



TETRA TECH RIZZO

May 26, 2009

Electronic Mail Submission ([NPDES.Generalpermits@epa.gov](mailto:NPDES.Generalpermits@epa.gov))  
US Environmental Protection Agency  
Ann Herrick  
Industrial NPDES Permits (CIP)  
1 Congress Street, Suite 1100  
Boston, MA 02114-2023

**Re: Notice of Intent for Remediation General Permit  
Nichols Hall Phase IV Excavation Dewatering  
231 Forest Street  
Wellesley, MA**

Dear Ms. Herrick:

On behalf of Babson College, Tetra Tech, Inc. d/b/a Tetra Tech Rizzo (TTR) has prepared this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), Massachusetts General Permit (MAG910000). This NOI was prepared in accordance with the general requirements of the NPDES RGP under Federal Register Volume 70, No. 147 and related guidance documentation provided by the U.S. Environmental Protection Agency (EPA).

The signed and completed NOI form is attached to this letter. The following sections provide additional information relevant to this NOI.

**Site Information:** This NOI addresses the proposed discharge of treated water recovered during excavation dewatering activities at the above-referenced property (the Site). The Site is associated with a release of oil and hazardous materials currently regulated under the Massachusetts Contingency Plan (MCP) by the Massachusetts Department of Environmental Protection (MassDEP). The disposal site is tracked under Release Tracking Number (RTN) 3-22805 and is currently in Phase IV of the MCP. Based on available information the disposal site is attributable to past automotive maintenance and repair activities at the Site. Babson College plans to implement a Phase IV Remedy Implementation Plan to conduct remedial activities at the Site including excavation dewatering, treatment and discharge. Off-site discharge of treated water will be conducted under the RGP.

One Grant Street  
Framingham, MA 01701  
Tel 508.903.2000 Fax 508.903.2001



**Discharge Information:** This NOI is for discharges from excavation dewatering activities that are expected to be conducted during the summer of 2009 (pending authorization from EPA). This discharge will be associated with the implementation of MCP response actions under Phase IV to address a release of oil and hazardous materials to the subsurface at the Site. The discharges are expected to be intermittent (related to maintaining dry excavations during work). Work will be initiated during dry weather months to minimize the extent of excavation dewatering required by the project. The maximum discharge flow rate for the facility will be 50 gallons per minute (GPM). However, it is expected that the average flow rate will be limited to approximately 30 GPM.

The treated water will be discharged to an on-site drainage swale with eventual discharge to a small unnamed tributary to Rosemary Brook. A drawing showing the approximate location of the Site in relation to the discharge is attached to the NOI.

**Treatment System Information:** The water recovered during excavation dewatering will require treatment to remove petroleum non-aqueous phase liquid (NAPL), with subsequent treatment to address elevated concentrations of total suspended solids, metals and potential petroleum residuals. The control of petroleum NAPL will be performed via an oil/water separator to separate petroleum NAPL from the influent water prior to further treatment. Petroleum liquids will be periodically removed from the oil/water separator and containerized for subsequent off-site removal in accordance with the MCP and Best Management Practices developed under the NPDES RGP. Subsequent treatment will include particulate settling and separation (using fractionation (frac) tanks or a combined oil/water separator and frac tank). Water pumped from the frac tank(s) will be directed through a minimum of two (2) bag filter units connected in series equipped with 25-micron and 10-micron bag filters respectively. Following particulate removal, the water will be pumped through one appropriately sized (approximately 2,000-lbs) organic clay and granular activated carbon (GAC) blend adsorption unit to further remove petroleum residues. After the organic clay/GAC blend unit the water will be pumped through one appropriately sized GAC adsorption unit for polishing prior to discharge under typical circumstances. A contingency is included for pH adjustment with sodium hydroxide (NaOH) should the influent pH be outside of the EPA approved range. In addition, should dissolved metals be detected above NPDES RGP effluent limits during initial system construction/startup testing, an ion exchange resin (i.e. Lewatit TP 207) for the selective removal of heavy metals may be added to the treatment train. The treatment system will have sample ports to collect water from the influent and effluent. A flow meter (totalizer and instantaneous flow meter) will be installed at the effluent of the system. A groundwater treatment system diagram is included as an attachment to the NOI.



**Request for Coverage Under NPDES RGP:** In consideration of the nature of this discharge and the requirements of the NPDES RGP, it is our opinion that the subject discharge is eligible for coverage under the NPDES RGP. Babson College requests covered under the NPDES RGP for the discharge of treated water to an unnamed tributary to Rosemary Brook. The attached NOI form provides the requisite information pertaining to this NOI and the appropriate signature of the facility Operator/Owner (Babson College). In accordance with Part 1B of the NPDES RGP, the Owner is applying for coverage as the "Operator" of the subject facility. TTR has been subcontracted to the Owner as an environmental consultant to aid in the preparation of this NOI and to oversee implementation of the Best Management Practices at the Site. However, additional "Operators" may be designated in the future and EPA will be notified of such an administrative change via submittal of a Notice of Change. The Owner and/or any subsequently-designated "Operators" shall be responsible for any enforcement action taken or imposed by federal, state or local agencies.

Pending authorization from EPA, discharge of treated water is scheduled to begin on or about August 3, 2009. It is expected that discharge will be limited in duration to approximately 45 days.

Questions or correspondence regarding the subject discharge should be directed through Bill Phelps at Tetra Tech Rizzo (508) 903-2389. Please contact the undersigned at (508) 903-2000 if you have any questions regarding this NOI.

Very truly yours,

Ian S. Cannan  
Project Scientist

  
William C. Phelps  
Project Manager

Enclosures

C: Town of Wellesley, Conservation Commission  
Massachusetts Department of Environmental Protection, Division of Watershed  
Management

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

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

a) Name of facility/site: Nichols Hall Phase IV Excavation Dewatering		Facility/site address:	
Location of facility/site: longitude: 71.262167 latitude: 42.298073	Facility SIC code(s): 1629	Street: 231 Forest Street	
b) Name of facility/site owner: Babson College		Town: Wellesley	
Email address of owner:		State: MA	County: Norfolk
Telephone no. of facility/site owner: 617-239-4389		Zip: 02418	
Fax no. of facility/site owner: 781-239-5841	Owner is (check one): 1. Federal _____ 2. State/Tribal _____		
Address of owner (if different from site):	3. Private <input checked="" type="checkbox"/> 4. other, if so, describe: _____		
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator:		Operator telephone no: 617-239-4389	
Babson College		Operator fax no.: 781-239-5841	
Operator contact name and title: Shelley Kaplan			
Address of operator (if different from owner):		Street:	
Town:	State:	Zip:	County:
d) Check "yes" or "no" for the following:			
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> if "yes," number:			
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> if "yes," date and tracking #:			
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes  No   
 If "yes," please list:  
 1. site identification # assigned by the state of NH or MA: RTN 3-22805  
 2. permit or license # assigned: MCP Tier II Permit  
 3. state agency contact information: name, location, and telephone number:  
 MassDEP NERO, 978-694-3200

f) Is the site/facility covered by any other EPA permit, including:  
 1. multi-sector storm water general permit? Y  N , if Y, number:  
 if Y, number:  
 2. phase I or II construction storm water general permit? Y  N ,  
 if Y, number:  
 3. individual NPDES permit? Y  N , if Y, number:  
 4. any other water quality related permit? Y  N , if Y, number:

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:  
**dewatering of excavations associated with Comprehensive Response Actions under the MCP**

b) Provide the following information about each discharge:  
 1) Number of discharge points: **1**  
 2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft<sup>3</sup>/s)? Max. flow 0.1114  
 Average flow 0.0668 Is maximum flow a design value? Y  N   
 For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.

3) Latitude and longitude of each discharge within 100 feet: pt.1: long. -71.262167 lat. 42.298073 ; pt.2: long. lat. ; pt.3: long. lat. ;  
 pt.4: long. lat. ; pt.5: long. lat. ; pt.6: long. lat. ; pt.7: long. lat. ; pt.8: long. lat. ; etc.:

4) If hydrostatic testing, total volume of the discharge (gals):  
 Is the discharge intermittent  or seasonal  ?  
 Is discharge ongoing Yes  No  ?

c) Expected dates of discharge (mm/dd/yy): start 08/01/09 end 12/31/09

d) Please attach a line drawing or flow schematic showing water flow through the facility including:  
 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s). see attachment 1

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation
		✓	✓			

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed. **SEE attachment 2**

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		✓	1	grab	2540D	5 mg/L	1600000	4.4 E+02	1600000	2.6E+02
2. Total Residual Chlorine	✓		1	grab	4500CL	0.02 mg/L	0	0	0	0
3. Total Petroleum Hydrocarbons		✓	1	grab	1664	4.8 mg/L	0	0	0	0
4. Cyanide	✓		1	grab	4500CN	0.005 mg/L	0	0	0	0
5. Benzene		✓	1	grab	8260B	0.50 ug/L	1.1	3.0E-04	1.1	1.8E-04
6. Toluene	✓		1	grab	8260B	0.75 ug/L	0	0	0	0
7. Ethylbenzene	✓		1	grab	8260B	0.50 ug/L	0	0	0	0
8. (m,p,o) Xylenes	✓		1	grab	8260B	1.0 ug/L	0	0	0	0
9. Total BTEX <sup>4</sup>		✓	1	grab	8260B		1.1	3.0E-04	1.1	1.8E-04

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide <sup>5</sup> (1,2- Dibromo-methane)	✓		1	grab	504.1	0.020 ug/L	0	0	0	0
11. Methyl-tert-Butyl Ether (MtBE)		✓	1	grab	8260B	1.0 ug/L	1.3	3.5E-04	1.3	2.1E-04
12. tert-Butyl Alcohol (TBA)	✓		1	grab	8260B	30 ug/L	0	0	0	0
13. tert-Amyl Methyl Ether (TAME)	✓		1	grab	8260B	2.0 ug/L	0	0	0	0
14. Naphthalene	✓		1	grab	8260B	2.5 ug/L	0	0	0	0
15. Carbon Tetra-chloride	✓		1	grab	8260B	0.5 ug/L	0	0	0	0
16. 1,4 Dichlorobenzene	✓		1	grab	8260B	2.5 ug/L	0	0	0	0
17. 1,2 Dichlorobenzene	✓		1	grab	8260B	2.5 ug/L	0	0	0	0
18. 1,3 Dichlorobenzene	✓		1	grab	8260B	2.5 ug/L	0	0	0	0
19. 1,1 Dichloroethane	✓		1	grab	8260B	0.75 ug/L	0	0	0	0
20. 1,2 Dichloroethane	✓		1	grab	8260B	0.50 ug/L	0	0	0	0
21. 1,1 Dichloroethylene	✓		1	grab	8260B	0.50 ug/L	0	0	0	0
22. cis-1,2 Dichloro-ethylene	✓		1	grab	8260B	0.50 ug/L	0	0	0	0
23. Dichloromethane (Methylene Chloride)	✓		1	grab	8260B	3.0 ug/L	0	0	0	0
24. Tetrachloroethylene	✓		1	grab	8260B	0.50 ug/L	0	0	0	0

<sup>5</sup>EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	grab	8260B	0.50 ug/L	0	0	0	0
26. 1,1,2 Trichloroethane	✓		1	grab	8260B	0.75 ug/L	0	0	0	0
27. Trichloroethylene	✓		1	grab	8260B	0.50 ug/L	0	0	0	0
28. Vinyl Chloride	✓		1	grab	8260B	1.0 ug/L	0	0	0	0
29. Acetone	✓		1	grab	8260B	5.0 ug/L	0	0	0	0
30. 1,4 Dioxane	✓		1	grab	8260B	250 ug/L	0	0	0	0
31. Total Phenols	✓		1	grab	8270C	30 ug/L	0	0	0	0
32. Pentachlorophenol	✓		1	grab	8270C	4.0 ug/L	0	0	0	0
33. Total Phthalates <sup>6</sup> (Phthalate esters)	✓		1	grab	8270C	4.9 ug/L	0	0	0	0
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	grab	8270C	4.9 ug/L	0	0	0	0
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	grab	8270C		0	0	0	0
a. Benzo(a) Anthracene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
b. Benzo(a) Pyrene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
c. Benzo(b) Fluoranthene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
d. Benzo(k) Fluoranthene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
e. Chrysene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0

