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MAG910103



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Notice of Intent

Remediation General Permit

276 Dorset Road

Waban, Massachusetts 02468

NPDES Exclusion #MA-051-026

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Prepared by:
GeoHydroCycle, Inc.

OCT 11 2005

Prepared for:
Alan and Sybil Edelstein

October 7, 2005



GEOHYDROCYCLE, INC.

October 7, 2005

HAZARDOUS WASTE
WATER SUPPLY

ASSESSMENT
REMEDATION
ANALYSES
PERMITTING
MODELING
SOFTWARE

US Environmental Protection Agency
RGP-NOC Processing
Municipal Assistance Unit (CMU),
1 Congress Street, Suite 1100
Boston, MA 02114-2023

re: NPDES Exclusion #MA-05I-026
276 Dorset Road
Waban, MA 02468
GHC #04054

Dear Department Staff Member:

On behalf of our Clients, Alan and Sybil Edelstein, GeoHydroCycle, Inc. (GHC) is pleased to submit the attached Notice of Intent form for the Remediation General Permit for the NPDES Exclusion #MA-05I-026 at 276 Dorset Road in Waban, MA.

If you have any questions, please call our office.

Sincerely,
GEOHYDROCYCLE, INC.

Laurie Boehl

cc: Susan J. Crane, Esq.
Alan and Sybil Edelstein
Steven Shope, Exeter Environmental Associates, Inc.

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151B California Street
Newton, Massachusetts
02458

(617) 527-8074 (v)
(617) 527-8668 (f)

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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: <u>EDELSTEIN RESIDENCE</u>		Facility/site address:	
Location of facility/site: longitude: <u>71°14'33"</u> latitude: <u>42°19'46"</u>	Facility SIC code(s): <u>NA</u>	Street: <u>276 DORSET ROAD</u>	
b) Name of facility/site owner: <u>ALAN AND SYBIL EDELSTEIN</u>		Town: <u>WABAN</u>	
Email address of owner: <u>ALAN276@AOL.COM</u>	State: <u>MA</u>	Zip: <u>02468</u>	County: <u>MIDDLESEX</u>
Telephone no. of facility/site owner: <u>617-527-7912</u>	Owner is (check one): 1. Federal ___ 2. State/Tribal ___		
Fax no. of facility/site owner: <u>617-527-7926</u>	3. Private <input checked="" type="checkbox"/> 4. other, if so, describe: _____		
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator: <u>GEOHYDROCYCLE, INC.</u>		Operator telephone no: <u>617-527-8074</u>	
		Operator fax no.: <u>617-527-8668</u>	Operator email: <u>SWSMITH@geohydrocycle.com</u>
Operator contact name and title: <u>STEPHEN SMITH, P.E., P.HGW, L.S.P.</u>			
Address of operator (if different from owner):		Street: <u>151 B CALIFORNIA STREET</u>	
Town: <u>NEWTON</u>	State: <u>MA</u>	Zip: <u>02458</u>	County: <u>MIDDLESEX</u>
d) Check "yes" or "no" for the following:			
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes <input checked="" type="checkbox"/> No ___ if "yes," number: <u>MA-05I-026</u>			
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ___ 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 ___ No <input checked="" 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 ___			

<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes ___ No <input checked="" type="checkbox"/></p> <p>If "yes," please list:</p> <ol style="list-style-type: none"> 1. site identification # assigned by the state of NH or MA: 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number: 	<p>f) Is the site/facility covered by any other EPA permit, including:</p> <ol style="list-style-type: none"> 1. multi-sector storm water general permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number: 2. phase I or II construction storm water general permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number: 3. individual NPDES permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number: 4. any other water quality related permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number:
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

<p>a) Describe the discharge activities for which the owner/applicant is seeking coverage: <i>GROUNDWATER FROM MONITORING WELLS IS PUMPED THROUGH A TREATMENT SYSTEM THAT CONSISTS OF AN EQUALIZATION TANK, BAG FILTER, AND TWO ACTIVATED CARBON CANISTERS IN SERIES. EFFLUENT FROM THE TREATMENT SYSTEM GOES TO A STORM DRAIN ON DORSET RD, APPROXIMATELY 60 FEET FROM THE EOELSTEIN'S PROPERTY. SEE APPENDIX B.</i></p>		
<p>b) Provide the following information about each discharge:</p>	<p>1) Number of discharge points: <i>1</i></p>	<p>2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow <i>NA</i> Average flow <i>0.00446</i> Is maximum flow a design value? Y ___ N <input checked="" type="checkbox"/> For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. <i>ESTIMATED AT 2 GALLONS PER MINUTE = 0.00446 ft³/s.</i></p>
<p>3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <i>71°14'33.31"</i> lat. <i>42°19'46.94"</i>; 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.</p>		
<p>4) If hydrostatic testing, total volume of the discharge (gals): <i>NA</i></p>		<p>5) Is the discharge intermittent <i>YES</i> or seasonal <i>No</i> ? Is discharge ongoing Yes <input checked="" type="checkbox"/> No ___ ?</p>
<p>c) Expected dates of discharge (mm/dd/yy): start <i>04/05/05</i> end <i>09/24/06</i></p>		
<p>d) Please attach a line drawing or flow schematic showing water flow through the facility including: <i>SEE APPENDIX C, FIGURES 2 AND 3.</i> 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).</p>		

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.

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		✓	23	grab	SM2540D	5.0 mg/L	17,000	0.186	2,300	0.025
2. Total Residual Chlorine	✓									
3. Total Petroleum Hydrocarbons		✓	23	grab	8100 by GC	0.2 mg/L	62,100	0.678	13,420	0.147
4. Cyanide	✓									
5. Benzene		✓	23	grab	VOC 8260B	1.0 ug/L	57.9	0.00063	13.69	0.00015
6. Toluene		✓	23	grab	VOC 8260B	1.0 ug/L	458	0.00500	113	0.00123
7. Ethylbenzene		✓	23	grab	VOC 8260B	1.0 ug/L	125	0.001365	35.77	0.000391
8. (m,p,o) Xylenes		✓	23	grab	VOC 8260B	2.0 ug/L 1.0 ug/L	464 282	0.005066 0.003079	174.94 111.41	0.001910 0.001216
9. Total BTEX ⁴		✓	23	grab	VOC 8260B	1.0 ug/L	1,386.9	0.015142	448.81	0.004900

⁴BTEX = 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 ⁵ (1,2- Dibromo-methane)	✓									
11. Methyl-tert-Butyl Ether (MtBE)		✓	23	grab	VOC 8260 B	1.0 ug/L	163	0.001780	42.43	0.000463
12. tert-Butyl Alcohol (TBA)	✓									
13. tert-Amyl Methyl Ether (TAME)	✓									
14. Naphthalene		✓	23	grab	PAH by 8270 C	2.0 ug/L	294	0.003210	109.31	0.001193
15. Carbon Tetrachloride	✓									
16. 1,4 Dichlorobenzene	✓									
17. 1,2 Dichlorobenzene	✓									
18. 1,3 Dichlorobenzene	✓									
19. 1,1 Dichloroethane	✓									
20. 1,2 Dichloroethane	✓									
21. 1,1 Dichloroethylene	✓									
22. cis-1,2 Dichloroethylene	✓									
23. Dichloromethane (Methylene Chloride)	✓									
24. Tetrachloroethylene	✓									

