

MAG-910179

January 9, 2006  
File No. 01-202349.00

U.S Environmental Protection Agency, Region 1  
One Congress Street, Suite 1100  
Boston, MA 02114-8127

Attn: Mr. George Papadopoulos

RE: NPDES Permit Application  
Cumberland Farms, Inc.  
507-509 Newton Street  
South Hadley, MA

Dear Mr. Papadopoulos:

On behalf of Cumberland Farms, Inc. (CFI), Environmental Compliance Services Inc. (ECS) is submitting this application for Notice of Intent (NOI) for the Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES) to perform dewatering activities associated with the new construction of a CFI convenience store and gasoline station at 507-509 Newton Street in South Hadley, Massachusetts (the Site). As part of the construction activities, dewatering of the excavation area for the installation of the new gasoline underground storage tanks (USTs) and the footings associated with the building will be necessary. The pouring of the concrete footings is scheduled to begin on Wednesday, January 11, 2006, and the groundwater from the footing excavation areas is proposed to be pumped into an on-site fractionation tank for temporary storage (until the NPDES permit is issued) for subsequent on-site treatment and discharge per the NPDES permit. The excavation activities for the installation of the new USTs are scheduled to begin on January 30, 2006. Due to the winter temperatures, we politely request the issuance of this NPDES permit as soon as possible, so that the construction efforts that will be implemented to keep the fractionation water from freezing can be minimized, and the fractionation water can be treated and discharged under NPDES. Please find attached the permit application and associated paperwork including the analytical data for groundwater samples collected at the Site.

If you have any questions concerning this information, please do not hesitate to contact the undersigned. An authorization letter can be faxed to 413-789-2776. Your assistance and attention to this matter is greatly appreciated.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.



Mary Brittain  
Project Manager

MA 696179

**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: <b>Cumberland Farms, Inc.</b>		Facility/site address:	
Location of facility/site: longitude: <b>72° 34' 56"</b> latitude: <b>42° 14' 14"</b>	Facility SIC code(s): <b>5541</b>	Street: <b>507-507 Newton Street</b>	
b) Name of facility/site owner: <b>Cumberland Farms, Inc.</b>		Town: <b>South Hadley</b>	
Email address of owner: <b>oudemba@cumberlandfarms.com</b>		State: <b>MA</b>	Zip: <b>01075</b>
Telephone no. of facility/site owner: <b>800-225-9702</b>		County: <b>Hampshire</b>	
Fax no. of facility/site owner: <b>781-575-9536</b>		Owner is (check one): 1. Federal _____ 2. State/Tribal _____	
Address of owner (if different from site):		3. Private _____ 4. other, if so, describe: <b>Corporation</b>	
Street: <b>777 Dedham Street</b>			
Town: <b>Canton</b>	State: <b>MA</b>	Zip: <b>02021</b>	County: <b>Norfolk</b>
c) Legal name of operator: <b>Environmental Compliance Services, Inc</b>		Operator telephone no.: <b>413-789-3530</b>	
Operator contact name and title: <b>Mary Brittain, Project Manager</b>		Operator fax no.: <b>413-789-2776</b>	
		Operator email: <b>mbrittain@ecsconsult.com</b>	

Address of operator (if different from owner):		Street: 588 Silver Street	
Town: Agawam	State: MA	Zip: 01001	County: Hampden

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

- Has a prior NPDES permit exclusion been granted for the discharge? Yes No No X if "yes," number: \_\_\_\_\_
- Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes No No X if "yes," date and tracking #: \_\_\_\_\_
- Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes X No \_\_\_\_\_
- For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes No No X

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes No No X

If "yes," please list:

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

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

- multi-sector storm water general permit? Y N X, if Y, number: \_\_\_\_\_
- phase I or II construction storm water general permit? Y X N \_\_\_\_\_ if Y, number: MAR 10000
- individual NPDES permit? Y N X, if Y, number: \_\_\_\_\_
- any other water quality related permit? Y \_\_\_\_\_ N X, 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 the excavations for the installation of three new underground storage tanks (USTs) and building footings.

b) Provide the following information about each discharge:

1) Number of discharge points: <u>upto 3</u>	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft <sup>3</sup> /s)? Max. flow <u>0.22</u> Average flow <u>0.09</u> Is maximum flow a design value? Y <u>N</u> X For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
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3) Latitude and longitude of each discharge within 100 feet: pt. 1: long. 72° 31' 53" lat. 42° 14' 22"; pt. 2: long. 72° 31' 53" lat. 42° 14' 22"; pt. 3: long. 72° 31' 53" lat. 42° 14' 22"; pt. 4: long. \_\_\_\_\_; pt. 5: long. \_\_\_\_\_; pt. 6: long. \_\_\_\_\_; pt. 7: long. \_\_\_\_\_; pt. 8: long. \_\_\_\_\_; etc.