<sup>6</sup>The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (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)
f. Dibenzo(a,h)anthracene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
g. Indeno(1,2,3-cd)Pyrene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	grab	8270C		0	0	0	0
h. Acenaphthene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
i. Acenaphthylene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
j. Anthracene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
k. Benzo(ghi) Perylene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
l. Fluoranthene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
m. Fluorene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
n. Naphthalene-	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
o. Phenanthrene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
p. Pyrene	✓		1	grab	8270C	0.99 ug/L	0	0	0	0
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	grab	608	0.258 ug/L	0	0	0	0
38. Antimony		✓	1	grab	3005A	0.0005 mg/L	0.7	1.9E-04	0.7	1.1E-04
39. Arsenic		✓	1	grab	3005A	0.0005 mg/L	16.3	4.4E-03	16.3	2.7E-03
40. Cadmium.		✓	1	grab	3005A	0.0002 mg/L	0.4	1.1E-04	0.4	6.5E-05
41. Chromium III		✓	1	grab	3005A	0.0005 mg/L	62.6	1.7E-02	62.6	1.0E-02
42. Chromium VI	✓		1	grab	3005A	10 ug/L	0	0	0	0

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper		✓	1	grab	3005A	0.0005 mg/L	59.1	1.6E-02	59.1	9.7E-03
44. Lead		✓	1	grab	3005A	0.0005 mg/L	171.9	4.7E-02	171.9	2.8E-02
45. Mercury	✓		1	grab	245.2	0.0002 mg/L	0	0	0	0
46. Nickel		✓	1	grab	3005A	0.0005 mg/L	28.7	7.8E-03	28.7	4.7E-03
47. Selenium		✓	1	grab	3005A	0.001 mg/L	2	5.4E-04	2	3.3E-04
48. Silver	✓		1	grab	3005A	0.0004 mg/L	0	0	0	0
49. Zinc		✓	1	grab	3005A	0.0050 mg/L	152.9	4.2E-02	152.9	2.5E-02
50. Iron		✓	1	grab	200.7	0.05 mg/L	54000	15	54000	8.8
Other (describe):										

c) For discharges where metals are believed present, please fill out the following:

<p><i>Step 1:</i> Do any of the metals in the influent have a <b>reasonable potential</b> to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/></p> <p><i>Step 2:</i> For any metals which have <b>reasonable potential</b> to exceed the <b>Appendix III</b> limits, calculate the <b>dilution factor (DF)</b> 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? Metals: <u>As, Cd, Cr, Cu, Pb, Zn, Fe</u> DF: <u>1.134</u></p>	<p>If yes, which metals? <u>As, Cd, Cr, Cu, Pb, Zn, Fe</u></p> <p>Look up the limit calculated at the corresponding dilution factor in <b>Appendix IV</b>. Do any of the metals in the <b>influent</b> have the potential to exceed the corresponding <b>effluent</b> limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> If "Yes," list which metals: <u>As, Cd, Cr, Cu, Pb, Zn, Fe</u></p>
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**4. Treatment system information.** Please describe the treatment system using separate sheets as necessary, including: see attached description

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

Frac. tank <input checked="" type="checkbox"/>	Air stripper	Oil/water separator <input checked="" type="checkbox"/>	Equalization tanks	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
Chlorination	Dechlorination	Other (please describe): organo/clay filter, ion exchange resin, and pH adjustment			

c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system:  
 Average flow rate of discharge 30 Maximum flow rate of treatment system 50 Design flow rate of treatment system 70

d) A description of chemical additives being used or planned to be used (attach MSDS sheets): pH adjustment NaOH, ion exchange resin, MSDS in attachment 3

**5. Receiving surface water(s).** Please provide information about the receiving water(s), using separate sheets as necessary: see attachment 4

a) Identify the discharge pathway:

Direct <input checked="" type="checkbox"/>	Within facility	Storm drain	River/brook <input checked="" type="checkbox"/>	Wetlands	Other (describe):
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b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:  
 discharge to on-site drainage swale and retention basin which discharges to a small unnamed tributary to Rosemary Brook

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: see attachment 4  
 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 Class B.

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.0149 cfs  
 Please attach any calculation sheets used to support stream flow and dilution calculations. see attachment 5

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes  No  If yes, for which pollutant(s)?  
 Is there a TMDL? Yes  No  If yes, for which pollutant(s)?  
 nutrients, organic enrichment, low DO, turbidity, SS, taste, odor and color

Rosemary Brook has a TMDL for pathogens

**6. Results of Consultation with Federal Services:** Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes  No  see attachment 6  
Has any consultation with the federal services been completed? Yes  No  or is consultation underway? Yes  No   
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):  
a "no jeopardy" opinion?  or written concurrence  on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?  
Yes  No  Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes  No   
see attachment 7 for Historic Places information

**7. Supplemental information:**

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

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

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

Facility/Site Name:

Nichols Hall Phase IV Excavation Dewatering

Operator signature:



Title:

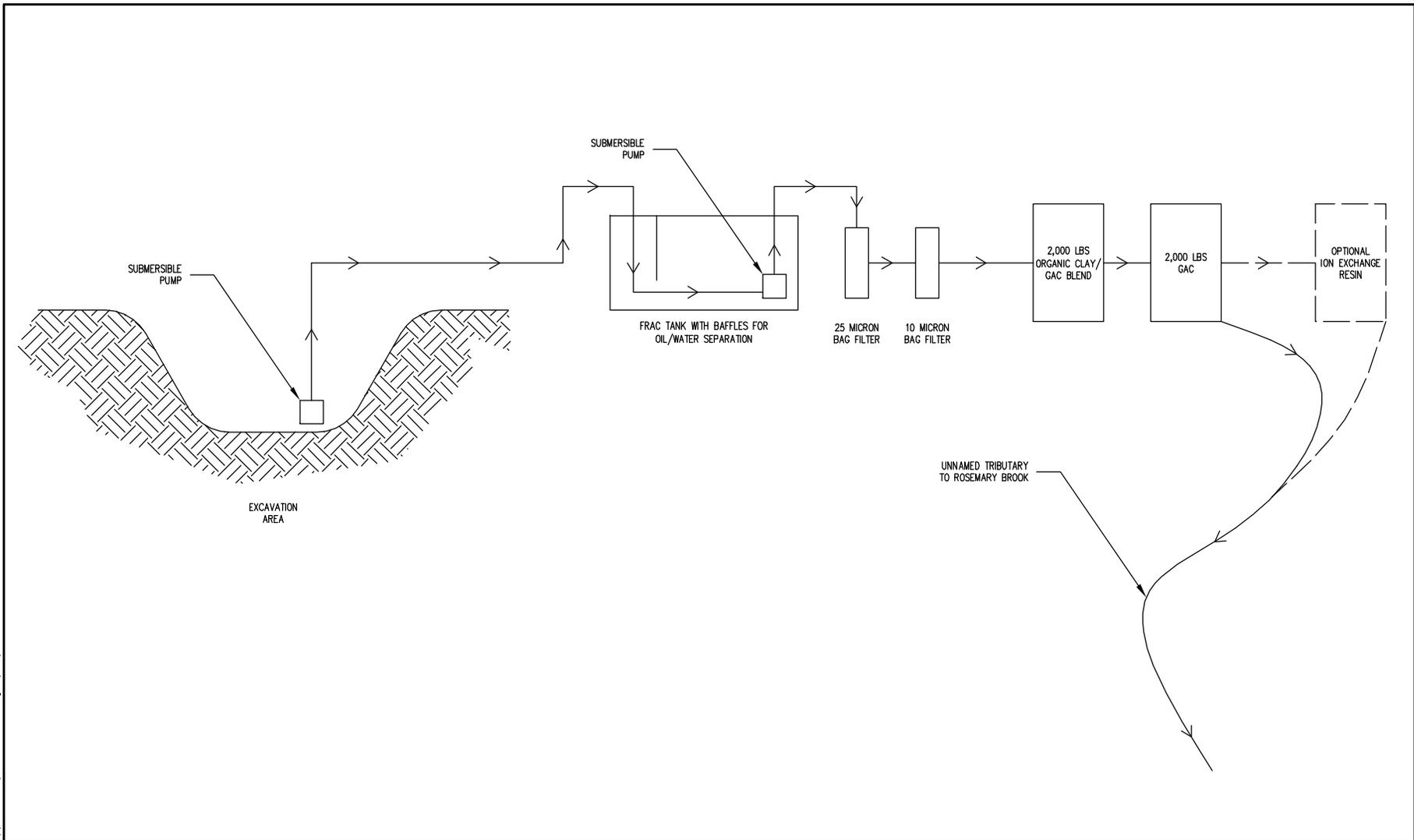
A. V. P. Facilities Management & Planning

Date:

5/27/09

**Attachment 1**  
**NOI Section 2 Question d:**  
Treatment System Schematic

P:\3517\127-3517-09001\CAD\SupportFiles\FIG2\_SYSTEM.dwg 5/26/2009 4:05:20 PM



Nichols Hall  
Babson College  
Wellesley, Massachusetts

Groundwater Treatment  
System Diagram

Figure  
1

**Attachment 2**  
**NOI Section 3 Question b:**  
Analysis of untreated influent

Remediation General Permit - MAG910000  
Nichols Hall, Babson College  
Wellesley, MA

Table 1. NPDES Remediation General Permit Sample

Parameter	Units	Effluent Limit <sup>3</sup>	Laboratory Minimum Level <sup>4</sup>	Nichols RGP L0905861 5/8/2009	Overall Mass (kg/day)	
					Average	Maximum
Total Flow Rate	MGD	0.072		0.072	0.0432	0.0720
Instantaneous Flow Rate	ft <sup>3</sup> /sec	0.1114			0.0668	0.1114
Instantaneous Flow Rate	GPM	50		50	NA	NA
pH	SU	6.5-8.3		6.4	NA	NA
TSS	ug/L	30,000	5,000	1,600,000	2.6E+02	4.4E+02
TRC <sup>2</sup>	ug/L	11	20	<20	0.0E+00	0.0E+00
TPH	ug/L	5,000	5,000	<4,800	0.0E+00	0.0E+00
Cyanide <sup>2</sup>	ug/L	5.2	10	<5	0.0E+00	0.0E+00
<b>Total BTEX</b>	ug/L	100		1.1	1.8E-04	3.0E-04
Benzene	ug/L	5	2	1.1	1.8E-04	3.0E-04
Toluene	ug/L	-	2	<0.75	0.0E+00	0.0E+00
Ethylbenzene	ug/L	-	2	<0.50	0.0E+00	0.0E+00
Xylene	ug/L	-	10	<1.0	0.0E+00	0.0E+00
Ethylene Dibromide (1,2 dibromoethane)	ug/L	0.05	0.01	<0.020	0.0E+00	0.0E+00
MtBE	ug/L	70.0	5	1.3	2.1E-04	3.5E-04
TBA	ug/L	monitor	100	<30	0.0E+00	0.0E+00
TAME	ug/L	monitor	0.5	<2.0	0.0E+00	0.0E+00
Naphthalene	ug/L	20	10	<2.5	0.0E+00	0.0E+00
Carbon Tetrachloride	ug/L	4.4	2	<0.5	0.0E+00	0.0E+00
<b>Total Dichlorobenzene</b>	ug/L	-		0	0.0E+00	0.0E+00
p-DCB (1,4)	ug/L	5	2	<2.5	0.0E+00	0.0E+00
o-DCB (1,2)	ug/L	600	2	<2.5	0.0E+00	0.0E+00
m-DCB (1,3)	ug/L	320	2	<2.5	0.0E+00	0.0E+00
1,1 DCA	ug/L	70	1	<0.75	0.0E+00	0.0E+00
1,2 DCA	ug/L	5.0	2	<0.50	0.0E+00	0.0E+00
1,1 DCE	ug/L	3.2	2	<0.50	0.0E+00	0.0E+00
cis-1,2 DCE	ug/L	70	2	<0.50	0.0E+00	0.0E+00
Methylene Chloride	ug/L	4.6	2	<3.0	0.0E+00	0.0E+00
PCE (tetrachloroethylene)	ug/L	5.0	2	<0.50	0.0E+00	0.0E+00
1,1,1 TCA	ug/L	200	2	<0.50	0.0E+00	0.0E+00
1,1,2 TCA	ug/L	5.0	2	<0.75	0.0E+00	0.0E+00
TCE (trichloroethylene)	ug/L	5.0	2	<0.50	0.0E+00	0.0E+00
Vinyl Chloride	ug/L	2.0	2	<1.0	0.0E+00	0.0E+00
Acetone	ug/L	monitor	50	<5.0	0.0E+00	0.0E+00
1,4 Dioxane	ug/L	monitor	50	<250	0.0E+00	0.0E+00
<b>Total Phenols</b>	ug/L	300	1	<30	0.0E+00	0.0E+00
PCP	ug/L	1.0	1	<4.0	0.0E+00	0.0E+00
<b>Total Phthalates <sup>2</sup></b>	ug/L	3.0	5	<4.9	0.0E+00	0.0E+00
Bis(2-ethylhexyl)Phthalate	ug/L	6.0	5	<4.9	0.0E+00	0.0E+00
<b>Total Group I PAHs</b>	ug/L	10.0		0	0.0E+00	0.0E+00
Benzo(a) Anthracene <sup>2</sup>	ug/L	0.0038	0.05	<0.99	0.0E+00	0.0E+00
Benzo(a) Pyrene <sup>2</sup>	ug/L	0.0038	2	<0.99	0.0E+00	0.0E+00
Benzo(b) Fluorethene <sup>2</sup>	ug/L	0.0038	0.1	<0.99	0.0E+00	0.0E+00
Benzo(k) Fluorethene <sup>2</sup>	ug/L	0.0038	2	<0.99	0.0E+00	0.0E+00
Chrysene <sup>2</sup>	ug/L	0.0038	5	<0.99	0.0E+00	0.0E+00
Dibenzo(a,h)anthracene <sup>2</sup>	ug/L	0.0038	0.1	<0.99	0.0E+00	0.0E+00
Indeno(1,2,3-cd)Pyrene <sup>2</sup>	ug/L	0.0038	0.15	<0.99	0.0E+00	0.0E+00
<b>Total Group II PAHs</b>	ug/L	100		0	0.0E+00	0.0E+00
Acenaphthene	ug/L	-	1	<0.99	0.0E+00	0.0E+00
Acenaphthylene	ug/L	-	10	<0.99	0.0E+00	0.0E+00
Anthracene	ug/L	-	10	<0.99	0.0E+00	0.0E+00
Benzo(ghi)Perylene	ug/L	-	5	<0.99	0.0E+00	0.0E+00
Fluoranthene	ug/L	-	10	<0.99	0.0E+00	0.0E+00
Fluorene	ug/L	-	10	<0.99	0.0E+00	0.0E+00
Naphthalene	ug/L	20	10	<0.99	0.0E+00	0.0E+00
Phenanthrene	ug/L	-	5	<0.99	0.0E+00	0.0E+00
Pyrene	ug/L	-	10	<0.99	0.0E+00	0.0E+00
<b>Total PCBs <sup>2</sup></b>	ug/L	6.4E-05	0.5	<0.258	0.0E+00	0.0E+00
<b>Total Metals</b>	ug/L				0.0E+00	0.0E+00
Antimony	ug/L	5.6	5	0.7	1.1E-04	1.9E-04
Arsenic	ug/L	10	5	16.3	2.7E-03	4.4E-03
Cadmium <sup>2</sup>	ug/L	0.2	0.5	0.4	6.5E-05	1.1E-04
Chromium, total	ug/L	48.8	10	62.6	1.0E-02	1.7E-02
Chromium VI	ug/L	11.4	10	<10	0.0E+00	0.0E+00
Copper	ug/L	5.2	5	59.1	9.7E-03	1.6E-02
Lead <sup>2</sup>	ug/L	1.3	3	171.9	2.8E-02	4.7E-02
Mercury	ug/L	0.9	0.2	<0.2	0.0E+00	0.0E+00
Nickel	ug/L	29.0	10	28.7	4.7E-03	7.8E-03
Selenium	ug/L	5.0	5	2	3.3E-04	5.4E-04
Silver <sup>2</sup>	ug/L	1.2	2	<0.4	0.0E+00	0.0E+00
Zinc	ug/L	66.6	30	152.9	2.5E-02	4.2E-02
Iron	ug/L	1,000	none	54,000	8.8E+00	1.5E+01