⁵EDB 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	✓									
26. 1,1,2 Trichloroethane	✓									
27. Trichloroethylene	✓									
28. Vinyl Chloride	✓									
29. Acetone	✓									
30. 1,4 Dioxane	✓									
31. Total Phenols	✓									
32. Pentachlorophenol	✓									
33. Total Phthalates ⁶ (Phthalate esthers)	✓									
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓									
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		✓	23	grab	PAH by SW846 8270C	5.26 µg/L				
a. Benzo(a) Anthracene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
b. Benzo(a) Pyrene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
c. Benzo(b)Fluoranthene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
d. Benzo(k) Fluoranthene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
e. Chrysene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND

ND = Not Detect

⁶The 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		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
g. Indeno(1,2,3-cd) Pyrene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		✓	23	grab	PAH SW846 8270C	5.26 µg/L				
h. Acenaphthene		✓	23	grab	PAH 8270C	5.26 µg/L	11.74	0.00013	1.25	0.000014
i. Acenaphthylene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
j. Anthracene		✓	23	grab	PAH 8270C	5.26 µg/L	8.2	0.00009	0.36	0.000004
k. Benzo(ghi) Perylene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
l. Fluoranthene		✓	23	grab	PAH 8270C	5.26 µg/L	ND	ND	ND	ND
m. Fluorene		✓	23	grab	PAH 8270C	5.26 µg/L	17.5	0.00011	1.93	0.000021
n. Naphthalene-		✓	23	grab	PAH 8270C	5.26 µg/L	52.5	0.00057	14.05	0.000153
o. Phenanthrene		✓	23	grab	PAH 8270C	5.26 µg/L	58.3	0.000637	5.25	0.000057
p. Pyrene		✓	23	grab	PAH 8270C	5.26 µg/L	15.5	0.000169	0.67	0.000007
37. Total Polychlorinated Biphenyls (PCBs)	✓									
38. Antimony	✓									
39. Arsenic	✓									
40. Cadmium	✓									
41. Chromium III	✓									
42. Chromium VI	✓									

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	✓									
44. Lead	✓									
45. Mercury	✓									
46. Nickel	✓									
47. Selenium	✓									
48. Silver	✓									
49. Zinc	✓									
50. Iron	✓									
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 reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y ___ N ___</p>	<p>If yes, which metals?</p>
<p><i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: _____</p>	<p>Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ___ N ___ If "Yes," list which metals:</p>

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including: SEE APPENDIX C

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks <input checked="" type="checkbox"/>	Bag filter <input checked="" type="checkbox"/>	GAC filter
	Chlorination	Dechlorination	Other (please describe): <u>TWO ACTIVATED CARBON ADSORPTION CANISTERS</u>			
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 <u>2 GPM</u> Maximum flow rate of treatment system <u>NA</u> Design flow rate of treatment system <u>10 GPM</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): <u>SULFAMIC ACID AND WATER SOLUTION. SEE APPENDIX D</u>						

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

a) Identify the discharge pathway:	Direct <input type="checkbox"/>	Within facility <input type="checkbox"/>	Storm drain <input checked="" type="checkbox"/>	River/brook <input type="checkbox"/>	Wetlands <input type="checkbox"/>	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: <u>SEE APPENDIX C.</u>						
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: <u>SEE APPENDIX C, FIGURE 4.</u> 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality classification of the receiving water <u>SEE APPENDIX E.</u>						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water <u>14.3</u> cfs Please attach any calculation sheets used to support stream flow and dilution calculations. <u>TAKEN FROM USGS STATION # 01104500</u>						
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, for which pollutant(s)? Is there a TMDL? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, for which pollutant(s)? <u>SEE APPENDIX F.</u>						

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 <u>SEE APPENDIX G.</u> Has any consultation with the federal services been completed? No ___ or is consultation underway? <u>YES</u> 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 <u>✓</u> Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No <u>✓</u>

SEE APPENDIX C, FIGURE 4 AND APPENDIX H.

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.
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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: <u>EDELSTEIN RESIDENCE</u>
Operator signature: <u>[Signature]</u>
Title:
Date: <u>10/7/05</u>

Appendix B - Discharge Activities and Discharge Pathway

Description of Discharge Activities and Discharge Pathway:

Background:

The Site is a residential property located in a residentially zoned area of Waban, MA (a suburb of Newton, MA). The residence is a two-story single-family home with basement, see Figure 1 for Site Location.

On September 24, 2004, a delivery of #2 fuel oil was made to the 1,000 gallon underground storage tank (UST) located beneath the front lawn at the Edelsteins' home. On September 28, 2004 at approximately 11:30 AM, it was determined that the tank had leaked its entire contents. The release was verbally reported to Massachusetts Department of Environmental Protection (MADEP) on September 28, 2004 at 12:45 PM.

On September 29, 2004, the previous contractors were at the Site to remove the leaking UST at the direction of Mr. James O'Brien, the former LSP of record. The contractor observed two holes in the tank bottom, approximately 0.25 and 0.75 inches in diameter, confirming a mechanism for the tank leak. The holes were located very close to each other on the underside of the UST. It is assumed that the 1,000 gallon UST had been filled on September 24, 2004, and that as much as 900 gallons of #2 fuel oil may have been released to the environment. The UST was removed, disposed of off the Site, and a temporary aboveground storage tank (AST) was installed.

A Notice of Responsibility (NOR) was issued for the Site with Release Tracking Number RTN 3-24275 in accordance with the Massachusetts Contingency Plan 310 CMR 40.0000 (the MCP). On November 29, 2004, on behalf of the Edelsteins, GHC submitted an Immediate Response Action (IRA) Plan with Mr. Stephen Smith as LSP of Record.

A number of response actions have occurred at the Site since it was reported, including: excavation and disposal of approximately 315 tons of soils; installation of nine monitoring wells; sampling and analyses of groundwater in the monitoring wells; sampling and analyses of soils taken during the well installations; installation and operation of product recovery pumps; installation and operation of an automated Product Recovery/Groundwater Treatment System; and installation of a bioventing system.

Product Recovery/Groundwater Treatment System

Excavation and other assessments of the spill showed that a majority of the fuel oil (product) migrated down through approximately 55 feet of outwash sand and gravel and is being held in the capillary fringe and floating on top of the groundwater table. As a result, product recovery pumps were installed in two 4-inch diameter wells (GHC-2 and GHC-3) in December and January, see Figure 2 for well locations.

In March and April 2005, to enhance the product recovery and to treat dissolved fuel oil constituents in groundwater, GHC installed a product recovery/groundwater treatment system at the Site. GHC installed submersible water pumps in GHC-2 and GHC-3 and set the water pumps to remove sufficient groundwater to lower the water table as much as two feet. The product pumps continue to pump only fuel oil.

A shed has been placed on the Site to enclose the recovery/treatment system, see Figure 2. Fuel oil is collected in a 55-gallon drum within the shed. Groundwater from the wells is pumped through the treatment system that consists of an equalization tank, bag filter, and two activated

carbon adsorption canisters in series. The system has been designed to treat up to 10 gallons per minute, however, combined groundwater pumping has been pumping an average of 2 gallons per minute since startup of the system. Effluent from the treatment system will go to a storm drain on Dorset Road, approximately 60 feet from the Edelsteins' property, see Figure 2 and Figure 3. Based on drainage maps from the City of Newton Engineering Department, the storm drain discharges to the Charles River at Albemarle Road in Newton.

See the Figure 4 for a detailed map showing the location of the discharge to the indirect conveyance and the discharge to surface water, as well as nearby sensitive receptors (surface waters, drinking water supplies, wetland areas, and areas of critical environmental concern), and historic properties. *Note: Town sewerage is provided to the residences on Dorset Road, the closest sanitary sewer is located beneath Dorset Road in front of the Edelstein's home (276 Dorset Road).