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal <input type="checkbox"/> ? Is discharge ongoing Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> ?
c) Expected dates of discharge (mm/dd/yy): start <u>01/16/06</u> end <u>02/28/06</u>	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

3. Contaminant information. 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
	<input checked="" type="checkbox"/> VOC with Other Contaminants	<input type="checkbox"/> Petroleum with Other Contaminants	<input type="checkbox"/> Listed Contaminated Sites	<input type="checkbox"/> Contaminated Dredge Condensates	<input type="checkbox"/> Hydrostatic Testing of Pipelines/Tanks	<input type="checkbox"/> 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		<input checked="" type="checkbox"/>	1	grab	SM 2540D	10,000 ug/L	46,000	121.5	46,000	48.6
2. Total Residual Chlorine	<input checked="" type="checkbox"/>		1	grab	SM 4500	200 ug/L				
3. Total Petroleum Hydrocarbons	<input checked="" type="checkbox"/>		1	grab	1664	6000 ug/L				
4. Cyanide	<input checked="" type="checkbox"/>		1	grab	9012A	10 mg/L				
5. Benzene	<input checked="" type="checkbox"/>		2	grab	8260B	1 mg/L				
6. Toluene	<input checked="" type="checkbox"/>		2	grab	8260B	1 mg/L				
7. Ethylbenzene	<input checked="" type="checkbox"/>		2	grab	8260B	1 mg/L				
8. (m,p,o) Xylenes	<input checked="" type="checkbox"/>		2	grab	8260B	2 ug/L				
9. Total BTEX'	<input checked="" type="checkbox"/>		2	grab	8260B	5 ug/L				

<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 (1,2-Dibromo-methane)	X		2	grab	8260B	1 ug/L				
11. Methyl-tert-Butyl Ether (MTBE)	X		2	grab	8260B	1 ug/L				
12. tert-Butyl Alcohol (TBA)	X		2	grab	8260B	40 ug/L				
13. tert-Amyl Methyl Ether (TAME)	X		2	grab	8260B	1 ug/L				
14. Naphthalene	X		2	grab	8260B	1 ug/L				
15. Carbon Tetra-chloride	X		2	grab	8260B	1 ug/L				
16. 1,4 Dichlorobenzene	X		2	grab	8260B	1 ug/L				
17. 1,2 Dichlorobenzene	X		2	grab	8260B	1 ug/L				
18. 1,3 Dichlorobenzene	X		2	grab	8260B	1 ug/L				
19. 1,1 Dichloroethane	X		2	grab	8260B	1 ug/L				
20. 1,2 Dichloroethane	X		2	grab	8260B	1 ug/L				
21. 1,1 Dichloroethylene	X		2	grab	8260B	1 ug/L				
22. cis-1,2 Dichloro-ethylene	X		2	grab	8260B	1 ug/L				
23. Dichloromethane (Methylene Chloride)	X		2	grab	8260B	5 ug/L				
24. Tetrachloroethylene		X	2	grab	8260B	1 ug/L	60	0.159	57	0.060

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	X		2	grab	8260B	1 ug/L				
26. 1,1,2 Trichloroethane	X		2	grab	8260B	1 ug/L				
27. Trichloroethylene	X		2	grab	8260B	1 ug/L				
28. Vinyl Chloride	X		2	grab	8260B	1 ug/L				
29. Acetone	X		2	grab	8260B	20 ug/L				
30. 1,4 Dioxane	X		2	grab	8260B	1000 ug/L				
31. Total Phenols	X		1	grab	8270C	5 ug/L				
32. Pentachlorophenol	X		1	grab	8270C	5 ug/L				
33. Total Phthalates <sup>5</sup> (Phthalate esters)	X		1	grab	8270C	5 ug/L				
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	X		1	grab	8270C	5 ug/L				
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	X		1	grab	8270C	5 ug/L				
a. Benzo(a) Anthracene	X		1	grab	8270C	5 ug/L				
b. Benzo(a) Pyrene	X		1	grab	8270C	5 ug/L				
c. Benzo(h)Fluoranthene	X		1	grab	8270C	5 ug/L				
d. Benzo(k) Fluoranthene	X		1	grab	8270C	5 ug/L				
e. Chrysene	X		1	grab	8270C	5 ug/L				