Notes:

- Bold** indicates detected concentration exceeds NPDES RGP effluent limit
- 1 - pH may be monitored in field in accordance with EPA Method 150.1
- 2 - Laboratory must meet minimum level to confound compound is "believed absent"
- 3 - Effluent Limits from NPDES RGP (MAG910000), Appendix III and VI
- 4 - Minimum Levels and EPA Approved Methods from NPDES RGP (MAG910000), Appendix VI
- 5 - mass is calculated as: mg/L (ug/L/1000) x MGD x 8.34 lbs/gal x 0.453592 kg/lb
- 6 - Compounds not detected below effluent limit or minimum level assigned value of 0.0 mg/L



## ANALYTICAL REPORT

Lab Number:	L0905861
Client:	Tetra Tech Rizzo 1 Grant Street Framingham, MA 01701-9005
ATTN:	Bill Phelps
Project Name:	BABSON
Project Number:	127-3517-09001
Report Date:	05/15/09

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

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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:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L0905861-01	NICHOLS-RGP	NICHOLS HALL	05/08/09 09:40
L0905861-02	TB-01-EDB	NICHOLS HALL	05/08/09 00:00
L0905861-03	TB-02-VOC	NICHOLS HALL	05/08/09 00:00

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### 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.

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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#### Semivolatile Organics

The WG361912-2/-3 LCS/LCSD recoveries associated with L0905861-01 were above the acceptance criteria for 2,4-Dinitrotoluene (107%/103%) and p-Chloro-m-cresol (LCSD at 98%); however, the associated sample was non-detect for these target compounds. The results of the original analysis are reported.

#### Semivolatile Organics-SIM

L0905861-01 has elevated detection limits due to the dilution required by the sample matrix.

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### Case Narrative (continued)

#### Metals

The WG362003-3 Laboratory Duplicate RPD associated with L0905861-01 is above the acceptance criteria for Antimony (23%); however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

#### Solids, Total Suspended

L0905861-01 has an elevated detection limit due to the dilution required by the elevated concentration present in the sample.

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

Authorized Signature:



Title: Technical Director/Representative

Date: 05/15/09

# ORGANICS

# VOLATILES

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-01  
**Client ID:** NICHOLS-RGP  
**Sample Location:** NICHOLS HALL  
**Matrix:** Water  
**Analytical Method:** 1,8260B  
**Analytical Date:** 05/15/09 14:09  
**Analyst:** GK

**Date Collected:** 05/08/09 09:40  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	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
Carbon tetrachloride	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	ND		ug/l	0.50	1
Benzene	1.1		ug/l	0.50	1
Toluene	ND		ug/l	0.75	1
Ethylbenzene	ND		ug/l	0.50	1
Vinyl chloride	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	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
Methyl tert butyl ether	1.3		ug/l	1.0	1
p/m-Xylene	ND		ug/l	1.0	1
o-Xylene	ND		ug/l	1.0	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	1
Acetone	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
Naphthalene	ND		ug/l	2.5	1
Tert-Butyl Alcohol	ND		ug/l	30	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	1
1,4-Dioxane	ND		ug/l	250	1

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

Lab ID: L0905861-01  
 Client ID: NICHOLS-RGP  
 Sample Location: NICHOLS HALL

Date Collected: 05/08/09 09:40  
 Date Received: 05/08/09  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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#### Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	103		70-130

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

Lab ID: L0905861-01  
 Client ID: NICHOLS-RGP  
 Sample Location: NICHOLS HALL  
 Matrix: Water  
 Analytical Method: 14,504.1  
 Analytical Date: 05/12/09 13:17  
 Analyst: JB

Date Collected: 05/08/09 09:40  
 Date Received: 05/08/09  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Pesticides by GC - Westborough Lab					
1,2-Dibromoethane	ND		ug/l	0.020	1

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

Lab ID: L0905861-02  
 Client ID: TB-01-EDB  
 Sample Location: NICHOLS HALL  
 Matrix: Water  
 Analytical Method: 14,504.1  
 Analytical Date: 05/12/09 13:29  
 Analyst: JB

Date Collected: 05/08/09 00:00  
 Date Received: 05/08/09  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Pesticides by GC - Westborough Lab					
1,2-Dibromoethane	ND		ug/l	0.020	1

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-03  
**Client ID:** TB-02-VOC  
**Sample Location:** NICHOLS HALL  
**Matrix:** Water  
**Analytical Method:** 1,8260B  
**Analytical Date:** 05/14/09 13:51  
**Analyst:** GK

**Date Collected:** 05/08/09 00:00  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	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
Carbon tetrachloride	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	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
Vinyl chloride	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	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
Methyl tert butyl ether	ND		ug/l	1.0	1
p/m-Xylene	ND		ug/l	1.0	1
o-Xylene	ND		ug/l	1.0	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	1
Acetone	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
Naphthalene	ND		ug/l	2.5	1
Tert-Butyl Alcohol	ND		ug/l	30	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	1
1,4-Dioxane	ND		ug/l	250	1

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

Lab ID: L0905861-03  
 Client ID: TB-02-VOC  
 Sample Location: NICHOLS HALL

Date Collected: 05/08/09 00:00  
 Date Received: 05/08/09  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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#### Volatiles Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	97		70-130

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

Analytical Method: 14,504.1  
Analytical Date: 05/12/09 11:23  
Analyst: JB

<b>Parameter</b>	<b>Result</b>	<b>Qualifier</b>	<b>Units</b>	<b>RDL</b>
Pesticides by GC - Westborough Lab for sample(s): 01-02 Batch: WG362153-1				
1,2-Dibromoethane	ND		ug/l	0.020

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 05/14/09 10:38  
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG362449-3				
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:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

Analytical Method: 1,8260B  
Analytical Date: 05/14/09 10:38  
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG362449-3				
Methyl tert butyl ether	ND		ug/l	1.0
p/m-Xylene	ND		ug/l	1.0
o-Xylene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	0.50
Dibromomethane	ND		ug/l	5.0
1,4-Dichlorobutane	ND		ug/l	5.0
1,2,3-Trichloropropane	ND		ug/l	5.0
Styrene	ND		ug/l	1.0
Dichlorodifluoromethane	ND		ug/l	5.0
Acetone	ND		ug/l	5.0
Carbon disulfide	ND		ug/l	5.0
2-Butanone	ND		ug/l	5.0
Vinyl acetate	ND		ug/l	5.0
4-Methyl-2-pentanone	ND		ug/l	5.0
2-Hexanone	ND		ug/l	5.0
Ethyl methacrylate	ND		ug/l	5.0
Acrylonitrile	ND		ug/l	5.0
Bromochloromethane	ND		ug/l	2.5
Tetrahydrofuran	ND		ug/l	10
2,2-Dichloropropane	ND		ug/l	2.5
1,2-Dibromoethane	ND		ug/l	2.0
1,3-Dichloropropane	ND		ug/l	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50
Bromobenzene	ND		ug/l	2.5
n-Butylbenzene	ND		ug/l	0.50
sec-Butylbenzene	ND		ug/l	0.50
tert-Butylbenzene	ND		ug/l	2.5
o-Chlorotoluene	ND		ug/l	2.5
p-Chlorotoluene	ND		ug/l	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5
Hexachlorobutadiene	ND		ug/l	0.50

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 05/14/09 10:38  
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG362449-3				
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

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	98		70-130

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

Analytical Method: 1,8260B  
Analytical Date: 05/15/09 12:32  
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG362600-3				
Methylene chloride	ND		ug/l	3.0
1,1-Dichloroethane	ND		ug/l	0.75
Carbon tetrachloride	ND		ug/l	0.50
1,1,2-Trichloroethane	ND		ug/l	0.75
Tetrachloroethene	ND		ug/l	0.50
1,2-Dichloroethane	ND		ug/l	0.50
1,1,1-Trichloroethane	ND		ug/l	0.50
Benzene	ND		ug/l	0.50
Toluene	ND		ug/l	0.75
Ethylbenzene	ND		ug/l	0.50
Vinyl chloride	ND		ug/l	1.0
1,1-Dichloroethene	ND		ug/l	0.50
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
Methyl tert butyl ether	ND		ug/l	1.0
p/m-Xylene	ND		ug/l	1.0
o-Xylene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	0.50
Acetone	ND		ug/l	5.0
1,2-Dibromoethane	ND		ug/l	2.0
Naphthalene	ND		ug/l	2.5
Tert-Butyl Alcohol	ND		ug/l	30
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0
1,4-Dioxane	ND		ug/l	250

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

Analytical Method: 1,8260B  
 Analytical Date: 05/15/09 12:32  
 Analyst: GK

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG362600-3				

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	106		70-130

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG362153-2					
1,2-Dibromoethane	92	-	70-130	-	20

Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG362449-1 WG362449-2					
Chlorobenzene	94	94	75-130	0	20
Benzene	94	93	76-127	1	20
Toluene	93	95	76-125	2	20
1,1-Dichloroethene	94	92	61-145	2	20
Trichloroethene	92	89	71-120	3	20

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG362449-1 WG362449-2

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	87		96		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	102		102		70-130
Dibromofluoromethane	97		97		70-130

Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG362600-1 WG362600-2

Chlorobenzene	90		96		75-130	6	20
Benzene	88		95		76-127	8	20
Toluene	88		93		76-125	6	20
1,1-Dichloroethene	90		93		61-145	3	20
Trichloroethene	92		97		71-120	5	20

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG362600-1 WG362600-2

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		108		70-130
Toluene-d8	101		99		70-130
4-Bromofluorobenzene	102		100		70-130
Dibromofluoromethane	102		105		70-130

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	Native Sample	MS Added	MS Found	MS	MSD Found	MSD	Recovery	RPD	RPD Limits
				%Recovery		%Recovery	Limits		
Pesticides by GC - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG362153-3 QC Sample: L0905739-01 Client ID: MS Sample									
1,2-Dibromoethane	ND	0.237	0.169	71	-	-	70-130	-	20

# SEMIVOLATILES

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-01  
**Client ID:** NICHOLS-RGP  
**Sample Location:** NICHOLS HALL  
**Matrix:** Water  
**Analytical Method:** 1,8270C  
**Analytical Date:** 05/11/09 18:18  
**Analyst:** PS

**Date Collected:** 05/08/09 09:40  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/09/09 14:26

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>					
Benzidine	ND		ug/l	49	1
1,2,4-Trichlorobenzene	ND		ug/l	4.9	1
Bis(2-chloroethyl)ether	ND		ug/l	4.9	1
1,2-Dichlorobenzene	ND		ug/l	4.9	1
1,3-Dichlorobenzene	ND		ug/l	4.9	1
1,4-Dichlorobenzene	ND		ug/l	4.9	1
3,3'-Dichlorobenzidine	ND		ug/l	49	1
2,4-Dinitrotoluene	ND		ug/l	5.9	1
2,6-Dinitrotoluene	ND		ug/l	4.9	1
Azobenzene	ND		ug/l	4.9	1
4-Chlorophenyl phenyl ether	ND		ug/l	4.9	1
4-Bromophenyl phenyl ether	ND		ug/l	4.9	1
Bis(2-chloroisopropyl)ether	ND		ug/l	4.9	1
Bis(2-chloroethoxy)methane	ND		ug/l	4.9	1
Hexachlorocyclopentadiene	ND		ug/l	30	1
Isophorone	ND		ug/l	4.9	1
Nitrobenzene	ND		ug/l	4.9	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	15	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	4.9	1
Butyl benzyl phthalate	ND		ug/l	4.9	1
Di-n-butylphthalate	ND		ug/l	4.9	1
Di-n-octylphthalate	ND		ug/l	4.9	1
Diethyl phthalate	ND		ug/l	4.9	1
Dimethyl phthalate	ND		ug/l	4.9	1
Aniline	ND		ug/l	20	1
4-Chloroaniline	ND		ug/l	4.9	1
2-Nitroaniline	ND		ug/l	4.9	1
3-Nitroaniline	ND		ug/l	4.9	1
4-Nitroaniline	ND		ug/l	6.9	1
Dibenzofuran	ND		ug/l	4.9	1

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-01  
**Client ID:** NICHOLS-RGP  
**Sample Location:** NICHOLS HALL

**Date Collected:** 05/08/09 09:40  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>					
n-Nitrosodimethylamine	ND		ug/l	49	1
2,4,6-Trichlorophenol	ND		ug/l	4.9	1
P-Chloro-M-Cresol	ND		ug/l	4.9	1
2-Chlorophenol	ND		ug/l	5.9	1
2,4-Dichlorophenol	ND		ug/l	9.9	1
2,4-Dimethylphenol	ND		ug/l	9.9	1
2-Nitrophenol	ND		ug/l	20	1
4-Nitrophenol	ND		ug/l	9.9	1
2,4-Dinitrophenol	ND		ug/l	30	1
4,6-Dinitro-o-cresol	ND		ug/l	20	1
Pentachlorophenol	ND		ug/l	9.9	1
Phenol	ND		ug/l	6.9	1
2-Methylphenol	ND		ug/l	5.9	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.9	1
2,4,5-Trichlorophenol	ND		ug/l	4.9	1
Benzoic Acid	ND		ug/l	49	1
Benzyl Alcohol	ND		ug/l	9.9	1
Carbazole	ND		ug/l	4.9	1
Pyridine	ND		ug/l	49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	107		10-120
4-Terphenyl-d14	97		33-120

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-01  
**Client ID:** NICHOLS-RGP  
**Sample Location:** NICHOLS HALL  
**Matrix:** Water  
**Analytical Method:** 1,8270C  
**Analytical Date:** 05/14/09 15:47  
**Analyst:** AS

**Date Collected:** 05/08/09 09:40  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/09/09 14:26

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by GC/MS-SIM - Westborough Lab</b>					
Acenaphthene	ND		ug/l	0.99	5
2-Chloronaphthalene	ND		ug/l	0.99	5
Fluoranthene	ND		ug/l	0.99	5
Hexachlorobutadiene	ND		ug/l	2.5	5
Naphthalene	ND		ug/l	0.99	5
Benzo(a)anthracene	ND		ug/l	0.99	5
Benzo(a)pyrene	ND		ug/l	0.99	5
Benzo(b)fluoranthene	ND		ug/l	0.99	5
Benzo(k)fluoranthene	ND		ug/l	0.99	5
Chrysene	ND		ug/l	0.99	5
Acenaphthylene	ND		ug/l	0.99	5
Anthracene	ND		ug/l	0.99	5
Benzo(ghi)perylene	ND		ug/l	0.99	5
Fluorene	ND		ug/l	0.99	5
Phenanthrene	ND		ug/l	0.99	5
Dibenzo(a,h)anthracene	ND		ug/l	0.99	5
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.99	5
Pyrene	ND		ug/l	0.99	5
1-Methylnaphthalene	ND		ug/l	0.99	5
2-Methylnaphthalene	ND		ug/l	0.99	5
Pentachlorophenol	ND		ug/l	4.0	5
Hexachlorobenzene	ND		ug/l	4.0	5
Hexachloroethane	ND		ug/l	4.0	5

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

Lab ID: L0905861-01  
 Client ID: NICHOLS-RGP  
 Sample Location: NICHOLS HALL

Date Collected: 05/08/09 09:40  
 Date Received: 05/08/09  
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	93		15-120
2,4,6-Tribromophenol	111		10-120
4-Terphenyl-d14	104		33-120

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

**Analytical Method:** 1,8270C  
**Analytical Date:** 05/11/09 17:24  
**Analyst:** PS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/09/09 14:26

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG361912-1				
Benzidine	ND		ug/l	50
1,2,4-Trichlorobenzene	ND		ug/l	5.0
Bis(2-chloroethyl)ether	ND		ug/l	5.0
1,2-Dichlorobenzene	ND		ug/l	5.0
1,3-Dichlorobenzene	ND		ug/l	5.0
1,4-Dichlorobenzene	ND		ug/l	5.0
3,3'-Dichlorobenzidine	ND		ug/l	50
2,4-Dinitrotoluene	ND		ug/l	6.0
2,6-Dinitrotoluene	ND		ug/l	5.0
Azobenzene	ND		ug/l	5.0
4-Chlorophenyl phenyl ether	ND		ug/l	5.0
4-Bromophenyl phenyl ether	ND		ug/l	5.0
Bis(2-chloroisopropyl)ether	ND		ug/l	5.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0
Hexachlorocyclopentadiene	ND		ug/l	30
Isophorone	ND		ug/l	5.0
Nitrobenzene	ND		ug/l	5.0
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	15
Bis(2-Ethylhexyl)phthalate	ND		ug/l	5.0
Butyl benzyl phthalate	ND		ug/l	5.0
Di-n-butylphthalate	ND		ug/l	5.0
Di-n-octylphthalate	ND		ug/l	5.0
Diethyl phthalate	ND		ug/l	5.0
Dimethyl phthalate	ND		ug/l	5.0
Aniline	ND		ug/l	20
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	7.0
Dibenzofuran	ND		ug/l	5.0
n-Nitrosodimethylamine	ND		ug/l	50

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

**Analytical Method:** 1,8270C  
**Analytical Date:** 05/11/09 17:24  
**Analyst:** PS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/09/09 14:26

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG361912-1				
2,4,6-Trichlorophenol	ND		ug/l	5.0
P-Chloro-M-Cresol	ND		ug/l	5.0
2-Chlorophenol	ND		ug/l	6.0
2,4-Dichlorophenol	ND		ug/l	10
2,4-Dimethylphenol	ND		ug/l	10
2-Nitrophenol	ND		ug/l	20
4-Nitrophenol	ND		ug/l	10
2,4-Dinitrophenol	ND		ug/l	30
4,6-Dinitro-o-cresol	ND		ug/l	20
Pentachlorophenol	ND		ug/l	10
Phenol	ND		ug/l	7.0
2-Methylphenol	ND		ug/l	6.0
3-Methylphenol/4-Methylphenol	ND		ug/l	6.0
2,4,5-Trichlorophenol	ND		ug/l	5.0
Benzoic Acid	ND		ug/l	50
Benzyl Alcohol	ND		ug/l	10
Carbazole	ND		ug/l	5.0
Pyridine	ND		ug/l	50

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	97		15-120
2,4,6-Tribromophenol	117		10-120
4-Terphenyl-d14	120		33-120

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

**Analytical Method:** 1,8270C  
**Analytical Date:** 05/11/09 21:57  
**Analyst:** AS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/09/09 14:26

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG362570-1				
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
Hexachlorobenzene	ND		ug/l	0.80
Hexachloroethane	ND		ug/l	0.80

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

Analytical Method: 1,8270C  
Analytical Date: 05/11/09 21:57  
Analyst: AS

Extraction Method: EPA 3510C  
Extraction Date: 05/09/09 14:26

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG362570-1				

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	39		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	77		15-120
2,4,6-Tribromophenol	107		10-120
4-Terphenyl-d14	100		33-120

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG361912-2 WG361912-3					
1,2,4-Trichlorobenzene	75	76	39-98	1	30
1,2-Dichlorobenzene	76	76	40-140	0	30
1,4-Dichlorobenzene	71	69	36-97	3	30
2,4-Dinitrotoluene	107	103	24-96	4	30
2,6-Dinitrotoluene	94	92	40-140	2	30
4-Chlorophenyl phenyl ether	96	95	40-140	1	30
n-Nitrosodi-n-propylamine	90	90	41-116	0	30
Butyl benzyl phthalate	110	111	40-140	1	30
P-Chloro-M-Cresol	93	98	23-97	5	30
2-Chlorophenol	80	79	27-123	1	30
2-Nitrophenol	92	90	30-130	2	30
4-Nitrophenol	76	76	10-80	0	30
2,4-Dinitrophenol	55	59	30-130	7	30
Pentachlorophenol	84	90	9-103	7	30
Phenol	46	45	12-110	2	30

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG361912-2 WG361912-3

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		60		21-120
Phenol-d6	46		44		10-120
Nitrobenzene-d5	92		91		23-120
2-Fluorobiphenyl	94		93		15-120
2,4,6-Tribromophenol	113		114		10-120
4-Terphenyl-d14	118		111		33-120

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG362570-2 WG362570-3

Acenaphthene	64	75	40-140	16	40
2-Chloronaphthalene	133	137	40-140	3	40
Fluoranthene	79	89	40-140	12	40
Anthracene	77	83	40-140	8	40
Pyrene	79	90	40-140	13	40

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG362570-2 WG362570-3

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		61		21-120
Phenol-d6	38		42		10-120
Nitrobenzene-d5	81		78		23-120
2-Fluorobiphenyl	77		74		15-120
2,4,6-Tribromophenol	102		103		10-120
4-Terphenyl-d14	87		93		33-120

# PCBS

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-01  
**Client ID:** NICHOLS-RGP  
**Sample Location:** NICHOLS HALL  
**Matrix:** Water  
**Analytical Method:** 5,608  
**Analytical Date:** 05/13/09 11:58  
**Analyst:** JB

**Date Collected:** 05/08/09 09:40  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/11/09 17:26  
**Cleanup Method1:** EPA 3665A  
**Cleanup Date1:** 05/12/09

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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#### Polychlorinated Biphenyls by GC - Westborough Lab

Aroclor 1016	ND		ug/l	0.258	1
Aroclor 1221	ND		ug/l	0.258	1
Aroclor 1232	ND		ug/l	0.258	1
Aroclor 1242	ND		ug/l	0.258	1
Aroclor 1248	ND		ug/l	0.258	1
Aroclor 1254	ND		ug/l	0.258	1
Aroclor 1260	ND		ug/l	0.258	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	42		30-150	A

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 5,608  
Analytical Date: 05/13/09 11:06  
Analyst: JB

