02/16/12 09:59  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG518817-3					
Isopropylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	2.5	--
n-Propylbenzene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--
Ethyl ether	ND		ug/l	2.5	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	98		70-130



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS		LCS D		%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits			
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG518817-1 WG518817-2									
Methylene chloride	98		102		70-130		4		20
1,1-Dichloroethane	109		115		70-130		5		20
Chloroform	103		108		70-130		5		20
Carbon tetrachloride	100		107		63-132		7		20
1,2-Dichloropropane	115		119		70-130		3		20
Dibromochloromethane	105		109		63-130		4		20
1,1,2-Trichloroethane	111		114		70-130		3		20
Tetrachloroethene	101		109		70-130		8		20
Chlorobenzene	102		109		75-130		7		25
Trichlorofluoromethane	116		125		62-150		7		20
1,2-Dichloroethane	105		109		70-130		4		20
1,1,1-Trichloroethane	95		101		67-130		6		20
Bromodichloromethane	111		116		67-130		4		20
trans-1,3-Dichloropropene	106		108		70-130		2		20
cis-1,3-Dichloropropene	103		107		70-130		4		20
1,1-Dichloropropene	101		107		70-130		6		20
Bromoform	118		118		54-136		0		20
1,1,2,2-Tetrachloroethane	117		119		67-130		2		20
Benzene	106		112		70-130		6		25
Toluene	105		111		70-130		6		25
Ethylbenzene	112		121		70-130		8		20



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS		LCS D		%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits			
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG518817-1 WG518817-2									
2-Butanone	112		106		63-138		6		20
Vinyl acetate	135	Q	148	Q	70-130		9		20
4-Methyl-2-pentanone	119		110		59-130		8		20
2-Hexanone	125		117		57-130		7		20
Ethyl methacrylate	102		101		70-130		1		20
Acrylonitrile	123		118		70-130		4		20
Bromochloromethane	106		110		70-130		4		20
Tetrahydrofuran	112		108		58-130		4		20
2,2-Dichloropropane	81		84		63-133		4		20
1,2-Dibromoethane	103		105		70-130		2		20
1,3-Dichloropropane	111		114		70-130		3		20
1,1,1,2-Tetrachloroethane	112		118		64-130		5		20
Bromobenzene	107		113		70-130		5		20
n-Butylbenzene	101		116		53-136		14		20
sec-Butylbenzene	106		121		70-130		13		20
tert-Butylbenzene	103		114		70-130		10		20
o-Chlorotoluene	110		120		70-130		9		20
p-Chlorotoluene	108		116		70-130		7		20
1,2-Dibromo-3-chloropropane	94		109		41-144		15		20
Hexachlorobutadiene	96		112		63-130		15		20
Isopropylbenzene	109		119		70-130		9		20



### Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 02 Batch: WG519406-2								
1,2-Dibromoethane	108		-		70-130	-		20
1,2-Dibromo-3-chloropropane	96		-		70-130	-		20





# SEMIVOLATILES

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

**SAMPLE RESULTS**

**Lab ID:** L1202479-01  
**Client ID:** MW-103  
**Sample Location:** FALMOUTH, MA

**Date Collected:** 02/10/12 11:45  
**Date Received:** 02/13/12  
**Field Prep:** Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	24		21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	65		10-120
4-Terphenyl-d14	90		41-149



Project Name: 43 DAVIS STRAITS  
Project Number: 11010.00

Lab Number: L1202479  
Report Date: 02/23/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270C  
Analytical Date: 02/18/12 13:15  
Analyst: JB

Extraction Method: EPA 3510C  
Extraction Date: 02/16/12 00:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG518736-1					
Benzidine	ND		ug/l	20	--
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--
1,2-Dichlorobenzene	ND		ug/l	2.0	--
1,3-Dichlorobenzene	ND		ug/l	2.0	--
1,4-Dichlorobenzene	ND		ug/l	2.0	--
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--
2,4-Dinitrotoluene	ND		ug/l	5.0	--
2,6-Dinitrotoluene	ND		ug/l	5.0	--
Azobenzene	ND		ug/l	2.0	--
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--
Hexachlorocyclopentadiene	ND		ug/l	20	--
Isophorone	ND		ug/l	5.0	--
Nitrobenzene	ND		ug/l	2.0	--
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	--
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Aniline	ND		ug/l	2.0	--
4-Chloroaniline	ND		ug/l	5.0	--
2-Nitroaniline	ND		ug/l	5.0	--
3-Nitroaniline	ND		ug/l	5.0	--
4-Nitroaniline	ND		ug/l	5.0	--
Dibenzofuran	ND		ug/l	2.0	--
n-Nitrosodimethylamine	ND		ug/l	2.0	--