<sup>5</sup>The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Types 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	X		1	grab	8270C	5 ug/L				
g. Indeno(1,2,3-cd) Pyrene	X		1	grab	8270C	5 ug/L				
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	X		1	grab	8270C	5 ug/L				
h. Acenaphthene	X		1	grab	8270C	5 ug/L				
i. Acenaphthylene	X		1	grab	8270C	5 ug/L				
j. Anthracene	X		1	grab	8270C	5 ug/L				
k. Benzo(ghi) Perylene	X		1	grab	8270C	5 ug/L				
l. Fluoranthene	X		1	grab	8270C	5 ug/L				
m. Fluorene	X		1	grab	8270C	5 ug/L				
n. Naphthalene	X		2	grab	8260B/8270C	1 ug/L/5 ug/L				
o. Phenanthrene	X		1	grab	8270C	5 ug/L				
p. Pyrene	X		1	grab	8270C	5 ug/L				
37. Total Polychlorinated Biphenyls (PCBs)	X		1	grab	8082	0.2 ug/L				
38. Antimony	X		1	grab	6010B	60 ug/L				
39. Arsenic	X		1	grab	6010B	10 ug/L				
40. Cadmium	X		1	grab	6010B	5 ug/L				
41. Chromium III		X	1	grab	*		60		0.158	60
42. Chromium VI	X		1	grab	7196A	10 ug/L				

\* Total Chromium (6010B) - Cr VI = Cr III



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		X	1	grab	6010B	25 ug/L	110	0.291	110	0.116
44. Lead		X	1	grab	6010B	5 ug/L	28	0.074	28	0.030
45. Mercury	X		1	grab	7470A	0.2 ug/L				
46. Nickel		X	1	grab	6010B	40 ug/L	60	0.158	60	0.063
47. Selenium	X		1	grab	6010B	50 ug/L				
48. Silver	X		1	grab	6010B	7 ug/L				
49. Zinc	X		1	grab	6010B	200 ug/L				
50. Iron		X	1	grab	6010B	100 ug/L	62,000	163.8	62,000	65.5
Other (describe):										

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

Step 1: 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 X N

If yes, which metals?

Copper, Lead, Nickel, Iron, Chromium

Step 2: 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: Copper, Lead, Nickel, Iron, Chromium

DF: 11.7

Y X N      If "Yes," list which metals:

Copper, Lead, Iron

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:  
 The system will consist of a submersible sump pump in the excavation. Depending on the groundwater recharge rate, groundwater will be pumped into a frac tank when necessary to keep the excavation dewatered. Groundwater will be pumped either from the excavation or the frac tank through bag filters and two 500-pound liquid phase granular activated carbon (LPGAC) canisters. Sample ports will be located prior to the first canister, at the mudpoint and at the system effluent. A flow meter will be located at the system effluent.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	Dechlorination	Other (please describe):			

c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system:  
 Average flow rate of discharge 40 Maximum flow rate of treatment system 100 Design flow rate of treatment system 100

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):  
Not applicable

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

a) Identify the discharge pathway:

Direct	Within facility	Storm drain	River/brook	Wetlands	Other (describe):
		<input checked="" type="checkbox"/>			

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:  
Discharge will be to the stormwater sewer on Newton Street which discharges to Stony Brook. Water discharged to the on-site groundwater recharge basin or stormwater infiltration basin will seep back to groundwater.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:  
 1. For multiple discharges, number the discharges sequentially.  
 2. For indirect discharges, indicate the location of the discharge to the indirect conveyance and the discharge to surface water  
 The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water Class B  
 e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 2.36 cfs Flow calculated from  
 Please attach any calculation sheets used to support stream flow and dilution calculations. STREAMSTATS (http://ma.water.usgs.gov/streamstats/)

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes      No X If yes, for which pollutant(s)?

Is there a TMDL? Yes      No X If yes, for which pollutant(s)?

**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 X No X  
 Has any consultation with the federal services been completed? No X or is consultation underway? No X  
 What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service? Yes (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 X Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes      No X