Extraction Method: EPA 3510C  
Extraction Date: 05/11/09 17:26  
Cleanup Method1: EPA 3665A  
Cleanup Date1: 05/12/09

Parameter	Result	Qualifier	Units	RDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG362054-1				
Aroclor 1016	ND		ug/l	0.250
Aroclor 1221	ND		ug/l	0.250
Aroclor 1232	ND		ug/l	0.250
Aroclor 1242	ND		ug/l	0.250
Aroclor 1248	ND		ug/l	0.250
Aroclor 1254	ND		ug/l	0.250
Aroclor 1260	ND		ug/l	0.250

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	111		30-150	A

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG362054-3 QC Sample: L0905861-01 Client ID: NICHOLS-RGP										
Aroclor 1016	ND	2.06	1.47	71	-	-		40-126	-	30
Aroclor 1260	ND	2.06	1.18	57	-	-		40-127	-	30

Surrogate	MS		MSD		Acceptance Criteria	Column
	% Recovery	Qualifier	% Recovery	Qualifier		
2,4,5,6-Tetrachloro-m-xylene	72				30-150	A
Decachlorobiphenyl	48				30-150	A

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG362054-2					
Aroclor 1016	77	-	40-126	-	
Aroclor 1260	84	-	40-127	-	

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63				30-150	A
Decachlorobiphenyl	113				30-150	A

## Lab Duplicate Analysis

Batch Quality Control

Project Name: BABSON  
Project Number: 127-3517-09001

Lab Number: L0905861  
Report Date: 05/15/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG362054-4 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
Aroclor 1016	ND	ND	ug/l	NC	30
Aroclor 1221	ND	ND	ug/l	NC	30
Aroclor 1232	ND	ND	ug/l	NC	30
Aroclor 1242	ND	ND	ug/l	NC	30
Aroclor 1248	ND	ND	ug/l	NC	30
Aroclor 1254	ND	ND	ug/l	NC	30
Aroclor 1260	ND	ND	ug/l	NC	30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		70		30-150	A
Decachlorobiphenyl	42		55		30-150	A

# METALS

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

**SAMPLE RESULTS**

Lab ID: L0905861-01  
 Client ID: NICHOLS-RGP  
 Sample Location: NICHOLS HALL  
 Matrix: Water

Date Collected: 05/08/09 09:40  
 Date Received: 05/08/09  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>										
Antimony, Total	0.0007		mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Arsenic, Total	0.0163		mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Cadmium, Total	0.0004		mg/l	0.0002	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Chromium, Total	0.0626		mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Copper, Total	0.0591		mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Iron, Total	54		mg/l	0.05	1	05/11/09 10:00	05/11/09 14:52	EPA 3005A	19,200.7	AI
Lead, Total	0.1719		mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	1	05/12/09 13:10	05/13/09 10:25	EPA 245.2	3,245.1	EZ
Nickel, Total	0.0287		mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Selenium, Total	0.002		mg/l	0.001	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0004	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM
Zinc, Total	0.1529		mg/l	0.0050	1	05/11/09 10:30	05/12/09 22:22	EPA 3005A	1,6020	BM



Project Name: BABSON  
Project Number: 127-3517-09001

Lab Number: L0905861  
Report Date: 05/15/09

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG361997-1								
Iron, Total	ND	mg/l	0.05	1	05/11/09 10:00	05/11/09 14:13	19,200.7	AI

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG362003-1								
Antimony, Total	ND	mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Arsenic, Total	ND	mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Cadmium, Total	ND	mg/l	0.0002	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Chromium, Total	ND	mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Copper, Total	ND	mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Lead, Total	ND	mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Nickel, Total	ND	mg/l	0.0005	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Selenium, Total	ND	mg/l	0.001	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Silver, Total	ND	mg/l	0.0004	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM
Zinc, Total	ND	mg/l	0.0050	1	05/11/09 10:30	05/12/09 22:10	1,6020	BM

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG362158-1								
Mercury, Total	ND	mg/l	0.0002	1	05/12/09 13:10	05/13/09 10:16	3,245.1	EZ

### Prep Information

Digestion Method: EPA 245.2



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
<b>Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG361997-2</b>					
Iron, Total	100	-	85-115	-	
<b>Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG362003-2</b>					
Antimony, Total	95	-	80-120	-	
Arsenic, Total	93	-	80-120	-	
Cadmium, Total	104	-	80-120	-	
Chromium, Total	103	-	80-120	-	
Copper, Total	104	-	80-120	-	
Lead, Total	101	-	80-120	-	
Nickel, Total	103	-	80-120	-	
Selenium, Total	100	-	80-120	-	
Silver, Total	97	-	80-120	-	
Zinc, Total	106	-	80-120	-	
<b>Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG362158-2</b>					
Mercury, Total	108	-		-	

### Matrix Spike Analysis Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01    QC Batch ID: WG361997-4    QC Sample: L0905875-02    Client ID: MS Sample									
Iron, Total	0.22	1	1.2	98	-	-	75-125	-	20
Total Metals - Westborough Lab Associated sample(s): 01    QC Batch ID: WG362003-4    QC Sample: L0905861-01    Client ID: NICHOLS-RGP									
Antimony, Total	0.0007	0.5	0.4159	83	-	-	80-120	-	20
Arsenic, Total	0.0163	0.12	0.1359	100	-	-	80-120	-	20
Cadmium, Total	0.0004	0.051	0.0558	109	-	-	80-120	-	20
Chromium, Total	0.0626	0.2	0.2845	111	-	-	80-120	-	20
Copper, Total	0.0591	0.25	0.3333	110	-	-	80-120	-	20
Lead, Total	0.1719	0.51	0.7221	108	-	-	80-120	-	20
Nickel, Total	0.0287	0.5	0.5543	105	-	-	80-120	-	20
Selenium, Total	0.002	0.12	0.114	93	-	-	80-120	-	20
Silver, Total	ND	0.05	0.0502	100	-	-	80-120	-	20
Zinc, Total	0.1529	0.5	0.7071	111	-	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 01    QC Batch ID: WG362158-4    QC Sample: L0905794-01    Client ID: MS Sample									
Mercury, Total	ND	0.001	0.0011	115	-	-	-	-	-

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG362003-3 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
Antimony, Total	0.0007	0.0006	mg/l	23	20
Arsenic, Total	0.0163	0.0146	mg/l	11	20
Cadmium, Total	0.0004	0.0004	mg/l	8	20
Chromium, Total	0.0626	0.0565	mg/l	10	20
Copper, Total	0.0591	0.0541	mg/l	9	20
Lead, Total	0.1719	0.1585	mg/l	8	20
Nickel, Total	0.0287	0.0266	mg/l	8	20
Selenium, Total	0.002	0.002	mg/l	1	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.1529	0.1346	mg/l	13	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG362158-3 QC Sample: L0905794-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	

# **INORGANICS & MISCELLANEOUS**

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### SAMPLE RESULTS

**Lab ID:** L0905861-01  
**Client ID:** NICHOLS-RGP  
**Sample Location:** NICHOLS HALL  
**Matrix:** Water

**Date Collected:** 05/08/09 09:40  
**Date Received:** 05/08/09  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>									
Solids, Total Suspended	1600		mg/l	50	10	-	05/11/09 10:00	30,2540D	DW
Cyanide, Total	ND		mg/l	0.005	1	05/08/09 17:00	05/11/09 18:49	30,4500CN-CE	DD
Chlorine, Total Residual	ND		mg/l	0.02	1	-	05/08/09 22:10	30,4500CL-D	BH
pH (H)	6.4		SU	-	1	-	05/08/09 22:10	30,4500H+-B	BH
TPH	ND		mg/l	4.80	1.2	05/12/09 16:15	05/14/09 21:15	74,1664A	JO
Phenolics, Total	ND		mg/l	0.03	1	-	05/09/09 17:15	4,420.1	TH
Chromium, Hexavalent	ND		mg/l	0.010	1	05/08/09 22:30	05/08/09 22:30	30,3500CR-D	JT



**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

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

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG361828-2								
Cyanide, Total	ND	mg/l	0.005	1	05/08/09 17:00	05/11/09 18:29	30,4500CN-CE	DD
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG361869-3								
Chlorine, Total Residual	ND	mg/l	0.02	1	-	05/08/09 22:10	30,4500CL-D	BH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG361881-1								
Chromium, Hexavalent	ND	mg/l	0.010	1	05/08/09 22:30	05/08/09 22:30	30,3500CR-D	JT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG361906-1								
Phenolics, Total	ND	mg/l	0.03	1	-	05/09/09 17:10	4,420.1	TH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG361958-1								
Solids, Total Suspended	ND	mg/l	5.0	1	-	05/11/09 10:00	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG362194-2								
TPH	ND	mg/l	4.00	1	05/12/09 16:15	05/14/09 21:15	74,1664A	JO

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG361828-1					
Cyanide, Total	107	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG361869-1					
Chlorine, Total Residual	93	-		-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG361870-1					
pH	100	-	99-101	-	5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG361881-2					
Chromium, Hexavalent	98	-	85-115	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG361906-2					
Phenolics, Total	104	-	82-111	-	12
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG362194-1					
TPH	75	-	64-132	-	34

## Matrix Spike Analysis

### Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	Native Sample	MS Added	MS Found	MS	MSD Found	MSD	Recovery	RPD	RPD Limits
				%Recovery		%Recovery	Limits		
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361828-3 QC Sample: L0905537-02 Client ID: MS Sample									
Cyanide, Total	0.197	0.2	0.402	102	-	-	80-120	-	30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361881-4 QC Sample: L0905861-01 Client ID: NICHOLS-RGP									
Chromium, Hexavalent	ND	0.1	0.103	103	-	-	85-115	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361906-3 QC Sample: L0905890-01 Client ID: MS Sample									
Phenolics, Total	ND	0.8	0.76	95	-	-	77-124	-	12
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG362194-3 QC Sample: L0905492-44 Client ID: MS Sample									
TPH	ND	22.5	ND	76	-	-	64-132	-	34

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361828-4 QC Sample: L0905537-02 Client ID: DUP Sample					
Cyanide, Total	0.197	0.200	mg/l	2	30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361869-2 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
Chlorine, Total Residual	ND	ND	mg/l	NC	
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361870-2 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
pH (H)	6.4	6.4	SU	0	5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361881-3 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
Chromium, Hexavalent	ND	ND	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361906-4 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
Phenolics, Total	ND	ND	mg/l	NC	12
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG361958-2 QC Sample: L0905802-01 Client ID: DUP Sample					
Solids, Total Suspended	80	76	mg/l	5	32
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG362194-4 QC Sample: L0905861-01 Client ID: NICHOLS-RGP					
TPH	ND	ND	mg/l	NC	34

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information

Cooler	Custody Seal
A	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0905861-01A	Vial Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> preserved	A	N/A	4	Y	Absent	504(14)
L0905861-01B	Vial Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> preserved	A	N/A	4	Y	Absent	504(14)
L0905861-01C	Vial HCl preserved	A	N/A	4	Y	Absent	8260(14)
L0905861-01D	Vial HCl preserved	A	N/A	4	Y	Absent	8260(14)
L0905861-01E	Amber 1000ml unpreserved	A	7	4	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L0905861-01F	Amber 1000ml unpreserved	A	7	4	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L0905861-01G	Amber 1000ml Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	A	7	4	Y	Absent	PCB-608(7)
L0905861-01H	Amber 1000ml Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	A	7	4	Y	Absent	PCB-608(7)
L0905861-01I	Amber 1000ml HCl preserved	A	7	4	Y	Absent	TPH-1664(28)
L0905861-01J	Amber 1000ml HCl preserved	A	7	4	Y	Absent	TPH-1664(28)
L0905861-01K	Amber 1000ml H <sub>2</sub> SO <sub>4</sub> preserved	A	<2	4	Y	Absent	TPHENOL-420(28)
L0905861-01L	Amber 1000ml H <sub>2</sub> SO <sub>4</sub> preserved	A	<2	4	Y	Absent	TPHENOL-420(28)
L0905861-01M	Plastic 250ml NaOH preserved	A	>12	4	Y	Absent	TCN-4500(14)
L0905861-01N	Plastic 500ml HNO <sub>3</sub> preserved	A	<2	4	Y	Absent	SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-U(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)
L0905861-01O	Plastic 1000ml unpreserved	A	7	4	Y	Absent	PH-4500(1),HEXCR-3500(1),TRC-4500(1)
L0905861-01P	Plastic 1000ml unpreserved	A	7	4	Y	Absent	TSS-2540(7)
L0905861-02A	Vial Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> preserved	A	N/A	4	Y	Absent	504(14)
L0905861-03A	Vial HCl preserved	A	N/A	4	Y	Absent	8260(14)

#### Container Comments

L0905861-03A

\*Hold days indicated by values in parentheses

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

## 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.
- LCS D** - Laboratory Control Sample Duplicate: Refer to LCS.
- 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.
- MS D** - 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.
- ND** - Not detected at the reported detection limit for the sample.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

### Terms

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

### Data Qualifiers

- \*** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**Project Name:** BABSON  
**Project Number:** 127-3517-09001

**Lab Number:** L0905861  
**Report Date:** 05/15/09

## 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 Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

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



## Certificate/Approval Program Summary

Last revised February 18, 2009 - Westboro Facility

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

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574.