Project Name: 43 DAVIS STRAITS  
Project Number: 11010.00

Lab Number: L1202479  
Report Date: 02/23/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270C-SIM  
Analytical Date: 02/16/12 15:58  
Analyst: JC

Extraction Method: EPA 3510C  
Extraction Date: 02/16/12 00:39

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG518737-1					
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	--



### Lab Control Sample Analysis Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS		LCSD		%Recovery Limits		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	Limits	Limits			
Semivolatle Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG518736-2 WG518736-3									
Benzidine	16		8				72	Q	30
1,2,4-Trichlorobenzene	64		73		39-98		13		30
Bis(2-chloroethyl)ether	81		81		40-140		0		30
1,2-Dichlorobenzene	70		78		40-140		11		30
1,3-Dichlorobenzene	69		76		40-140		10		30
1,4-Dichlorobenzene	68		75		36-97		10		30
3,3'-Dichlorobenzidine	167	Q	164		40-140		2		30
2,4-Dinitrotoluene	94		96		24-96		2		30
2,6-Dinitrotoluene	88		95		40-140		8		30
Azobenzene	89		90		40-140		1		30
4-Chlorophenyl phenyl ether	88		88		40-140		0		30
4-Bromophenyl phenyl ether	92		93		40-140		1		30
Bis(2-chloroisopropyl)ether	80		81		40-140		1		30
Bis(2-chloroethoxy)methane	82		87		40-140		6		30
Hexachlorocyclopentadiene	64		78		40-140		20		30
Isophorone	83		88		40-140		6		30
Nitrobenzene	82		81		40-140		1		30
NitrosoDiPhenylAmine(NDPA)/DPA	163	Q	167		40-140		2		30
Bis(2-Ethylhexyl)phthalate	100		101		40-140		1		30
Butyl benzyl phthalate	95		96		40-140		1		30
Di-n-butylphthalate	94		95		40-140		1		30



### Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG518736-2 WG518736-3								
3-Methylphenol/4-Methylphenol	71		79		30-130	11		30
2,4,5-Trichlorophenol	96		103		30-130	7		30
Benzoic Acid	10		23			83	Q	30
Benzyl Alcohol	73		76			4		30
Carbazole	92		92		55-144	0		30
Pyridine	31		26		10-66	18		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59		60		21-120
Phenol-d6	41		44		10-120
Nitrobenzene-d5	85		86		23-120
2-Fluorobiphenyl	82		83		15-120
2,4,6-Tribromophenol	98		97		10-120
4-Terphenyl-d14	88		89		41-149



### Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS		LCSD		%Recovery Limits		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits			
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG518737-2 WG518737-3									
Hexachlorobenzene	88		87		40-140		1		40
Hexachloroethane	68		69		40-140		1		40

Surrogate	LCS		LCSD		Acceptance Criteria	
	%Recovery	Qual	%Recovery	Qual		
2-Fluorophenol	55		58		21-120	
Phenol-d6	41		43		10-120	
Nitrobenzene-d5	76		82		23-120	
2-Fluorobiphenyl	78		79		15-120	
2,4,6-Tribromophenol	99		99		10-120	
4-Terphenyl-d14	94		95		41-149	



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**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

**SAMPLE RESULTS**

**Lab ID:** L1202479-01  
**Client ID:** MW-103  
**Sample Location:** FALMOUTH, MA  
**Matrix:** Water  
**Analytical Method:** 5,608  
**Analytical Date:** 02/16/12 02:59  
**Analyst:** KB

**Date Collected:** 02/10/12 11:45  
**Date Received:** 02/13/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 608  
**Extraction Date:** 02/15/12 12:52  
**Cleanup Method1:** EPA 3665A  
**Cleanup Date1:** 02/15/12  
**Cleanup Method2:** EPA 3660B  
**Cleanup Date2:** 02/15/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>						
Aroclor 1016	ND		ug/l	0.263	--	1
Aroclor 1221	ND		ug/l	0.263	--	1
Aroclor 1232	ND		ug/l	0.263	--	1
Aroclor 1242	ND		ug/l	0.263	--	1
Aroclor 1248	ND		ug/l	0.263	--	1
Aroclor 1254	ND		ug/l	0.263	--	1
Aroclor 1260	ND		ug/l	0.263	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	86		30-150
Decachlorobiphenyl	78		30-150





**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG518620-3 QC Sample: L1202479-01 Client ID: MW-103										
Aroclor 1016	ND	2.13	1.84	86	-	-	-	40-140	-	50
Aroclor 1260	ND	2.13	1.59	75	-	-	-	40-140	-	50

Surrogate	MS % Recovery	MSD Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	89				30-150
Decachlorobiphenyl	73				30-150