**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.

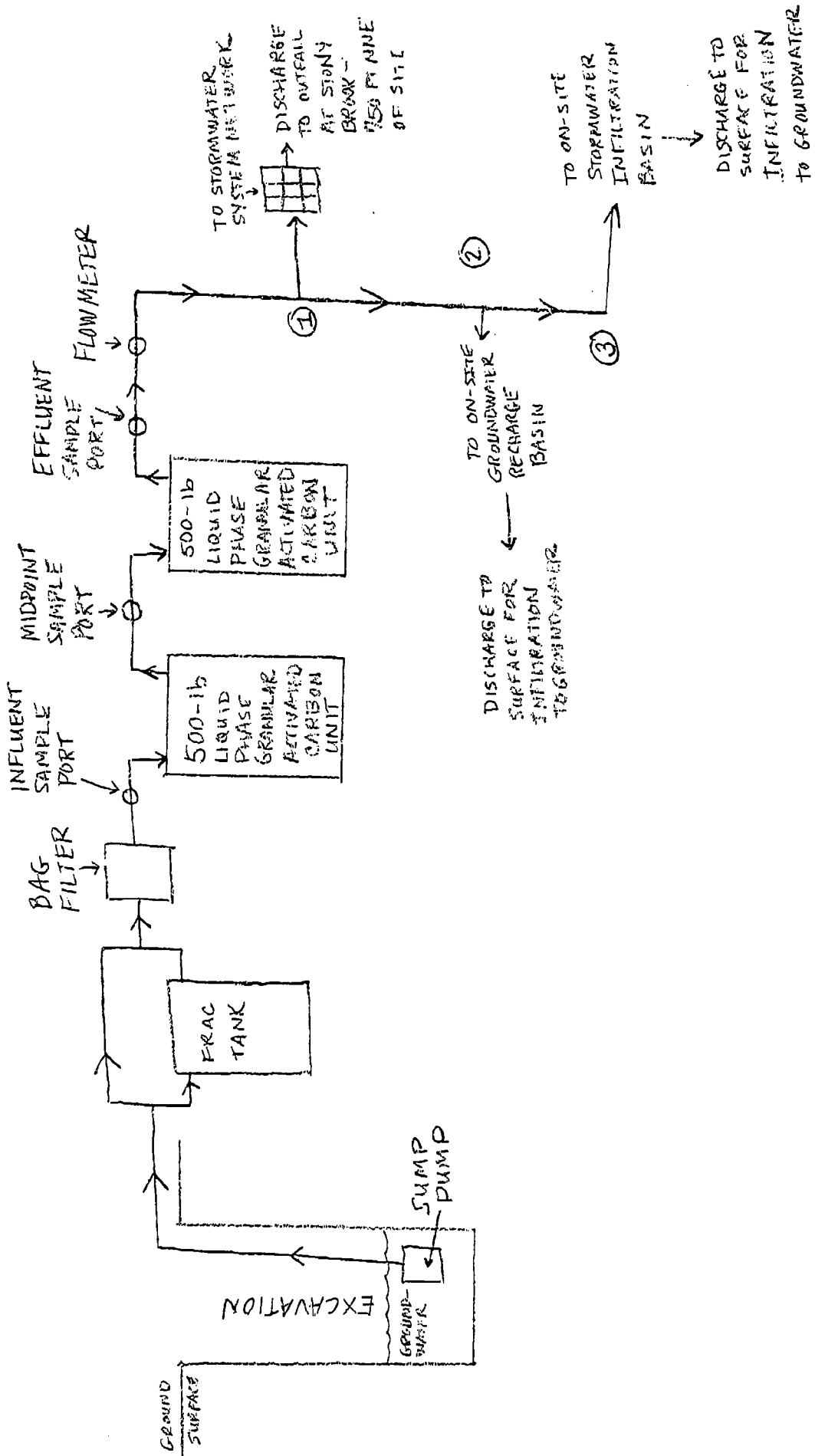
8. **Signature Requirements:** The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