*Drinking Water* (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

*Wastewater/Non-Potable Water* (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

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

### Maine Department of Human Services Certificate/Lab ID: MA0086.

*Drinking Water* (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)

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

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

#### *Drinking Water*

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

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

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

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

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

#### *Non-Potable Water*

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

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

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

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

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

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

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

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

*Drinking Water (Inorganic Parameters:* SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 314.0, SM4500CN-E, 4500H+B, 4500NO<sub>3</sub>-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

*Non-Potable Water (Inorganic Parameters:* SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH<sub>3</sub>-H, 4500NH<sub>3</sub>-E, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

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

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

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500NO<sub>3</sub>-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

*Non-Potable Water (Inorganic Parameters:* SM5210B, EPA 410.1, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH<sub>3</sub>-H, EPA 350.2/1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330.)

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

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

*Drinking Water (Inorganic Parameters:* SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO<sub>3</sub>-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

*Non-Potable Water (Inorganic Parameters:* SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, LACHAT 10-107-06-1-B, SM4500NH<sub>3</sub>-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO<sub>3</sub>F, EPA 354.1, SM4500-NO<sub>2</sub>-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

*Solid & Hazardous Waste (Inorganic Parameters:* EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

*Analytical Services Protocol:* CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

**Rhode Island Department of Health Certificate/Lab ID: LAO00065.**

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

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

**Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.**



# CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

**Client Information**

Client: **TEMA TECH Bldg**  
 Address: **ONE GRANT STREET**  
**FRAMINGHAM, MA 01702**  
 Phone: **508.903.2889**  
 Fax: **508.903.2001**  
 Email: **BILL.PHERR@TEMA-TECH.COM**

**Project Information**  
 Project Name: **BABSON**  
 Project Location: **NICHOLS HALL**  
 Project #: **127-3517-09002**  
 Project Manager: **BILL PHERRS**  
 ALPHA Quote #:  
 Turn-Around Time

Standard  RUSH  (only confirmed if pre-approved!)  
 Date Due: **5-DAY 5/15/09** Time:  
 Other Project Specific Requirements/Comments/Detection Limits:  
**DLS to copy w/ NPDES RBP Minimum Levels, (Appendix VI)**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
58601	1 NICHOLS-RESP	5/8/09	0940	GW	WSP
	2 TB-01-EDB	-	-	-	-
	3 TB-02-VOL	-	-	-	-

Date Rec'd in Lab: **08-MAY-09**  
**ALPHA Job #: 109058601**

**Report Information - Data Deliverables**  
 FAX  EMAIL  
 ADEX  Add'l Deliverables

**Regulatory Requirements/Report Limits**  
 State/Fed Program Criteria  
 EPA/MPDES RBP Appendix VI Min Levels  
**MA MCP PRESUMPTIVE CERTAINTY ... CT REASONABLE CONFIDENCE PROTO.**

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

ANALYSIS	1	2	3
TSS, TRC, TCN	X	X	X
TPH (1664)	X	X	X
VOCs *	X	X	X
EDB SOY	X	X	X
8270 (Sim PAHs)	X	X	X
Total phenol	X	X	X
PCBs	X	X	X
Hex chrome	X	X	X
Metals (all NPDES)	X	X	X
PH	X	X	X

**SAMPLE HANDLING**  
 Filtration  Done  Not needed  
 Lab to do  Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)  
**Sample Specific Comments**  
 \* VOCs: Benzene, Toluene, Ethylbenzene, Xylene, EDB, MIBK, TBA, TAME, Naphthalene, o-x-Tol, DCA, 1,1, DCA, 1,2-DCA, DDE, cis-DCE, methylene chloride, PCE, TCA, HETCA, TCE, Vinyl chloride, Acetone, 1,4 Dioxane

**PLEASE ANSWER QUESTIONS ABOVE!**

**IS YOUR PROJECT MA MCP or CT RCP?**

Relinquished By:

Date/Time: **5/8/09 12:55**

Received By:

Date/Time: **5/8/09 12:55**

Container Type	1	2	3
Preservative	P	A	B
	V	V	H
	A	A	A
	A	A	A
	P	P	P
	P	P	P

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

**Attachment 3**  
**Section 4 Question d:**  
Material Safety Data Sheets

A L A N X E S S C O M P A N Y

Sybron Chemicals Inc.  
 LANXESS Corporation  
 200 Birmingham Road  
 Birmingham, NJ 08011

TRANSPORTATION EMERGENCY

CALL CHEMTREC: 800-424-9300  
 INTERNATIONAL: 703-527-3887

NON-TRANSPORTATION

LANXESS EMERGENCY PHONE.: (609) 893-1100  
 LANXESS INFO PHONE.....: (609) 893-1100

1. CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME.....: Lewatit TP 207, Sodium Form  
 PRODUCT CODE.....: 5348B  
 CHEMICAL FAMILY.....: Styrene-divinylbenzene copolymer with iminodiacetic acid anchor group in form of salt

2. COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION (%)
/CAS NUMBER		

\*\*\*\*\* HAZARDOUS INGREDIENTS \*\*\*\*\*

This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION:

```

*****
*                               EMERGENCY OVERVIEW                               *
*                               *                                                 *
* Color: Beige, opaque; Form: Beads; Odor: Odorless; Product *
* poses little or no hazard if spilled and no unusual hazard *
* if involved in a fire. *
*****
  
```

POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY.....: Eye and skin contact.

3. HAZARDS IDENTIFICATION (Continued)

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS OF EXPOSURE.....: On the basis of animal toxicity testing (see Section 11) on a similarly compounded product, we would expect this product to be non-irritating to the eyes and skin and essentially non-toxic by ingestion.

CHRONIC EFFECTS OF EXPOSURE...: No applicable information was found concerning any adverse chronic health effects from overexposure to this product.

CARCINOGENICITY.....: This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: None Known

4. FIRST AID MEASURES:

FIRST AID FOR EYES.....: In case of contact, immediately flush eyes with water, occasionally lifting upper and lower lids, until no evidence of chemical remains (usually 15-20 minutes). Seek medical attention.

FIRST AID FOR SKIN.....: Wash affected area with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention.

FIRST AID FOR INHALATION: Due to the nature of this product, exposure from inhalation is unlikely.

FIRST AID FOR INGESTION.: If swallowed, call a physician.

5. FIRE FIGHTING MEASURES:

FLASH POINT.....: Not Established

AUTO-IGNITION TEMPERATURE.....: Greater than 572 F (300 C) DIN 51794

EXTINGUISHING MEDIA.....: All extinguishing media are suitable.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes from combustion/decomposition products.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES.....: Utilize appropriate protective clothing and equipment. Take up spill mechanically and place into labeled, closable containers. Spill area can be washed with water; Collect wash water for approved disposal.

-----  
7. HANDLING AND STORAGE:  
-----

STORAGE TEMPERATURE(MIN/MAX): 32 F (0 C)/104 F (40 C)  
SHELF LIFE.....: Minimum five (5) years if stored in sealed original container.  
SPECIAL SENSITIVITY.....: Avoid loss of moisture (water) used to swell the beads.  
HANDLING/STORAGE PRECAUTIONS: Store in dry place, away from temperature extremes, in original or similar waterproof containers. Reseal containers immediately after use. Avoid unnecessary contact. Adopt precautionary measures against static discharges. Static charges lead to the agglomeration of dry beads. Protect from freezing.

-----  
8. PERSONAL PROTECTION:  
-----

EYE PROTECTION REQUIREMENTS.....: Employees should wear safety glasses.  
SKIN PROTECTION REQUIREMENTS.....: Cloth gloves and other protective clothing as necessary. Employees should wash their hands and face before eating, drinking or using tobacco products.  
VENTILATION REQUIREMENTS.....: Under normal conditions of use, special ventilation is not required.  
RESPIRATOR REQUIREMENTS.....: Under normal conditions of use, respirator protection is not required.  
ADDITIONAL PROTECTIVE MEASURES.....: Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product.

-----  
9. PHYSICAL AND CHEMICAL PROPERTIES:  
-----

PHYSICAL FORM.....: Beads  
COLOR.....: Beige, opaque  
ODOR.....: Odorless  
pH .....: Approx. 9 in aqueous suspension  
BOILING POINT.....: Not Established  
MELTING/FREEZING POINT....: Greater than 392 F (200 C)  
SOLUBILITY IN WATER .....: Not Applicable  
SPECIFIC GRAVITY .....: Approx. 1.17 g/cm3  
BULK DENSITY.....: 700 to 800 kg/m3  
VAPOR PRESSURE .....: Not Applicable

-----  
10. STABILITY AND REACTIVITY:  
-----

STABILITY.....: This is a stable material.  
HAZARDOUS POLYMERIZATION...: Will not occur.  
INCOMPATIBILITIES.....: Oxidizing and reducing agents may destroy color.  
INSTABILITY CONDITIONS.....: Excessive heat and cold  
DECOMPOSITION TEMPERATURE...: Not Established  
DECOMPOSITION PRODUCTS.....: In case of fire CO, CO2, oxides of nitrogen and  
other potentially toxic fumes.

-----  
11. TOXICOLOGICAL INFORMATION:  
-----

ACUTE TOXICITY

ORAL LD50.....: Greater than 5000 mg/kg (Rat) The dosage of 5000  
mg/kg caused no symptoms.  
EYE EFFECTS.....: Non-Irritant (Rabbit)  
SKIN EFFECTS.....: Non-Irritant (Rabbit) 4h exposure

-----  
12. ECOLOGICAL INFORMATION:  
-----

NO ECOLOGICAL INFORMATION AVAILABLE

-----  
13. DISPOSAL CONSIDERATIONS  
-----

WASTE DISPOSAL METHOD.....: Waste disposal should be in accordance with  
existing federal, state and local environmental regulations.

-----  
14. TRANSPORTATION INFORMATION:  
-----

TECHNICAL SHIPPING NAME.....: Cation Exchange Resin  
FREIGHT CLASS BULK.....: Compounds, Water Purifying, NOT MED., NOI  
FREIGHT CLASS PACKAGE.....: Compounds, Water Purifying, NOT MED., NOI  
PRODUCT LABEL.....: Lewatit TP 207, Sodium Form

14. TRANSPORTATION INFORMATION (Continued)

DOT (DOMESTIC SURFACE)

HAZARD CLASS OR DIVISION .....: Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

15. REGULATORY INFORMATION:

OSHA STATUS.....: This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS.....: On TSCA Inventory

CERCLA REPORTABLE QUANTITY...: None

SARA TITLE III:

SECTION 302 EXTREMELY

HAZARDOUS SUBSTANCES...: None

SECTION 311/312

HAZARD CATEGORIES.....: Non-hazardous under Section 311/312

SECTION 313

TOXIC CHEMICALS.....: None

RCRA STATUS.....: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME

/CAS NUMBER

CONCENTRATION

STATE CODE

Benzene, diethenyl-, random polymer with ethenylbenzene and ethenylethylbenzene, aminoethylated, reacted with chloroacetic acid, partial sodium salt

135620-93-8

Approx. 50 %

PA3, NJ4

15. REGULATORY INFORMATION (Continued)

COMPONENT NAME /CAS NUMBER	CONCENTRATION	STATE CODE
Water 7732-18-5	Approx. 50 %	PA3, NJ4

NJ4 = New Jersey Other - included in 5 predominant ingredients > 1%  
PA3 = Pennsylvania Non-hazardous present at 3% or greater.

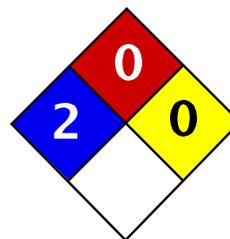
16. OTHER INFORMATION:

HMIS RATINGS:                   Health   Flammability   Reactivity  
                                  1           1           1  
                                  0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

LANXESS'S method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS ratings are provided by LANXESS as a customer service.