During the week of June 13 to 19, 2005, GHC shut down the product recovery/groundwater treatment system in order to clean out the product recovery wells. GHC discovered biofouling in the wells was causing malfunctioning of the recovery probes. As a result, GHC acidized the wells with a solution of sulfamic acid and purged the wells until they were pumping clear. The system was started again on June 20, 2005, and has been fully operational since.

As a preventative maintenance measure, GHC has scheduled monthly cleaning of the recovery wells. GHC shut down the system from July 20 to July 21, and from September 7 through September 9 to perform routine maintenance of the recovery wells.

Sampling and Analyses

Since the August 17, 2005 sampling, GHC personnel have been to the Site on twenty-eight occasions to collect influent and effluent water samples. Water samples were not taken the week of September 9, due to the shut down of the system for routine maintenance. All samples were placed in appropriate sample containers supplied by the laboratory and placed on ice in an insulated container and sent under chain-of-custody protocol to Spectrum Analytical, Inc. in Agawam, MA. Samples were analyzed in the laboratory for Total Suspended Solids (TSS), Total Petroleum Hydrocarbons (TPH), Polynuclear Aromatic Hydrocarbons (PAH), BTEX, and naphthalene in accordance with Attachment A of the Permit Exclusion. In addition, Methyl-tert-Butyl Ether (MtBE) is being monitored as an indicator of contaminant breakthrough in the carbon canisters. The MCP GW-1 cleanup standard of 70 mg/L is used for the comparison concentration. This means, if MtBE concentrations in the effluent begin approaching 70 mg/L, that is an indication that the canisters must be changed.

GHC has included Table 2 in Appendix H which summarizes the results of the water testing from the first twenty-two sampling rounds that were summarized in NPDES Reports 1 through 4.

Sampling Frequency and Reporting

In accordance with a request from the City of Newton, influent and effluent water will continue to be sampled on a weekly basis. In addition, the City of Newton and the MADEP will receive the monthly NPDES reports.





0 2,083
Scale in Feet



Figure 1. Site Locus.

Base Map: Mass GIS Scanned USGS
Quadrangles

Project No. GHC #04054

NPDES Exclusion
#MA-05I-026
276 Dorset Road
Waban, MA

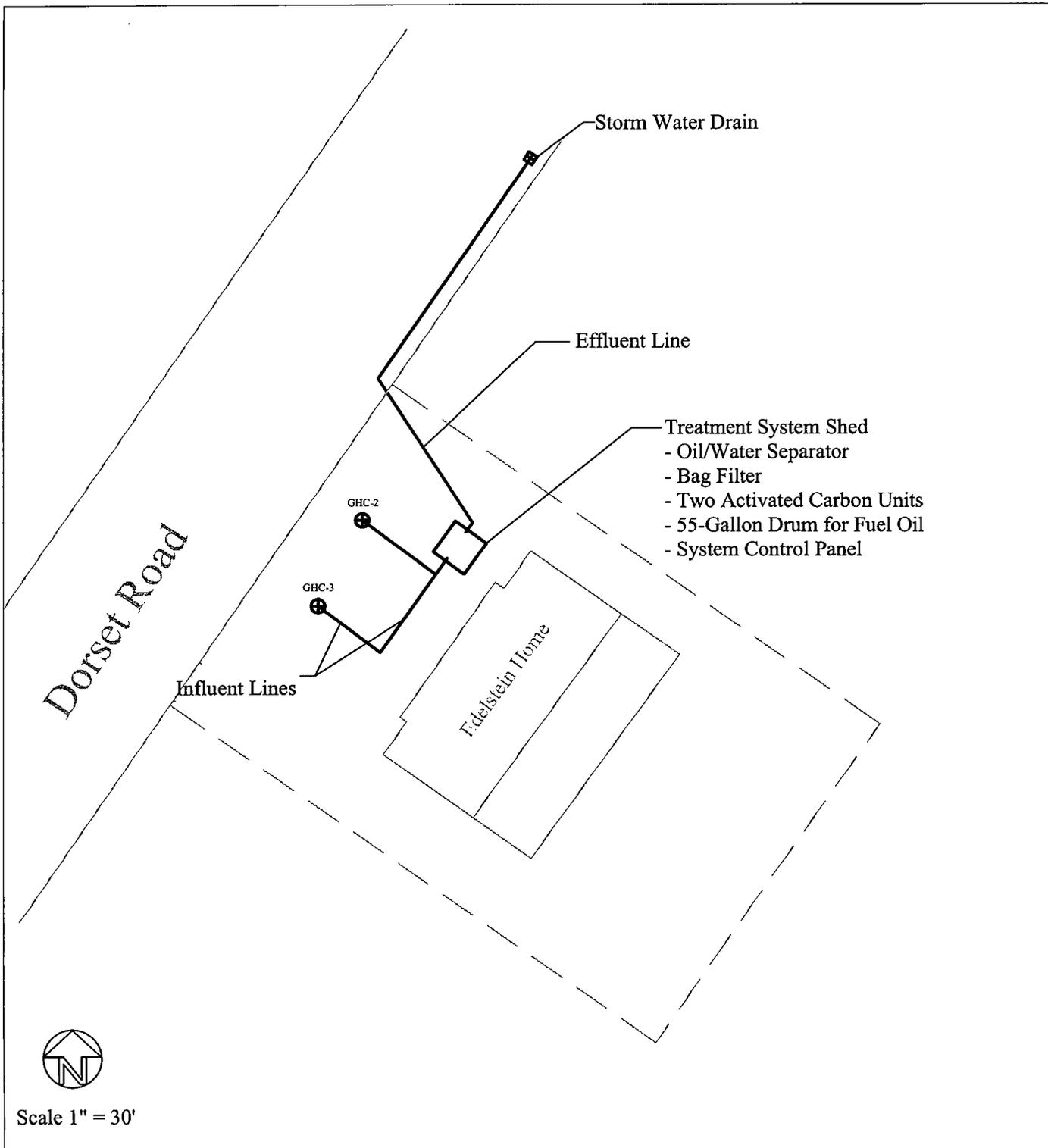
GeoHydroCycle, Inc.