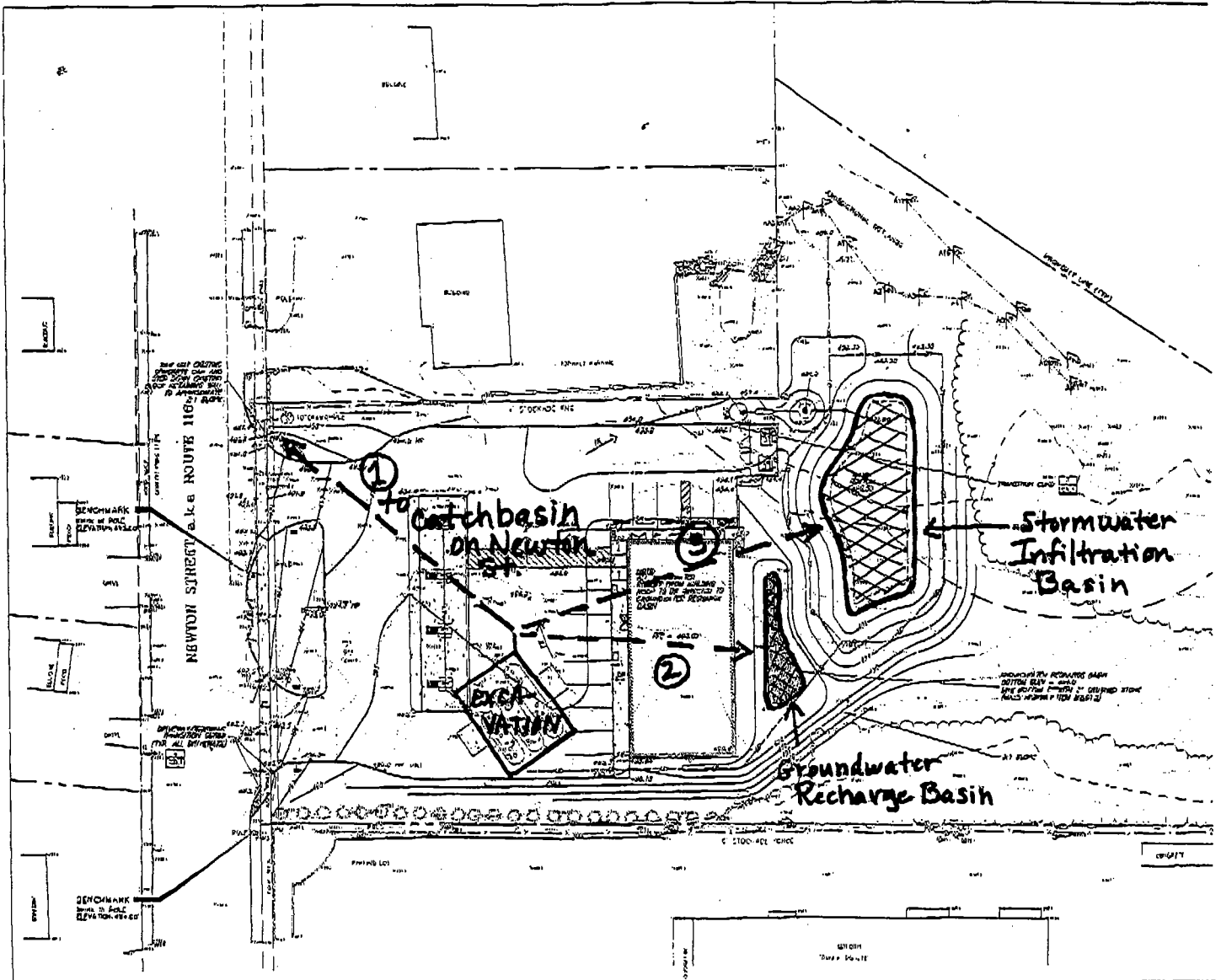
*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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:	Cumberland Farms, Inc.
Operator signature:	Mary Brittain
Title:	ECS Project Manager
Date:	1-9-06

8

507-509 Newton Street  
 South Hadley, MA





DATE	BY	DESCRIPTION
1/9/06	...	...
1/10/06	...	...
1/16/06	...	...