### Lab Duplicate Analysis Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG518620-4 QC Sample: L1202479-01 Client ID: MW-103						
Aroclor 1016	ND	ND	ug/l	NC		50
Aroclor 1221	ND	ND	ug/l	NC		50
Aroclor 1232	ND	ND	ug/l	NC		50
Aroclor 1242	ND	ND	ug/l	NC		50
Aroclor 1248	ND	ND	ug/l	NC		50
Aroclor 1254	ND	ND	ug/l	NC		50
Aroclor 1260	ND	ND	ug/l	NC		50

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	86		79		30-150
Decachlorobiphenyl	78		77		30-150



**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

**SAMPLE RESULTS**

**Lab ID:** L1202479-01  
**Client ID:** MW-103  
**Sample Location:** FALMOUTH, MA  
**Matrix:** Water

**Date Collected:** 02/10/12 11:45  
**Date Received:** 02/13/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Antimony, Total	ND		mg/l	0.0010	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Arsenic, Total	ND		mg/l	0.0005	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Chromium, Total	ND		mg/l	0.0005	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Copper, Total	0.0009		mg/l	0.0005	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Iron, Total	ND		mg/l	0.05	--	1	02/15/12 14:25	02/16/12 12:59	EPA 3005A	19,200.7	AI
Lead, Total	0.0007		mg/l	0.0005	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	--	1	02/16/12 14:10	02/17/12 11:24	EPA 245.1	3,245.1	AK
Nickel, Total	0.0009		mg/l	0.0005	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Selenium, Total	ND		mg/l	0.001	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0004	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM
Zinc, Total	0.0168		mg/l	0.0050	--	1	02/15/12 14:25	02/17/12 18:26	EPA 3005A	1,6020	BM



### Lab Control Sample Analysis

Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	LCS		LCSD		%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	Limits	RPD			
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG518574-2									
Iron, Total	100		-		85-115	-			
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG518676-2									
Antimony, Total	92		-		80-120	-			
Arsenic, Total	108		-		80-120	-			
Cadmium, Total	108		-		80-120	-			
Chromium, Total	103		-		80-120	-			
Copper, Total	110		-		80-120	-			
Lead, Total	106		-		80-120	-			
Nickel, Total	109		-		80-120	-			
Selenium, Total	111		-		80-120	-			
Silver, Total	101		-		80-120	-			
Zinc, Total	107		-		80-120	-			
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG518757-2									
Mercury, Total	100		-		85-115	-			



### Lab Duplicate Analysis Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
<b>Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG518574-3 QC Sample: L1202479-01 Client ID: MW-103</b>						
Iron, Total	ND	ND	mg/l	NC		20
<b>Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG518676-3 QC Sample: L1202479-01 Client ID: MW-103</b>						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.0009	0.0008	mg/l	7		20
Lead, Total	0.0007	ND	mg/l	NC		20
Nickel, Total	0.0009	0.0008	mg/l	10		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.0168	0.0167	mg/l	1		20
<b>Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG518757-3 QC Sample: L1202643-01 Client ID: DUP Sample</b>						
Mercury, Total	0.0004	0.0003	mg/l	7		20





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**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

**SAMPLE RESULTS**

**Lab ID:** L1202479-01  
**Client ID:** MW-103  
**Sample Location:** FALMOUTH, MA  
**Matrix:** Water

**Date Collected:** 02/10/12 11:45  
**Date Received:** 02/13/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/17/12 15:25	30,2540D	DW
TPH	ND		mg/l	4.00	--	1	02/15/12 16:00	02/22/12 11:30	74,1664A	JO
Phenolics, Total	ND		mg/l	0.03	--	1	02/20/12 16:50	02/20/12 20:53	4,420.1	TP



Project Name: 43 DAVIS STRAITS  
 Project Number: 11010.00

Lab Number: L1202479  
 Report Date: 02/23/12

**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: WG518602-2									
TPH	ND	mg/l	4.00	--	1	02/15/12 16:00	02/22/12 11:30	74,1664A	JO
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG518933-1									
Chromium, Hexavalent	ND	mg/l	0.010	--	1	02/16/12 21:40	02/16/12 21:48	30,3500CR-D	TP
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG518946-1									
Chlorine, Total Residual	ND	mg/l	0.02	--	1	-	02/17/12 00:15	30,4500CL-D	TP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG518966-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	02/17/12 15:25	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG519091-2									
Cyanide, Total	ND	mg/l	0.005	--	1	02/17/12 19:00	02/21/12 15:07	30,4500CN-CE	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG519357-1									
Phenolics, Total	ND	mg/l	0.03	--	1	02/20/12 16:50	02/20/12 20:50	4,420.1	TP