Drafted:	TWM	Checked:	SWS
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Date:	11/22/04	Revision:	5/26/05
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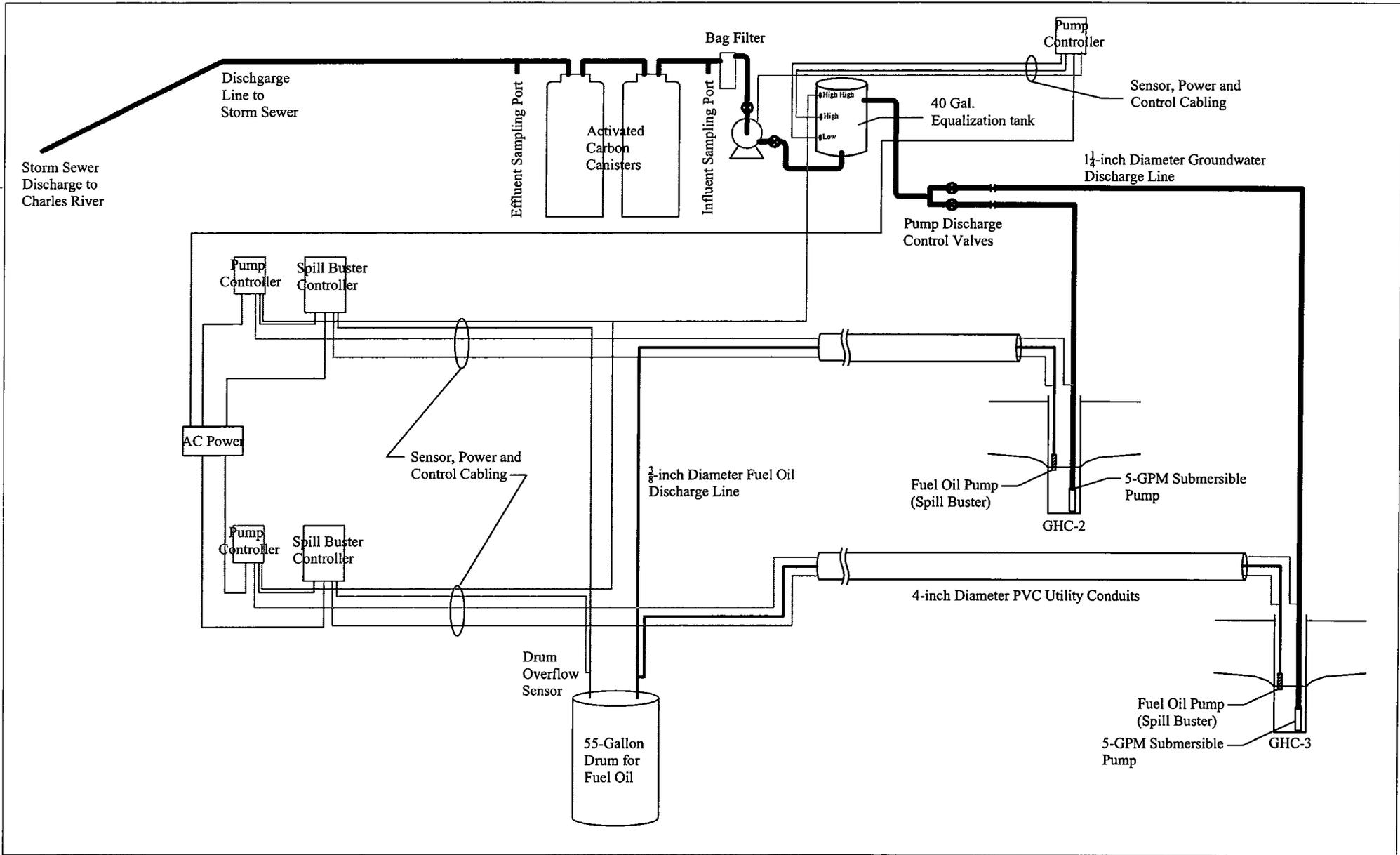
NPDES Permit
Exclusion #MA-05I-026
276 Dorset Road
Waban, MA

Figure 2. Groundwater
Treatment System
Layout.



September 6, 2005

GeoHydroCycle, Inc.



Not to Scale

Figure 3. Schematic Layout of Groundwater Depression and Product Recovery System.

Edelstein Residence
 276 Dorset Road
 Waban, MA 02468

GeoHydroCycle, Inc.



Scale: 1 km (1:44577)

X: 726881 m Y: 899984 m



Scale in feet



Figure 4. Receiving Water Outfall Location.

Base Map: USGS 21E Map

Project No.		GHC #04054	
Drafted	LCB	Checked	KAR
Date	10/4/05	Rev	10/05/05

NPDES Exclusion
#MA-05I-026
276 Dorset Road
Waban, MA

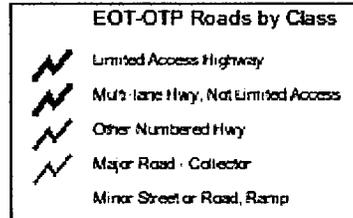
GeoHydroCycle, Inc.

Figure 4 - Legend

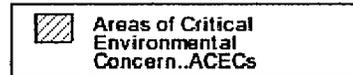
Major Basins Outlines



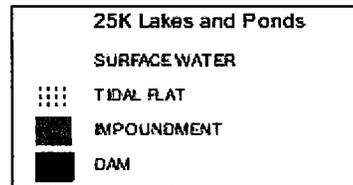
EOT-OTP Roads by Class



Areas of Critical Environmental Concern ACECs



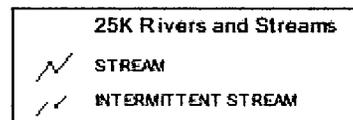
25k Lakes and Ponds



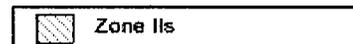
25k Wetlands



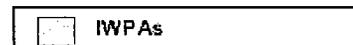
25k Rivers and Streams



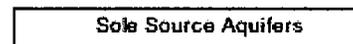
Zone IIs



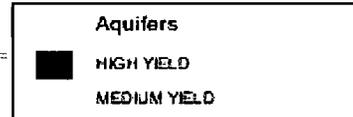
IWPAs



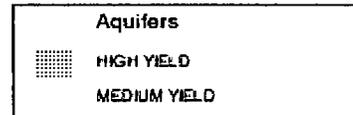
Sole Source Aquifers



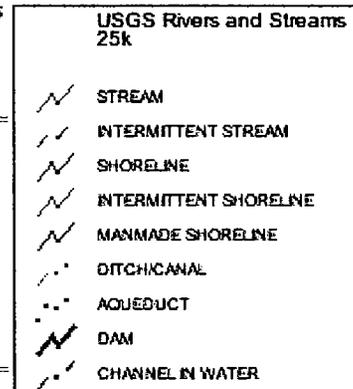
Aquifers by Yield Green Shades



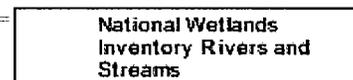
Aquifers by Yield Transparent



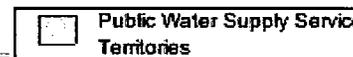
USGS Rivers and Streams 25k



NWI Streams



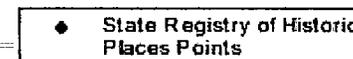
Public Water Supply Service Territories



State Registry of Historic Places Points Labels



State Registry of Historic Places Points



Appendix D - Chemical Additive



Description of Chemical Additive, Sulfamic Acid and Water Solution:

During the week of June 13 to 19, 2005, GHC shut down the product recovery/groundwater treatment system in order to clean out the product recovery wells. GHC discovered biofouling in the wells was causing malfunctioning of the recovery probes. As a result, GHC acidized the wells with a solution of sulfamic acid and purged the wells until they were pumping clear. The system was started again on June 20, 2005, and has been fully operational since.

As a preventative maintenance measure, GHC has scheduled monthly cleaning of the recovery wells. GHC shut down the system from July 20 to July 21, and from September 7 through September 9 to perform routine maintenance of the recovery wells.

See the attached MSDS for Sulfamic Acid.

MSDS Number: S7586 * * * * Effective Date: 05/08/03 * * * * Supercedes: 08/02/00

MSDS**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865



Mallinckrodt
CHEMICALS



24 Hour Emergency Telephone: 909-850-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

SULFAMIC ACID

1. Product Identification

Synonyms: Amidosulfonic acid; amidosulfuric acid; aminosulfonic acid; sulfamidic acid

CAS No.: 5329-14-6

Molecular Weight: 97.09

Chemical Formula: H₂NSO₃H

Product Codes:

J.T. Baker: V145, V147

Mallinckrodt: 1931

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sulfamic Acid	5329-14-6	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES SEVERE IRRITATION AND BURNS TO EVERY AREA OF CONTACT. MAY CAUSE LUNG DAMAGE.