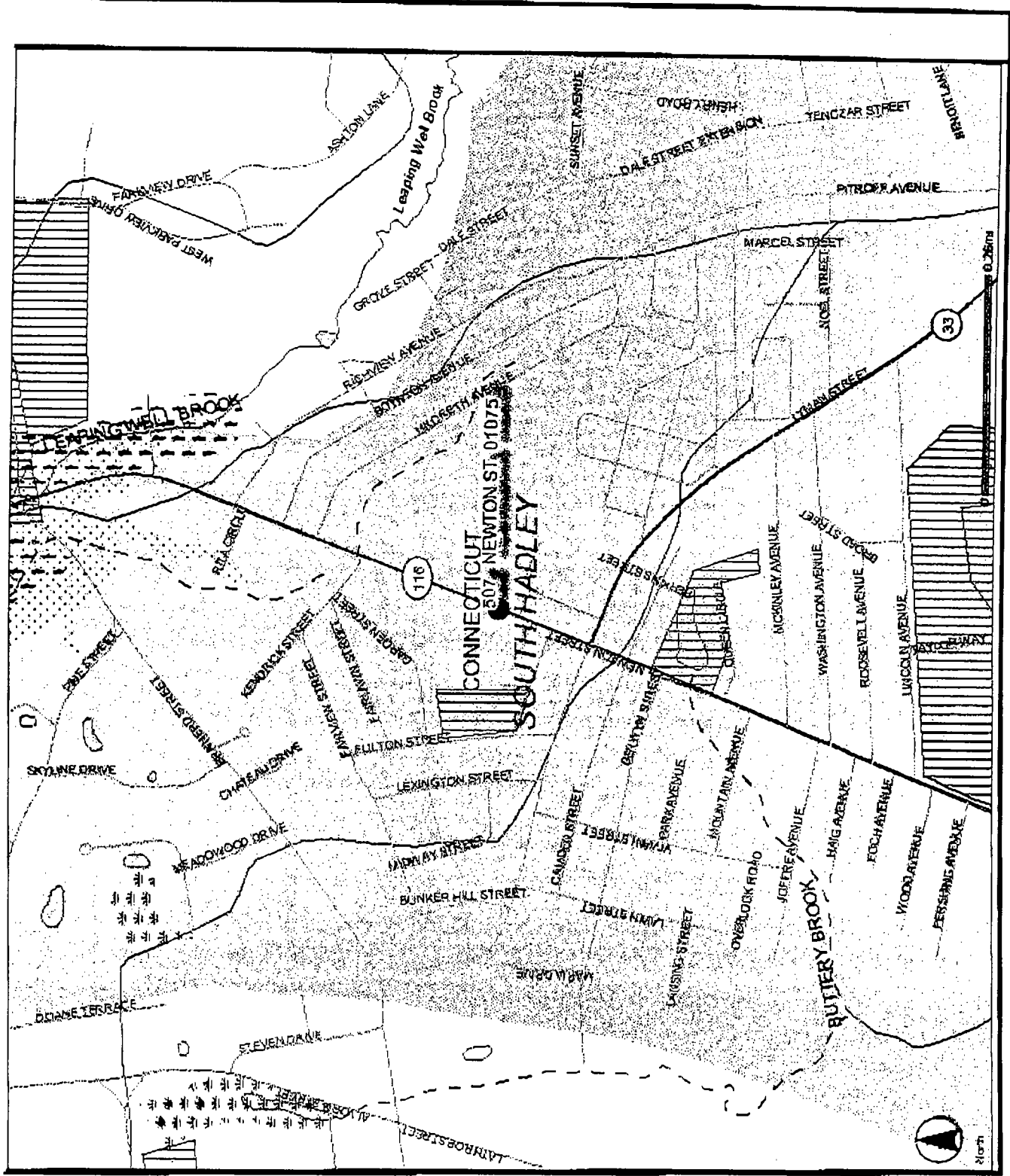
Clough Harbour & Associates LLP  
 Professional Engineer  
 License No. 11000  
 State of New Jersey

**CHA** CLOUGH HARBOUR & ASSOCIATES LLP  
 CONSULTING ENGINEERS & LANDSCAPE ARCHITECTS  
 11 WING COURT - HEDDEN TOWNSHIP - NEW JERSEY 07033  
 TEL: 908-221-7777 FAX: 908-221-7778









































**Cumberland Farms**  
 777 Queen Street, Ocean, NJ 08857







DEP MCP 21e Map Legend

<ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPAs</li> <li> Zone A</li> <li> Safe Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Opanspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arce</li> <li> County Boundaries</li> </ul>	<p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul>	<p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul>	<p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY, NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECT</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul>
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# GROUNDWATER ANALYTICAL

January 9, 2006

Groundwater Analytical, Inc.  
P.O. Box 1200  
228 Main Street  
Buzzards Bay, MA 02532

Telephone (508) 759-4441  
FAX (508) 759-4475  
www.groundwateranalytical.com

Ms. Xan Riddle  
Environmental Compliance Services, Inc.  
588 Silver Street  
Agawam, MA 01001

## LABORATORY REPORT

Project: CFI Acquisition Site S. Hadley/01-202349.01  
Lab ID: 90603  
Received: 01-05-06

Dear Xan:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 48 Hour turnaround.

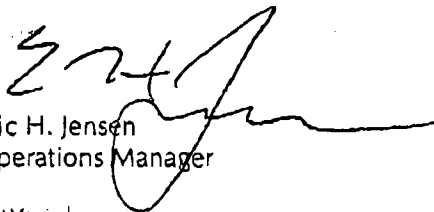
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,

  
Eric H. Jensen  
Operations Manager

EHJ/smd  
Enclosures

# GROUNDWATER ANALYTICAL

## Sample Receipt Report

Project: CFI Acquisition Site S. Hadley/01-202349.01 Delivery: GWA Courier  
 Client: Environmental Compliance Services, Inc. Airbill: n/a  
 Lab ID: 90603 Lab Receipt: 01-05-06