**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG518602-3 QC Sample: L1201691-38 Client ID: MS Sample										
TPH	ND	20.2	15.7	78	-	-	-	64-132	-	34
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG518933-3 QC Sample: L1202479-02 Client ID: MW-103										
Chromium, Hexavalent	ND	0.1	0.107	107	-	-	-	85-115	-	20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG519091-3 QC Sample: L1202621-02 Client ID: MS Sample										
Cyanide, Total	ND	0.2	0.209	104	-	-	-	90-110	-	30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG519357-3 QC Sample: L1202812-01 Client ID: MS Sample										
Phenolics, Total	ND	0.8	0.76	95	-	-	-	77-124	-	12



Project Name: 43 DAVIS STRAITS

Lab Number: L1202479

Project Number: 11010.00

Report Date: 02/23/12

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

A Absent  
B Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1202479-01A	Vial HCl preserved	A	N/A	3	Y	Absent	8260(14)
L1202479-01B	Vial HCl preserved	A	N/A	3	Y	Absent	8260(14)
L1202479-01C	Plastic 250ml unpreserved	A	7	3	Y	Absent	8260(7)
L1202479-01D	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L1202479-01E	Plastic 500ml unpreserved	A	7	3	Y	Absent	8260(7)
L1202479-01F	Plastic 1000ml unpreserved	A	7	3	Y	Absent	TSS-2540(7)
L1202479-01G	Amber 1000ml H2SO4 preserved	A	<2	3	Y	Absent	TPHENOL-420(28)
L1202479-01H	Amber 1000ml unpreserved	A	7	3	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1202479-01I	Amber 1000ml unpreserved	A	7	3	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1202479-01J	Amber 1000ml Na2S2O3	A	7	3	Y	Absent	PCB-608(7)
L1202479-01K	Amber 1000ml Na2S2O3	A	7	3	Y	Absent	PCB-608(7)
L1202479-01L	Amber 1000ml HCl preserved	A	N/A	3	Y	Absent	TPH-1664(28)
L1202479-01M	Amber 1000ml HCl preserved	A	N/A	3	Y	Absent	TPH-1664(28)
L1202479-02A	Vial Na2S2O3 preserved	B	N/A	5	Y	Absent	504(14)
L1202479-02B	Vial Na2S2O3 preserved	B	N/A	5	Y	Absent	504(14)
L1202479-02C	Vial Na2S2O3 preserved	B	N/A	5	Y	Absent	504(14)
L1202479-02D	Vial Na2S2O3 preserved	B	N/A	5	Y	Absent	504(14)
L1202479-02E	Plastic 250ml NaOH preserved	B	>12	5	Y	Absent	TCN-4500(14)
L1202479-02F	Plastic 250ml NaOH preserved	B	>12	5	Y	Absent	TCN-4500(14)
L1202479-02G	Plastic 500ml unpreserved	B	7	5	Y	Absent	TRC-4500(1)
L1202479-02H	Plastic 500ml unpreserved	B	7	5	Y	Absent	TRC-4500(1)
L1202479-02I	Plastic 500ml unpreserved	B	7	5	Y	Absent	HEXCR-3500(1)

\*Values in parentheses indicate holding time in days



**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

## GLOSSARY

### Acronyms

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

### Footnotes

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

### Terms

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report



**Project Name:** 43 DAVIS STRAITS  
**Project Number:** 11010.00

**Lab Number:** L1202479  
**Report Date:** 02/23/12

### REFERENCES

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

### LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at its 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.





SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

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

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

*Non-Potable Water* (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

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

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

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

*Non-Potable Water* (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 6020A, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846, 6010B, 6010C, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

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

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

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

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

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



# CHAIN OF CUSTODY

PAGE 1 OF 1

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

### Project Information

Project Name: 43 Davis Street

Project Location: Falmouth, MA

Project #: 11010, 00

Project Manager: Paul McKinley

ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)  
Date Due: Time:

Client: VHB  
Address: 101 Walnut Street  
Waterbury, MA  
Phone: 617-924-1770  
Fax: 617-924-1286  
Email: [dmyaly19@VHB.com](mailto:dmyaly19@VHB.com)

These samples have been previously analyzed by Alpha

### Other Project Specific Requirements/Comments/Detection Limits:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials
02079	MW-103	2/10/12	11:45	GW	Dimm

ANALYSIS	MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO	Regulatory Requirements/Report Limits	State/Fed Program	Criteria	MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO
ANALYSIS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are MCP Analytical Methods Required?	MA-MCP	LC-GW1	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)			
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are CT RCP (Reasonable Confidence Protocols) Required?			

**SAMPLE HANDLING**  
Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do  
 Preservation  
 Lab to do  
(Please specify below)  
Sample Specific Comments

TOTAL # BOTTLES 14

### PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type Preservative

Relinquished By: *Maura Falciano*

Date/Time: 2/13/12 1300

Received By: *Monique Lee*

Date/Time: 2/13/12 1300

Please print clearly, legibly and completely. Samples can not be logged 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.