REASON FOR ISSUE.....: Update Section 1; No change to label  
PREPARED BY.....: S. Van Volkenburg  
APPROVED BY.....: John F. McPeak  
APPROVAL DATE.....: 07/09/2002  
SUPERSEDES DATE.....: 01/14/2002  
MSDS NUMBER.....: 01417

-----  
This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of LANXESS. The data on this sheet relates only to the specific material designated herein. LANXESS assumes no legal responsibility for use or reliance upon these data.  
-----



Health	2
Fire	0
Reactivity	0
Personal Protection	

## Material Safety Data Sheet Sodium Hydroxide, 25% MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Sodium Hydroxide, 25%

**Catalog Codes:** SLS4210

**CAS#:** Mixture.

**RTECS:** Not applicable.

**TSCA:** TSCA 8(b) inventory: Sodium hydroxide; Water

**CI#:** Not applicable.

**Synonym:**

**Chemical Name:** Not applicable.

**Chemical Formula:** Not applicable.

**Contact Information:**

**Sciencelab.com, Inc.**  
14025 Smith Rd.  
Houston, Texas 77396

US Sales: **1-800-901-7247**  
International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**  
1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Sodium hydroxide	1310-73-2	25
Water	7732-18-5	75

**Toxicological Data on Ingredients:** Sodium hydroxide LD50: Not available. LC50: Not available.

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion. Hazardous in case of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

Non-corrosive for skin. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin. Non-irritating to the eyes. Non-hazardous in case of ingestion. Non-hazardous in case of inhalation.

**CARCINOGENIC EFFECTS:** Not available.

**MUTAGENIC EFFECTS:** Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to lungs, mucous membranes.

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

#### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Finish by rinsing thoroughly with running water to avoid a possible infection. Cold water may be used.

**Skin Contact:**

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Ingestion:**

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

#### Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

### Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

### Large Spill:

Corrosive liquid.

Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep container dry. Do not breathe gas/fumes/ vapour/spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes Keep away from incompatibles such as acids.

### Storage:

Alkalis may be stored in heavy duty gauge steel containers. Corrosive materials should be stored in a separate safety storage cabinet or room.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

### Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

Sodium hydroxide

CEIL: 2 (mg/m<sup>3</sup>) from ACGIH [1995]

Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Odorless.

**Taste:** Alkaline. Bitter. (Strong.)

**Molecular Weight:** Not applicable.

**Color:** Clear Colorless.

**pH (1% soln/water):** Basic.

**Boiling Point:** The lowest known value is 100°C (212°F) (Water).

**Melting Point:** Not available.

**Critical Temperature:** Not available.

**Specific Gravity:** Weighted average: 1.15 (Water = 1)

**Vapor Pressure:** The highest known value is 17.535 mm of Hg (@ 20°C) (Water).

**Vapor Density:** The highest known value is 0.62 (Air = 1) (Water).

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:** Easily soluble in cold water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Extremely reactive or incompatible with acids.

**Corrosivity:**

Highly corrosive in presence of aluminum.

Slightly corrosive to corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

## Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

LD50: Not available.

LC50: Not available.

**Chronic Effects on Humans:** The substance is toxic to lungs, mucous membranes.

**Other Toxic Effects on Humans:**

Very hazardous in case of skin contact (corrosive, irritant), of ingestion.  
Hazardous in case of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

## Section 14: Transport Information

**DOT Classification:** CLASS 8: Corrosive liquid.

**Identification :** Sodium hydroxide, solution (Sodium hydroxide) : UN1824 PG: II

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:**

Pennsylvania RTK: Sodium hydroxide  
Massachusetts RTK: Sodium hydroxide  
TSCA 8(b) inventory: Sodium hydroxide; Water

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).  
CLASS E: Corrosive liquid.

**DSCL (EEC):** R35- Causes severe burns.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:**

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves.

Full suit.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Face shield.

## Section 16: Other Information

**References:** Not available.

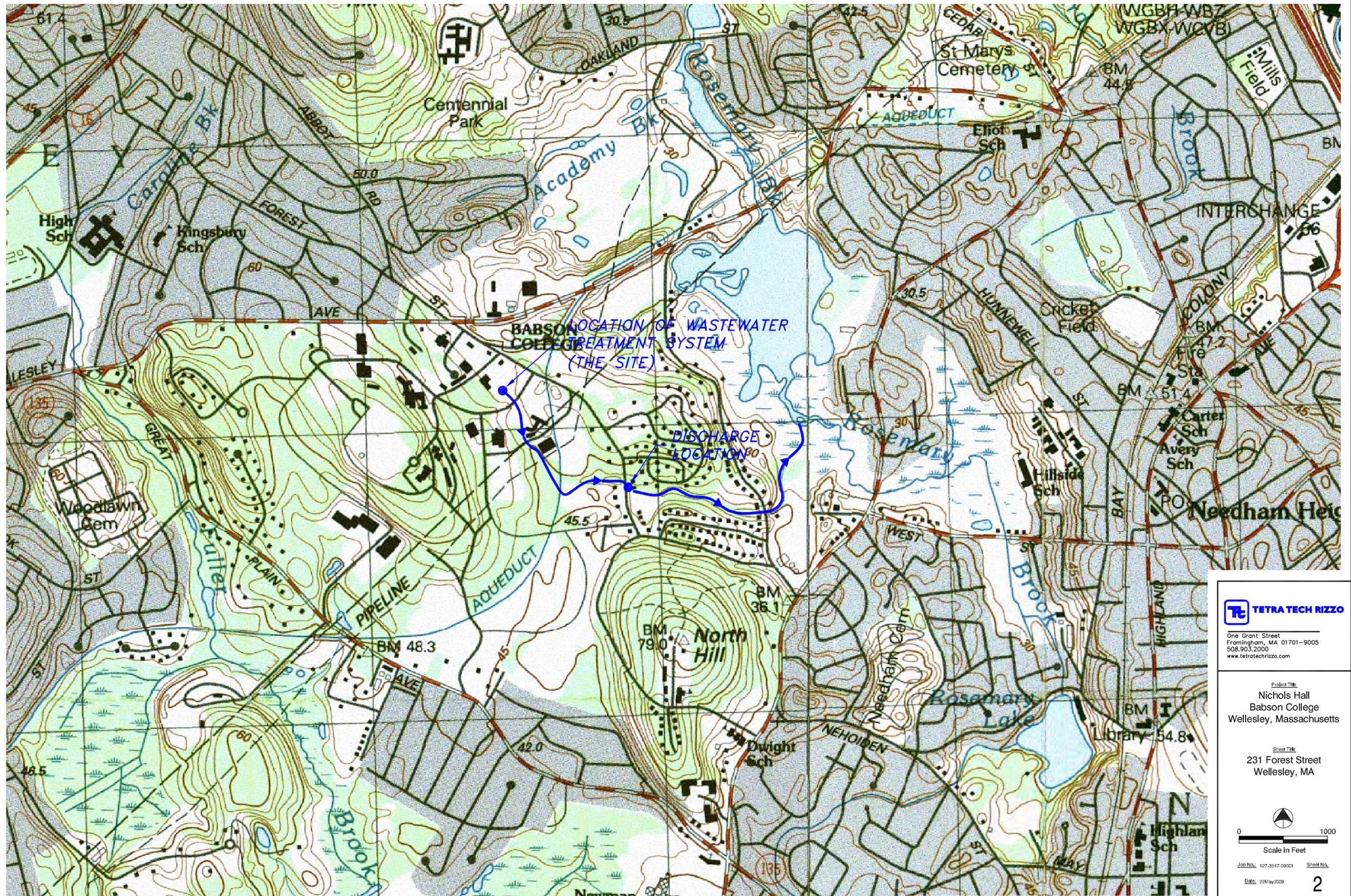
**Other Special Considerations:** Not available.

**Created:** 10/10/2005 12:05 PM

**Last Updated:** 11/06/2008 12:00 PM

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**Attachment 4**  
**Section 5**  
Receiving Surface Water Information



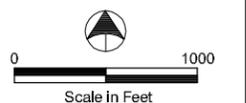
P:\3517\127-3517-09001\CAD\SupportFiles\FIG1\_TOP0.dwg 5/26/2009 2:54:36 PM



One Grant Street  
 Framingham, MA 01701-9005  
 508.903.2000  
 www.tetratechrizzo.com

Project Title  
 Nichols Hall  
 Babson College  
 Wellesley, Massachusetts

Sheet Title  
 231 Forest Street  
 Wellesley, MA



Job No.: 127-3517-09001 Sheet No.:

Date: 22 May 2009 **2**

File Name: FIG1

## ROSEMARY BROOK (SEGMENT MA72-25)

Location: Headwaters, outlet Rosemary Lake, Needham, to confluence with the Charles River, Wellesley.  
Segment Length: 3.3 miles  
Classification: Class B.

Land-use estimates (top 3, excluding water) for the 3.8 mi<sup>2</sup> subwatershed.

Residential ..... 54%  
Open land ..... 19%  
Forest..... 15%

The estimated percent impervious area for this subwatershed area is 19.0%.

This segment is on the 2006 Integrated List of Waters in *Category 5 - Waters Requiring a TMDL* because of nutrients, organic enrichment/low DO, turbidity, pathogens, suspended solids, taste, odor and color (MassDEP 2007).

## WITHDRAWALS AND DISCHARGES

### WMA (See Appendix H, Table H1)

Wellesley Water Department (32031701). [Note: A non-consumptive use status was also accepted for the Wellesley DPW in January 1989 for a water treatment system to withdraw and oxygenate water, then inject it into the groundwater to treat for iron and manganese. The withdrawal points for the non-consumptive use are 02G – Wellesley Ave and 06G – TF Coughlin Wellfields with a withdrawal volume of 117 million gallons per year (McCann 2007).]

Wellesley Country Club (32031703)

### NPDES (See Appendix H, Table H4)

## USE ASSESSMENT

### *Aquatic Life Use*

#### Habitat and Flow

There are three dams along Rosemary Brook - Rosemary Lake Dam, Wellesley Avenue Dam, and Longfellow Pond Dam. Downstream from these dams, Rosemary Brook was approximately 20 feet wide near Barton Road in Wellesley (Station RB02) between April and September 2002 (Appendix B). By early June the water level had dropped approximately 1 foot and the velocity was low. Low flows continued into July and by the August and September surveys the brook was almost stagnant. The stream bottom was described as mucky and silt covered with no aquatic plants at this sampling location.

#### Water Chemistry

Rosemary Brook was sampled by DWM near Barton Road in Wellesley (Station RB02) between April and September 2002. DO was very low (<5.0 mg/L) on six of the 10 surveys. None of the measurements taken between 10 July and 11 September were above 4.3 mg/L (Appendix B, Table 3). The maximum temperature recorded was 21.6°C and all pH measurements met criteria. Conductivities were somewhat elevated (ranging from 455 to 965 µS/cm and two of the 10 measurements were qualified for being outside of the upper calibration range). Phosphorus levels were moderately high ranging from 0.041 to 0.12 mg/L (n=5 excluding duplicate samples).

The *Aquatic Life Use* is assessed as impaired for Rosemary Brook based primarily on the low DO documented between July and September 2002 and the elevated concentrations of total phosphorus. The dams and water withdrawals in this subwatershed likely exacerbate low flow conditions in the brook. Sources contributing to these conditions are unknown, although the country club and nonpoint source(s) from urban/residential areas likely contribute to these conditions.

### *Primary and Secondary Contact Recreation and Aesthetics Uses*

Bacteria sampling took place in Rosemary Brook near Barton Road in Wellesley (Station RB02) between April and September 2002 (Appendix B). The *E. coli* bacteria counts ranged from <20 to 540 cfu/100 ml. The geometric mean of all of five samples is 96 cfu/100 ml and only one of the five counts exceeded 235 cfu/100 ml. The water column was slightly turbid in-stream with no odor during the April and June surveys, but in July there was an odor described as "rotting vegetables" and "swampy". Trash was noted near the sampling site on all survey dates.

The *Primary* and *Secondary Contact Recreational* and *Aesthetics* uses are assessed as support for Rosemary Brook because of the low bacteria counts and the general lack of objectionable conditions. The *Aesthetics Use* is identified with an Alert Status because of deposits of trash and debris.

Rosemary Brook (Segment MA72-25) Use Summary

Designated Uses		Status
Aquatic Life		<b>IMPAIRED</b> Causes: Low DO, elevated total phosphorus Suspected causes: Flow regulation at impoundments, water withdrawals Source: Unknown Suspected sources: Golf course, habitat modification associated with dams, baseflow depletion from groundwater withdrawals, nonpoint source from urban/residential areas
Fish Consumption		NOT ASSESSED
Primary Contact		SUPPORT
Secondary Contact		SUPPORT
Aesthetics		SUPPORT*

\*Alert Status issues identified, see details in use assessment.