Temperature: 2.0°C  
 Chain of Custody: Present  
 Custody Seal(s): n/a

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90603-1	MW-N	Aqueous	1/5/06 11:45	EPA 8082 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C715405	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a	
C715397	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a	
90603-2	MW-N	Aqueous	1/5/06 11:45	EPA 8270C Semivolatile Organics				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C715403	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a	
C715395	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a	
90603-3	MW-N	Aqueous	1/5/06 11:45	EPA 1664 Hexane Extractable Material				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C715404	1 L Amber Glass	n/a	n/a	H2SO4	n/a	n/a	n/a	
C715395	1 L Amber Glass	n/a	n/a	H2SO4	n/a	n/a	n/a	
90603-4	MW-N	Aqueous	1/5/06 11:45	SM 4500-Cl G Total Residual Chlorine				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C533939	250 mL Plastic	Proline	BX1455B	None	n/a	n/a	n/a	
90603-5	MW-N	Aqueous	1/5/06 11:45	SM 2540 D Total Suspended Solids				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C534018	250 mL Plastic	Proline	BX1455B	None	n/a	n/a	n/a	
90603-6	MW-N	Aqueous	1/5/06 11:45	EPA 7060A Arsenic by GFAA As EPA 7740 Selenium by GFAA				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C534024	250 mL Plastic	Proline	BX1455B	HNO3	n/a	n/a	n/a	
90603-7	MW-N	Aqueous	1/5/06 11:45	EPA 7196A Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C534044	250 mL Plastic	Proline	BX1455B	None	n/a	n/a	n/a	
C533940	250 mL Plastic	Proline	BX1455B	None	n/a	n/a	n/a	

# GROUNDWATER ANALYTICAL

## EPA Method 8082 Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID: MW-N  
 Project: CFI Acquisition Site S. Hadley/01-202349.01  
 Client: Environmental Compliance Services  
 Laboratory ID: 90603-01  
 Sampled: 01-05-06 11:45  
 Received: 01-05-06 17:50  
 Extracted: 01-05-06 22:50  
 Cleaned Up: 01-06-06 09:00  
 Analyzed: 01-07-06 11:22  
 Analyst: MJB

Matrix: Aqueous  
 Container: 1 L Amber Glass  
 Preservation: Cool  
 QC Batch ID: PB-1195-F  
 Instrument ID: GC-6 HP 5890  
 Sample Weight: 1000 mL  
 Final Volume: 1 mL  
 Dilution Factor: 1

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262	BRL		ug/L	0.2
11100-14-4	Aroclor 1268	BRL		ug/L	0.2

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
First Column	Tetrachloro- <i>m</i> -xylene	0.20	0.16	82 %	30 - 150 %
Second Column	Decachlorobiphenyl	0.20	0.14	72 %	30 - 150 %
First Column	Tetrachloro- <i>m</i> -xylene	0.20	0.16	82 %	30 - 150 %
Second Column	Decachlorobiphenyl	0.20	0.14	70 %	30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 † Non-target analyte. Result is based on a single mid-range calibration standard.

# GROUNDWATER ANALYTICAL

## EPA Method 8270C Semivolatile Organics by GC/MS

Field ID: MW-N  
Project: CFI Acquisition Site S. Hadley/01-202349.01  
Client: Environmental Compliance Services, Inc.

Matrix: Aqueous  
Container: 1 L Amber Glass  
Preservation: Cool

Laboratory ID: 90603-02  
Sampled: 01-05-06 11:45  
Received: 01-05-06 17:50  
Extracted: 01-06-06 10:00  
Analyzed: 01-07-06 03:39  
Analyst: CMM

QC Batch ID: SV-1814-F  
Instrument ID: MS-3 HP 5890  
Sample Volume: 1000 mL  
Final Volume: 1 mL  
Dilution Factor: 1

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	5
110-86-1	Pyridine	BRL		ug/L	5
108-95-2	Phenol	BRL		ug/L	5
62-53-3	Aniline	BRL		ug/L	5
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	5
95-57-8	2-Chlorophenol	BRL		ug/L	5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	5
100-51-6	Benzyl Alcohol	BRL		ug/L	5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	5
95-48-7	2-Methylphenol	BRL		ug/L	5
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	5
108-99-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	5
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	5
98-86-2	Acetophenone	BRL		ug/L	5
67-72-1	Hexachloroethane	BRL		ug/L	5
98-95-3	Nitrobenzene	BRL		ug/L	5
78-59-1	Isophorone	BRL		ug/L	5
88-75-5	2-Nitrophenol	BRL		ug/L	5
105-67-9	2,4-Dimethylphenol	BRL		ug/L	5
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	5
120-83-2	2,4-Dichlorophenol	BRL		ug/L	5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	5
91-20-3	Naphthalene	BRL		ug/L	5
106-47-8	4-Chloroaniline	BRL		ug/L	5
87-68-3	Hexachlorobutadiene	BRL		ug/L	5
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	BRL		ug/L	5
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	5
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	5
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	5
91-58-7	2-Chloronaphthalene	BRL		ug/L	5
88-74-4	2-Nitroaniline	BRL		ug/L	5
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	5
131-11-3	Dimethyl phthalate	BRL		ug/L	5
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	5
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	5
99-09-2	3-Nitroaniline	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
51-28-5	2,4-Dinitrophenol	BRL		ug/L	5
100-02-7	4-Nitrophenol	BRL		ug/L	5
132-64-9	Dibenzofuran	BRL		ug/L	5
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	5