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Storage Color Code: White (Corrosive)

Potential Health Effects

Inhalation:

Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. May cause pulmonary edema, a medical emergency. Pulmonary edema may be delayed up to 48 hours.

Ingestion:

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea.

Skin Contact:

Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Contact:

Corrosive. Can cause blurred vision, redness, pain, severe tissue burns and eye damage.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper

eyelids occasionally. Get medical attention immediately.

Note to Physician:

For severe exposures, monitor for delayed onset of pulmonary edema.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the

emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls as needed to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White to colorless crystals.

Odor:

Odorless.

Solubility:

Soluble in water.

Density:

2.1

pH:

1.18 (1% solution @ 25C (77F))

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

Decomposes.

Melting Point:

205C (401F)

Vapor Density (Air=1):

3.3

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Solutions are acidic. In water solution slowly hydrolyzes to form ammonium sulfate and bisulfate.

Hazardous Decomposition Products:

May emit ammonia, oxides of sulfur, oxides of nitrogen, and oxides of carbon.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers, nitric acid, chlorine. Solutions are strong acids and react violently with bases.

Conditions to Avoid:

Dusting and incompatibles.

11. Toxicological Information

Oral rat LD50: 3160 mg/kg; Irritation data: skin human, standard Draize:4%/5D-I mild. Skin rabbit, standard Draize, 500 mg/24H severe. Eye rabbit, standard Draize: 250 ug/24H Severe.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sulfamic Acid (5329-14-6)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)**Proper Shipping Name:** CORROSIVE SOLID, N.O.S. (SULFAMIC ACID)**Hazard Class:** 8**UN/NA:** UN2967**Packing Group:** III**Information reported for product/size:** 50KG**International (Water, I.M.O.)****Proper Shipping Name:** SULPHAMIC ACID**Hazard Class:** 8**UN/NA:** UN2967**Packing Group:** III**Information reported for product/size:** 50KG**International (Air, I.C.A.O.)****Proper Shipping Name:** SULPHAMIC ACID**Hazard Class:** 8**UN/NA:** UN2967**Packing Group:** III**Information reported for product/size:** 50KG

15. Regulatory Information

```

-----\Chemical Inventory Status - Part 1\-----
Ingredient                                     TSCA  EC    Japan  Australia
-----
Sulfamic Acid (5329-14-6)                     Yes   Yes   Yes    Yes

```

```

-----\Chemical Inventory Status - Part 2\-----
Ingredient                                     Korea  DSL   NDSL  Phil.
-----
Sulfamic Acid (5329-14-6)                     Yes   Yes   No    Yes

```

```

-----\Federal, State & International Regulations - Part 1\-----
Ingredient                                     -SARA 302-  -SARA 313-
RQ    TPQ    List  Chemical Catg.
-----
Sulfamic Acid (5329-14-6)                     No    No    No    No

```

```

-----\Federal, State & International Regulations - Part 2\-----
Ingredient                                     -RCRA-      -TSCA-
CERCLA 261.33  8 (d)
-----
Sulfamic Acid (5329-14-6)                     No          No    No

```

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No

Reactivity: No (Pure / Solid)

Australian Hazchem Code: 2T

Poison Schedule: S6

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 3 Flammability: 0 Reactivity: 0

Label Hazard Warning:

DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES SEVERE IRRITATION AND BURNS TO EVERY AREA OF CONTACT. MAY CAUSE LUNG DAMAGE.

Label Precautions:

Do not get in eyes, on skin, or on clothing.

Do not breathe dust.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Label First Aid:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Revision Information:

No Changes.

Disclaimer:

Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT

**BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING
FROM USE OF OR RELIANCE UPON THIS INFORMATION.**

Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

Appendix E - State Water Quality Classification



Receiving Water - State Water Quality Classification:

The following information was taken from:

314 CMR 4.00
Massachusetts Surface Water Quality Standards
Dated 5/12/00

Name: Charles River
Boundary: South Natick Dam to Watertown Dam
Description: Miles 41.0 - 9.8
Class: B
Other Restrictions: Warm Water

Definition of Class B:

Class B - These waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. Where designated they shall be suitable as a source of public water supply with appropriate treatment. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

1. Dissolved Oxygen

- a. Shall not be less than 6.0 mg/l in cold water fisheries nor less than 5.0 mg/l in warm water fisheries unless background conditions are lower;
- b. natural seasonal and daily variations above these levels shall be maintained; levels shall not be lowered below 75% of saturation in cold water fisheries nor 60% of saturation in warm water fisheries due to a discharge; and
- c. site-specific criteria may apply where background levels are lower than specified levels, to the hypolimnion of stratified lakes or where the Department determines that designated uses are not impaired.

- a. Shall not exceed 68°F (20°C) in cold water fisheries nor 83°F (28.3°C) in warm water fisheries, and the rise in temperature due to a discharge shall not exceed 3°F (1.7°C) in rivers and streams designated as cold water fisheries nor 5°F (2.8°C) in rivers and streams designated as warm water fisheries (based on the minimum expected flow for the month); in lakes and ponds the rise shall not exceed 3°F (1.7°C) in the epilimnion (based on the monthly average of maximum daily temperature); and

- b. natural seasonal and daily variations shall be maintained. There shall be no changes from background conditions that would impair any use assigned to this Class, including site-specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.
3. pH - Shall be in the range of 6.5 through 8.3 standard units and not more than 0.5 units outside of the background range. There shall be no change from background conditions that would impair any use assigned to this Class.

4. Fecal Coliform Bacteria - Shall not exceed a geometric mean of 200 organisms per 100 ml in any representative set of samples nor shall more than 10% of the samples exceed 400 organisms per 100 ml. This criterion may be applied on a seasonal basis at the discretion of the Department.

5. Solids - These waters shall be free from floating, suspended and settleable solids in concentrations and combinations that would impair any use assigned to this Class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

6. Color and Turbidity - These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this Class.

7. Oil and Grease - These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

8. Taste and Odor - None in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to this Class, or that would cause tainting or undesirable flavors in the edible portions of aquatic life.

Appendix F - Listed 303(d) Water Quality Impaired or Limited Water

Receiving Water - Listed 303(d) Water Quality Impaired or Limited Water:

The following information was taken from Page 82 of:

September, 2003 (7)
Massachusetts Year 2002 Integrated List of Waters
Part 2 - Final Listing of Individual Categories of Waters CN:125.2

By:
Commonwealth of Massachusetts
Executive Office of Environmental Affairs, Ellen Roy Herzfelder, Secretary
Massachusetts Department of Environmental Protection, Robert W. Gollidge Jr., Commissioner
Bureau of Resource Protection, Cynthia Giles, Assistant Commissioner
Division of Watershed Management, Glenn Haas, Director

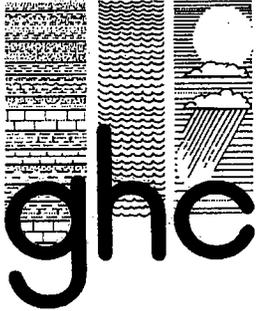
Page 82 listing:

Name: Charles River
Segment ID: MA72-07_2002
Description: Chestnut Street, Needham to Watertown Dam, Watertown. Miles 33.0 - 9.8
Size: 23.2 miles
Assess Date: Dec-98
Pollutant Needing TMDL (EPA Approval Date/Document Control Number):
 Priority organics
 Nutrients
 Organic enrichment/Low DO
 Pathogens
 Noxious aquatic plants
 Turbidity
 (Exotic species*)

*-non Pollutant

Appendix G - Copies of Letters to the Services





GEOHYDROCYCLE, INC.