#### RECOMMENDATIONS

Additional bacteria sampling should be conducted to assess the status of the *Primary* and *Secondary Contact Recreational Uses* and to evaluate cleanup progress.

Wellesley Country Club should:

- establish a riparian zone along the brook,
- optimize course irrigation practices to minimize any impact(s) on flows in Rosemary Brook, and
- utilize best management practices to reduce nutrient loading to the brook.

Additional field reconnaissance should be conducted along Rosemary Brook to better evaluate habitat quality conditions as well as flow conditions. Efforts should be made to better understand streamflow regimes (particularly during low flow months) and what effect water withdrawals and/or outlet control practices of the impoundments along the brook are having on aquatic life habitat.

Stream cleanup to remove trash/debris.

**Attachment 5**

**Section 5 Question e:**

Calculated Seven Day-Ten Year Flow (7Q10)

$$\text{Dilution Factor (DF)} = (Q_d + Q_s)/Q_d$$

$Q_d$  = maximum flow of discharge estimated at 50 gpm or 0.1114 ft<sup>3</sup>/sec.

$Q_s$  = 7Q10 flow calculated by StreamStats as 0.0149 ft<sup>3</sup>/sec.

$$\mathbf{DF} = (0.1114 + 0.0149)/0.1114 = \mathbf{1.134}$$



# Streamstats Ungaged Site Report

Date: Mon May 18 2009 13:40:46  
 Site Location: Massachusetts  
 NAD83 Latitude: 42.2954 (42 17 43)  
 NAD83 Longitude: -71.2584 (-71 15 30)  
 NAD27 Latitude: 42.2953 (42 17 42)  
 NAD27 Longitude: -71.2589 (-71 15 31)  
 Drainage Area: 0.0544 mi<sup>2</sup>

Peak Flow Basin Characteristics			
100% Statewide Low Flow (0.0544 mi <sup>2</sup> )			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.0544 (below min value 1.61)	1.61	149
Mean Basin Slope from 250K DEM (percent)	2.74	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	2.69 (above max value 1.29)	0	1.29
Massachusetts Region (dimensionless)	0	0	1

*Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.*

Streamflow Statistics					
Statistic	Flow (ft <sup>3</sup> /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
D50	0.049				
D60	0.0407				
D70	0.0388				
D75	0.0342				
D80	0.0572				
D85	0.0437				
D90	0.0581				
D95	0.029				
D98	0.0188				
D99	0.0126				
M7D2Y	0.0204				
AUGD50	0.0462				
M7D10Y	0.0149				

**Attachment 6**  
**NOI Section 6 Question a:**

Tetra Tech Rizzo has performed a review of the procedures for Endangered Species Consultation Project Review for Projects with Federal Involvement, specified by the New England Field Office of the U.S. Fish & Wildlife Service. There are no federally listed species reported for Norfolk County, Massachusetts. According to the listing of rare species by town from the Massachusetts Division of Fisheries & Wildlife, there are state-listed species identified for Wellesley, Massachusetts. The Massachusetts Natural Heritage Atlas (11<sup>th</sup> Edition, July 1, 2003) indicates that there are no Priority Habitats of Rare Species, estimated habitats of Rare Wildlife or Certified Vernal Pools within the “action area”. The Natural Heritage and Endangered Species map (BioMap) provided by the Massachusetts Division of Fisheries & Wildlife indicates that there are no BioMap Core Habitat or BioMap Supporting Natural Landscapes located within the “action area”. Therefore, no further coordination with federal and/or state authorities is necessary. The facility meets the eligibility criteria of the NPDES RGP under Criteria A since no endangered or threatened species or critical habitat are in proximity to the point where authorized discharges reach the receiving waters. This finding is supported by the attached letter obtained pursuant to the U.S. Fish & Wildlife Service procedures for endangered species consultation.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Field Office  
70 Commercial Street, Suite 300  
Concord, New Hampshire 03301-5087  
<http://www.fws.gov/northeast/newenglandfieldoffice>

January 2, 2009

To Whom It May Concern:

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

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

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

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

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

Sincerely yours,

Thomas R. Chapman  
Supervisor  
New England Field Office

<b>Town</b>	<b>Taxonomic Group</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>MESA Status</b>	<b>Federal Status</b>	<b>Most Recent Observation</b>
WELLESLEY	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	T		Historic
WELLESLEY	Beetle	Cicindela purpurea	Purple Tiger Beetle	SC		1906
WELLESLEY	Beetle	Cicindela rufiventris hentzii	Hentz's Redbelly Tiger Beetle	T		Historic
WELLESLEY	Bird	Circus cyaneus	Northern Harrier	T		1878
WELLESLEY	Bird	Vermivora chrysoptera	Golden-winged Warbler	E		Historic
WELLESLEY	Dragonfly/Damselfly	Enallagma laterale	New England Bluet	SC		1895
WELLESLEY	Dragonfly/Damselfly	Ophiogomphus aspersus	Brook Snaketail	SC		Historic
WELLESLEY	Vascular Plant	Ageratina aromatica	Lesser Snakeroot	E		1891
WELLESLEY	Vascular Plant	Aristida purpurascens	Purple Needlegrass	T		1908
WELLESLEY	Vascular Plant	Asclepias purpurascens	Purple Milkweed	E		1884
WELLESLEY	Vascular Plant	Asclepias verticillata	Linear-leaved Milkweed	T		1909
WELLESLEY	Vascular Plant	Carex oligosperma	Few-fruited Sedge	E		1854
WELLESLEY	Vascular Plant	Claytonia virginica	Narrow-leaved Spring Beauty	E		1994
WELLESLEY	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1915
WELLESLEY	Vascular Plant	Nabalus serpentarius	Lion's Foot	E		1915
WELLESLEY	Vascular Plant	Rotala ramosior	Toothcup	E		1908
WELLESLEY	Vascular Plant	Sphenopholis nitida	Shining Wedgegrass	T		1908
WELLESLEY	Vascular Plant	Verbena simplex	Narrow-leaved Vervain	E		1890



# ESTIMATED HABITATS OF RARE WILDLIFE AND CERTIFIED VERNAL POOLS

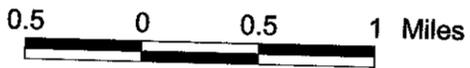
For use with the MA Wetlands Protection Act Regulations (310 CMR 10)

Effective June 1, 2003

Produced by the Natural Heritage & Endangered Species Program



NOTE



See County Index Maps to locate adjacent quadrangles



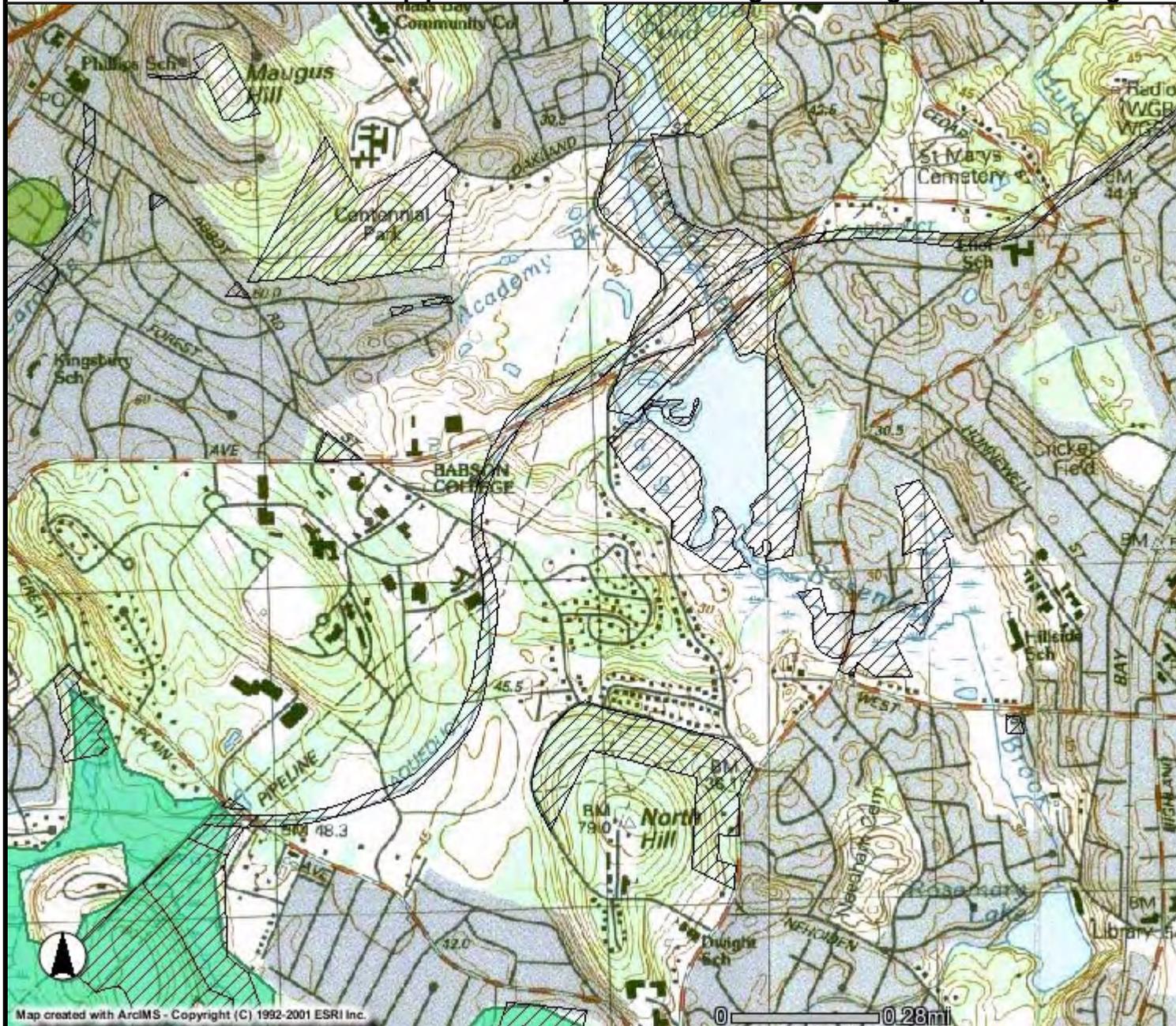
NATICK QUAD

QUAD INDEX

TOWN INDEX

SPECIES LIST

# BioMap produced by Natural Heritage & Endangered Species Program



- Legend**
- Surrounding States
  - ▨ Permanently Protected Open Space
  - BioMap Core Habitat
  - BioMap Supporting Natural Landscapes

Map created with ArcIMS - Copyright (C) 1992-2001 ESRI Inc.

0 0.25mi

**Attachment 7**  
**NOI Section 6 Question b:**

Tetra Tech Rizzo has performed a review of the National Parks Service National Information System (NRIS) to identify places listed or determined eligible for listing on the National Register of Historic Places. There are a total of seven listings in Wellesley, Massachusetts. None of the identified historic properties are located in the path of the site's discharges or where construction activities are planned to implement Best Management Practices to control such discharges.



## Index by State and City (Links)

05/22/2009 13:28:29

No filter

Include filter in navigation

Row	STATE ▾	COUNTY ▾	RESOURCE NAME ▾	ADDRESS ▾	CITY ▾	LISTED ▾	MULTIPLE ▾	WEB PAGE ▾
1	MA	Norfolk	<b>Eaton-Moulton Mill</b>	37 Walnut St.	Wellesley	1976-05-16		NULL
2	MA	Norfolk	<b>Elm Park and Isaac Sprague Memorial Tower</b>	305 Washington St.	Wellesley	2007-06-05		NULL
3	MA	Norfolk	<b>Hunnewell Estates Historic District</b>	Washington St. and Pond Rd.	Wellesley	1988-04-14		NULL
4	MA	Norfolk	<b>Sudbury Aqueduct Linear District</b>	Along Sudbury Aqueduct from Farm Pond at Waverly St. to Chestnut Hill Reservoir	Wellesley	1990-01-18	Water Supply System of Metropolitan Boston MPS	NULL
5	MA	Norfolk	<b>Wellesley Farms Railroad Station</b>	Croton St. extension	Wellesley	1986-02-14		NULL
6	MA	Norfolk	<b>Wellesley Hills Branch Library</b>	210 Washington St.	Wellesley	2007-06-12		NULL
7	MA	Norfolk	<b>Wellesley Town Hall</b>	525 Washington St.	Wellesley	1976-04-30		<a href="http://memory.loc.gov/cgi-bin/query/r?ammem/hh:@field(NUMBER+@band(MA1369))">memory.loc.gov/cgi-bin/query/r?ammem/hh:@field(NUMBER+@band(MA1369))</a>