October 5, 2005

HAZARDOUS WASTE
WATER SUPPLY

ASSESSMENT
REMEDIATION
ANALYSES
PERMITTING
MODELING
SOFTWARE

To Whom it May Concern
NOAA Fisheries Service
Northeast Regional Office
One Blackburn Drive
Gloucester, MA 01930

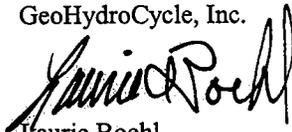
re: Remediation General Permit - Notice of Intent
NPDES Exclusion #MA-05I-026
GHC #04054

To Whom it May Concern:

GeoHydroCylce, Inc. (GHC), an environmental consulting company, on behalf of our client is discharging treated groundwater to a storm drain which empties into the Charles River at Albemarle Road in Newton, Massachusetts, under NPDES exclusion #MA-05I-026. In addition to the NPDES exclusion, the EPA is requiring a new permit, Remediation General Permit (RGP). The application for the RGP requires that GHC receives a formal certification from the National Marine Fisheries Service which will result in either a no jeopardy opinion or a written concurrence on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.

We look forward to your reply in the near future. If you have any questions, please call (617) 527-8074.

Sincerely,
GeoHydroCycle, Inc.

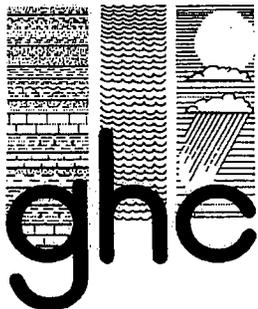


Laurie Boehl

Marine Fisheries Service.lwp

151B California Street
Newton, Massachusetts
02458

(617) 527-8074 (v)
(617) 527-8668 (f)



GEOHYDROCYCLE, INC.

October 5, 2005

HAZARDOUS WASTE
WATER SUPPLY

ASSESSMENT
REMEDIAION
ANALYSES
PERMITTING
MODELING
SOFTWARE

To Whom it May Concern
U.S. Fish and Wildlife Service
1849 C Street, NW
Washington, DC 20242

re: Remediation General Permit - Notice of Intent
NPDES Exclusion #MA-05I-026
GHC #04054

To Whom it May Concern:

GeoHydroCylce, Inc. (GHC), an environmental consulting company, on behalf of our client is discharging treated groundwater to a storm drain which empties into the Charles River at Albemarle Road in Newton, Massachusetts, under NPDES exclusion #MA-05I-026. In addition to the NPDES exclusion, the EPA is requiring a new permit, Remediation General Permit (RGP). The application for the RGP requires that GHC receives a formal certification from the U.S. Fish and Wildlife Service which will result in either a no jeopardy opinion or a written concurrence on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.

We look forward to your reply in the near future. If you have any questions, please call (617) 527-8074.

Sincerely,
GeoHydroCycle, Inc.


Laurie Boehl

Ltr US Fish & Wildlife Service.lwp

151B California Street
Newton, Massachusetts
02458

(617) 527-8074 (v)
(617) 527-8668 (f)

Appendix H - National Register of Historic Places

Index by State and City

National Register Information System

10/05/2005 14:43:18

No filter

Include filter in navigation

Row	STATE ▾	COUNTY ▾	RESOURCE NAME ▾	ADDRESS ▾	CITY ▾	LISTED ▾	MULTIPLE ▾
1	MA	Middlesex	Adams, Amos, House	37 Park Ave.	Newton	1986-09-04	Newton MRA
2	MA	Middlesex	Adams, Seth, House	72 Jewett St.	Newton	1986-09-04	Newton MRA
3	MA	Middlesex	Agudas Achim Anshei Sfarad Synagogue	168 Adams St.	Newton	1990-02-16	Newton MRA
4	MA	Middlesex	Allen, Nathaniel Topliff, Homestead	25 Webster St.	Newton	1978-01-09	
5	MA	Middlesex	Auburndale Congregational Church	64 Hancock St.	Newton	1986-09-04	Newton MRA
6	MA	Middlesex	Bartlett--Hawkes Farm	15 Winnetaska Rd.	Newton	1986-09-04	Newton MRA
7	MA	Middlesex	Bayley House	16 Fairmont Ave.	Newton	1986-09-04	Newton MRA
8	MA	Middlesex	Bemis Mill	1--3 Bridge St.	Newton	1986-09-04	Newton MRA
9	MA	Middlesex	Bigelow, Dr. Henry Jacob, House	742 Dedham St.	Newton	1976-01-01	
10	MA	Middlesex	Bigelow, Henry, House	15 Bigelow Terr.	Newton	1986-09-04	Newton MRA

Page 1

First Page

Next Page

Refresh

Export

Index by State and City

National Register Information System

10/05/2005 14:43:56

No filter

Include filter in navigation

Row	STATE ▾	COUNTY ▾	RESOURCE NAME ▾	ADDRESS ▾	CITY ▾	LISTED ▾	MULTIPLE ▾
11	MA	Middlesex	Blodgett, William, House	645 Centre St.	Newton	1986-09-04	Newton MRA
12	MA	Middlesex	Boston Edison Power Station	374 Homer St.	Newton	1990-02-16	Newton MRA
13	MA	Middlesex	Brackett House	621 Centre St.	Newton	1986-09-04	Newton MRA
14	MA	Middlesex	Brae-Burn Historic District	Brae Burn and Windmere Rds.	Newton	1990-02-16	Newton MRA
15	MA	Middlesex	Brandeis University President's House	66 Beaumont Ave.	Newton	1998-08-19	
16	MA	Middlesex	Bruner, Mayall, House	36 Magnolia Ave.	Newton	1990-02-16	Newton MRA
17	MA	Middlesex	Buckingham, John, House	33--35 Waban St.	Newton	1986-09-04	Newton MRA
18	MA	Middlesex	Building at 1--6 Walnut Terrace	1--6 Walnut Terr.	Newton	1986-09-04	Newton MRA
19	MA	Middlesex	Central Congregational Church	218 Walnut St.	Newton	1986-09-04	Newton MRA
20	MA	Middlesex	Chestnut Hill Reservoir Historic District	Beacon St. and Commonwealth Ave.	Newton	1990-01-18	Water Supply System of Metropolitan Boston MPS

Page 2

First Page

Next Page

Refresh

Export

Index by State and City

National Register Information System

10/05/2005 14:44:06

No filter

Include filter in navigation

Row	STATE	COUNTY	RESOURCE NAME	ADDRESS	CITY	LISTED	MULTIPLE
21	MA	Middlesex	Chestnut Hill, The	219 Commonwealth Ave.	Newton	1986-09-04	Newton MRA
22	MA	Middlesex	Childs, Mayor Edwin O., House	340 California St.	Newton	1990-02-16	Newton MRA
23	MA	Middlesex	Church, William L., House	145 Warren St.	Newton	1990-02-21	Newton MRA
24	MA	Middlesex	City Stable and Garage	74 Elliot St.	Newton	1990-02-16	Newton MRA
25	MA	Middlesex	Claflin School	110-112 Washington Park	Newton	1984-08-16	
26	MA	Middlesex	Claflin, Adams, House	156 Grant Ave.	Newton	1986-09-04	Newton MRA
27	MA	Middlesex	Clark House	379 Central St.	Newton	1986-09-04	Newton MRA
28	MA	Middlesex	Collins, Frederick, House	1734 Beacon St.	Newton	1986-09-04	Newton MRA
29	MA	Middlesex	Commonwealth Avenue Historic District	Roughly Commonwealth Ave. from Walnut St. to Waban Hill Rd.	Newton	1990-02-16	Newton MRA
30	MA	Middlesex	Crimmins, Thomas A., House	19 Dartmouth St.	Newton	1990-02-16	Newton MRA

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Appendix I - Supplemental Information



Table 2
 276 Dorset Road, Waban
 RTN 3-24275
 NPDES Exclusion #MA-05I-026
 Influent and Effluent Water Sampling Results
 4/7/2005 - 8/17/2005

PAH (µg/L)	Influent 1 4/7/2005	Effluent 1 4/7/2005	Influent 2 4/8/2005	Effluent 2 4/8/2005	Influent 3 4/11/2005	Effluent 3 4/11/2005	Influent 4 4/13/2005	Effluent 4 4/13/2005	Influent 5 4/14/2005	Effluent 5 4/14/2005	Limit
Acenaphthene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Acenaphthylene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Anthracene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Benz[a]Anthracene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Benzo[a]Pyrene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Benzo[b]Fluoranthene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Benzo[g,h,i]Perylene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Benzo[k]Fluoranthene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Chrysene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Dibenzo[a,h]Anthracene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Flouranthene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Florene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Ideno[1,2,3-Cd]Pyrene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
1-Methylnapthalene	6.69	<5.41	76.2	<5.41	71.2	<5.26	112	<5.26	92.9	<5.41	100
2-Methylnapthalene	7.62	<5.41	142	<5.41	119	<5.26	120	<5.26	144	<5.41	100
Napthalene	10.3	<5.41	52.5	<5.41	29.9	<5.26	36.5	<5.26	36.5	<5.41	100
Phenanthrene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	5.5	<5.41	100
Pyrene	<5.56	<5.41	<5.71	<5.41	<5.26	<5.26	<5.88	<5.26	<5.41	<5.41	100
Total Petroleum Hydrocarbons (mg/L)											100
TPH	15.2	<0.2	10.4	<0.2	8.8	<0.2	10.8	<0.2	10.7	<0.2	5
Total Suspended Solids (mg/L)											
TSS	<5.00	<5.00	<5.00	<5.00	<5.00	<5.0	<5.0	<5.0	<5.0	<5.0	50
BTEX Total (µg/L)											
BTEX Total	1,386.9	<100	1,065.8	<100	786.6	<100	790.9	<100	777.5	<100	100
VOC (µg/L)											
Benzene	57.9	<1.0	42.6	<1.0	29.6	<1.0	26.4	<1.0	27.4	<1.0	5
Ethylbenzene	125	<1.0	77.2	<1.0	35.0	<1.0	46.5	<1.0	52.1	<1.0	5
Methyl tert-butyl ether**	163	<1.0	153	<1.0	133	<1.0	103	<1.0	108	<1.0	70**
Napthalene	270	<2.0	294	<2.0	206	<2.0	160	<2.0	196	<2.0	20
Toluene	458	<1.0	339	<1.0	178	<1.0	189	<1.0	212	<1.0	5
m,p-Xylene	464	<2.0	377	<2.0	320	<2.0	329	<2.0	304	<2.0	5
o-Xylene	282	<1.0	230	<1.0	224	<1.0	200	<1.0	182	<1.0	5

Table 2
 276 Dorset Road, Waban
 RTN 3-24275
 NPDES Exclusion #MA-05I-026
 Influent and Effluent Water Sampling Results
 4/7/2005 - 8/17/2005

PAH (µg/L)	Influent 6 4/21/2005	Effluent 6 4/21/2005	Influent 7 4/27/2005	Effluent 7 4/27/2005	Influent 8 5/4/2005	Effluent 8 5/4/2005	Influent 9 5/10/2005	Effluent 9 5/10/2005	Influent 10 5/17/2005	Effluent 10 5/17/2005	Limit
Acenaphthene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	3.3	<0.250	100
Acenaphthylene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Anthracene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Benzo[a]Anthracene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Benzo[a]Pyrene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.200	<0.200	100
Benzo[b]Fluoranthene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Benzo[g,h,i]Perylene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<1.00	<1.00	100
Benzo[k]Fluoranthene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<1.00	<1.00	100
Chrysene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Dibenzo[a,h]Anthracene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Flouranthene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
Florene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	4.7	<0.500	100
Ideno[1,2,3-Cd]Pyrene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.56	<5.26	<0.500	<0.500	100
1-Methylnapthalene	23.5	<5.56	85.3	<5.26	70.1	<5.26	53.5	<5.26	NT	NT	100
2-Methylnapthalene	12.3	<5.56	113	<5.26	102	<5.26	52.6	<5.26	24.1	<0.750	100
Napthalene	<5.26	<5.56	31.5	<5.26	27.0	<5.26	12.3	<5.26	23.5	<0.750	100
Phenanthrene	<5.26	<5.56	6.0	<5.26	6.4	<5.26	<5.26	<5.26	2.4	<0.500	100
Pyrene	<5.26	<5.56	<5.56	<5.26	<5.56	<5.26	<5.26	<5.26	<1.25	<1.25	100
Total Petroleum Hydrocarbons (mg/L)											100
TPH	7.1	<0.4	4.4	<0.2	9.3	<0.2	22.6	1.3	12.1	<5.0	5
Total Suspended Solids (mg/L)											
TSS	7.0	<5.0	17	<5.0	<5.0	<5.0	<5.0	<5.0	<4.0	<4.0	50
BTEX Total (µg/L)											
BTEX Total	615.3	<100	409.4	<100	430.9	<100	419.0	<100	253.8	<100	100
VOC (µg/L)											
Benzene	21.6	<1.0	13.8	<1.0	10.9	<1.0	10.2	<1.0	6.97	<5.0	5
Ethylbenzene	45.7	<1.0	31.6	<1.0	43.1	<1.0	37	<1.0	<5.0	<5.0	5
Methyl tert-butyl ether**	66.6	8.7	40.8	27.6	34.1	<1.0	20.4	<1.0	<5.0	<5.0	70**
Napthalene	137	<1.0	120	<1.0	127	<1.0	108	<1.0	59.3	<20.0	20
Toluene	167	<1.0	115	<1.0	88.9	<1.0	98.8	<1.0	52.8	<5.0	5
m,p-Xylene	237	<2.0	148	<2.0	182	<2.0	165	<2.0	194	<5.0	5
o-Xylene	144	<1.0	101	<1.0	106	<1.0	108	<1.0	<1.0	<1.0	5

Table 2
 276 Dorset Road, Waban
 RTN 3-24275
 NPDES Exclusion #MA-05I-026
 Influent and Effluent Water Sampling Results
 4/7/2005 - 8/17/2005

PAH (µg/L)	Influent 11 5/25/2005	Effluent 11 5/25/2005	Influent 12 5/31/2005	Effluent 12 5/31/2005	Influent 14 6/7/2005	Effluent 14 6/7/2005	Influent 15 6/21/2005	Effluent 15 6/21/2005	Limit
Acenaphthene	<5.13	<5.41	<5.13	<5.71	7.0	<5.13	<5.56	<5.26	100
Acenaphthylene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Anthracene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Benzo[a]Anthracene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Benzo[a]Pyrene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Benzo[b]Fluoranthene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Benzo[g,h,i]Perylene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Benzo[k]Fluoranthene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Chrysene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Dibenzo[a,h]Anthracene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Flouranthene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
Florene	<5.13	<5.41	<5.13	<5.71	12.5	<5.13	<5.56	<5.26	100
Idenof[1,2,3-Cd]Pyrene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.56	<5.26	100
1-Methylnapthalene	60.7	<5.41	24.7	<5.71	97.6	<5.13	53.5	<5.26	100
2-Methylnapthalene	95.2	<5.41	8.5	<5.71	143	<5.13	52.6	<5.26	100
Napthalene	20.4	<5.41	<5.13	<5.71	<5.41	<5.13	12.3	<5.26	100
Phenanthrene	5.15	<5.41	<5.13	<5.71	20.4	<5.13	<5.26	<5.26	100
Pyrene	<5.13	<5.41	<5.13	<5.71	<5.41	<5.13	<5.26	<5.26	100
Total Petroleum Hydrocarbons (mg/L)									100
TPH	6.6	<0.2	3.6	0.3	19.3	1.4	22.6	1.3	5
Total Suspended Soils (mg/L)									
TSS	5.0	<5.0	<5.0	5.0	<5.0	<5.0	<5.0	<5.0	50
BTEX Total (µg/L)									
BTEX Total	344.5	<100	281.2	<100	464.3	<100	419.0	<100	100
VOC (µg/L)									
Benzene	10.9	<1.0	7.3	<1.0	6.8	<1.0	10.2	<1.0	5
Ethylbenzene	31.9	<1.0	27.4	<1.0	41.5	<1.0	37	<1.0	5
Methyl tert-butyl ether**	19	<1.0	15.8	<1.0	14.4	2.0	20.4	<1.0	70**
Napthalene	102	<1.0	68.9	<1.0	<5.41	<1.0	108	<1.0	20
Toluene	81.5	<1.0	56.6	<1.0	155	<1.0	98.8	<1.0	5
m,p-Xylene	135	<2.0	113	<2.0	155	<2.0	165	<2.0	5
o-Xylene	85.2	<1.0	76.9	<1.0	106	<1.0	108	<1.0	5

Table 2
 276 Dorset Road, Waban
 RTN 3-24275
 NPDES Exclusion #MA-05I-026
 Influent and Effluent Water Sampling Results
 4/7/2005 - 8/17/2005

PAH (µg/L)	Influent 16 6/29/2005	Effluent 16 6/29/2005	Influent 17 7/7/2005	Effluent 17 7/7/2005	Influent 18 7/13/2005	Effluent 18 7/13/2005	Influent 19 7/20/2005	Effluent 19 7/20/2005	Limit
Acenaphthene	<5.71	<5.88	<6.25	<5.13	6.74	<5.56	11.7	<5.26	100
Acenaphthylene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Anthracene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	8.2	<5.26	100
Benzo[a]Anthracene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Benzo[a]Pyrene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Benzo[b]Fluoranthene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Benzo[g,h,i]Perylene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Benzo[k]Fluoranthene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Chrysene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Dibenzo[a,h]Anthracene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Flouranthene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
Florene	<5.71	<5.88	<6.25	<5.13	9.69	<5.56	17.5	<5.26	100
Ideno[1,2,3-Cd]Pyrene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	<7.14	<5.26	100
1-Methylnapthalene	63.8	<5.88	<6.25	<5.13	101	<5.56	102.0	<5.26	100
2-Methylnapthalene	57.8	<5.88	<6.25	<5.13	137	<5.56	96.6	<5.26	100
Napthalene	<5.71	<5.88	<6.25	<5.13	21.2	<5.56	<7.14	<5.26	100
Phenanthrene	<5.71	<5.88	<6.25	<5.13	16.6	<5.56	58.3	<5.26	100
Pyrene	<5.71	<5.88	<6.25	<5.13	<5.71	<5.56	15.5	<5.26	100
Total Petroleum Hydrocarbons (mg/L)									
TPH	10.3	<0.2	10.6	<0.2	32.1	0.9	16.8	0.6	5
Total Suspended Soils (mg/L)									
TSS	<5.0	15	5	<5.0	6	<5.0	<5.0	<5.0	50
BTEX Total (µg/L)									
BTEX Total	326.0	<100	378.6	<100	317.2	<100	175.9	<100	100
VOC (µg/L)									
Benzene	9.8	<1.0	6.0	<1.0	5.6	<1.0	<5.0	<1.0	5
Ethylbenzene	31	<1.0	42.0	<1.0	35.9	<1.0	18.3	<1.0	5
Methyl tert-butyl ether**	14.4	<1.0	18.7	<1.0	11.7	2.6	7.2	3.4	70**
Napthalene	67.2	<1.0	98.4	<1.0	90.1	<1.0	49.9	<1.0	20
Toluene	71.8	<1.0	66.6	<1.0	35.7	<1.0	31.4	<1.0	5
m,p-Xylene	129	<2.0	159	<2.0	144	<2.0	74.4	<2.0	5
o-Xylene	84.4	<1.0	105	<1.0	96	<1.0	51.8	<1.0	5

Table 2
 276 Dorset Road, Waban
 RTN 3-24275
 NPDES Exclusion #MA-05I-026
 Influent and Effluent Water Sampling Results
 4/7/2005 - 8/17/2005

PAH (µg/L)	Influent 20 7/29/2005	Effluent 20 7/29/2005	Influent 21 8/3/2005	Effluent 21 8/3/2005	Influent 22 8/11/2005	Effluent 22 8/11/2005	Influent 23 8/17/2005	Effluent 23 8/17/2005	Limit
Acenaphthene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Acenaphthylene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Anthracene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Benzo[a]Anthracene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Benzo[a]Pyrene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Benzo[b]Fluoranthene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Benzo[g,h,i]Perylene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Benzo[k]Fluoranthene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Chrysene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Dibenzo[a,h]Anthracene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Flouranthene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Florene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Ideno[1,2,3-Cd]Pyrene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
1-Methylnaphthalene	42.9	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
2-Methylnaphthalene	47.9	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Napthalene	9.2	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Phenanthrene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Pyrene	<5.71	<5.88	<6.25	<5.56	<5.88	<5.26	<6.67	<5.56	100
Total Petroleum Hydrocarbons (mg/L)									
TPH	5.7	<0.2	3.8	0.3	3.8	1.1	62.1	1.6	5
Total Suspended Solids (mg/L)									
TSS	13.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	50
BTEX Total (µg/L)									
BTEX Total	174.2	<100	173.5	<100	170.7	<100	161.4	<100	100
VOC (µg/L)									
Benzene	5.0	<1.0	3.9	<1.0	<5.0	<1.0	1.9	<1.0	5
Ethylbenzene	12.5	<1.0	13.3	<1.0	19.8	<1.0	18.9	<1.0	5
Methyl tert-butyl ether**	7.1	4.7	6.4	3.9	11.0	5.3	7.8	4.8	70**
Napthalene	45.9	<1.0	56.1	<1.0	77.6	<1.0	72.7	<1.0	20
Toluene	37.2	<1.0	31.4	<1.0	19.9	<1.0	14.6	<1.0	5
m,p-Xylene	57.6	<2.0	60.0	<2.0	57.2	<2.0	54.4	<2.0	5
o-Xylene	61.9	<1.0	64.9	<1.0	73.8	<1.0	71.6	<1.0	5

**MtBE is not required in the permit but is used as an indicator for breakthrough. MCP GW-1 cleanup standard of 70 mg/L is used for indicator standard.

Values in **BOLD** exceed applicable Limits

NT - Not Tested