# GROUNDWATER ANALYTICAL

## EPA Method 8270C (Continued) Semivolatile Organics by GC/MS

Field ID: MW-N  
Project: CFI Acquisition Site S. Hadley/01-202349.01  
Client: Environmental Compliance Services, Inc.  
Laboratory ID: 90603-02  
Sampled: 01-05-06 11:45  
Received: 01-05-06 17:50  
Extracted: 01-06-06 10:00  
Analyzed: 01-07-06 03:39  
Analyst: CMM

Matrix: Aqueous  
Container: 1 L Amber Glass  
Preservation: Cool  
QC Batch ID: SV-1814-F  
Instrument ID: MS-3 HP 5890  
Sample Volume: 1000 mL  
Final Volume: 1 mL  
Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
84-66-2	Diethyl phthalate	BRL		ug/L	5
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	5
86-73-7	Fluorene	BRL		ug/L	5
100-01-6	4-Nitroaniline	BRL		ug/L	5
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	5
86-30-6	N-Nitrosodiphenylamine <sup>†</sup>	BRL		ug/L	5
122-66-7	1,2-Diphenylhydrazine <sup>‡</sup>	BRL		ug/L	5
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	5
118-74-1	Hexachlorobenzene	BRL		ug/L	5
87-86-5	Pentachlorophenol	BRL		ug/L	5
85-01-8	Phenanthrene	BRL		ug/L	5
120-12-7	Anthracene	BRL		ug/L	5
86-74-8	Carbazole	BRL		ug/L	5
84-74-2	Di-n-butyl phthalate	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
85-68-7	Butyl benzyl phthalate	BRL		ug/L	5
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	5
117-84-0	Di-n-octyl phthalate	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	94	47 %	15 - 110 %
Phenol-d5	200	78	39 %	15 - 110 %
Nitrobenzene-d5	100	64	64 %	30 - 130 %
2-Fluorobiphenyl	100	72	72 %	30 - 130 %
2,4,6-Tribromophenol	200	180	88 %	15 - 110 %
Terphenyl-d14	100	71	71 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
\* Analyzed as 4-Methylphenol.  
† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.  
‡ Analyzed as Azobenzene.

# GROUNDWATER ANALYTICAL

## Inorganic Chemistry

Field ID: MW-N  
 Project: CFI Acquisition Site S. Hadley/01-202349.01  
 Client: Environmental Compliance Services, Inc.

Matrix: Aqueous  
 Received: 01-05-06 17:50

Lab ID: 90603-03    Sampled: 01-05-06 11:45    Container: 1 L Amber Glass    Preservation: H2SO4/Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Oil and Grease, Total	BRL	mg/L	6	1	900 mL	01-09-06 12:00	HO-0201-W	EPA 1664	3	JK

Lab ID: 90603-04    Sampled: 01-05-06 11:45    Container: 250 mL Plastic    Preservation: Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	BRL	mg/L	0.2	1	5 mL	01-05-06 21:30	TRC-0396-W	SM 4500-Cl C	2	UD

Lab ID: 90603-05    Sampled: 01-05-06 11:45    Container: 250 mL Plastic    Preservation: Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	46	mg/L	10	1	100 mL	01-06-06 09:36	TSS-1179-W	SM 2540 D	3	MW

Lab ID: 90603-07    Sampled: 01-05-06 11:45    Container: 250 mL Plastic    Preservation: Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	BRL	mg/L	0.01	1	5 mL	01-05-06 21:41	HC-0241-W	EPA 7196A	1	DDW

**Method Reference:** Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

**Report Notations:**

- BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
- RL Reporting Limit.
- DF Dilution Factor.
- 1 Instrument ID: Lachat 8000 Autoanalyzer
- 2 Instrument ID: Milton Roy Spectronic 401
- 3 Instrument ID: Mettler AT 200 Balance



# GROUNDWATER ANALYTICAL

## Trace Metals

Field ID: SB-1  
 Project: CFI Aq Site South Hadley, MA/01.202349.01  
 Client: Environmental Compliance Services, Inc.  
 Laboratory ID: 90217-11  
 Sampled: 12-19-05 12:50  
 Received: 12-19-05 18:40

Matrix: Aqueous  
 Container: 250 mL Plastic  
 Preservation: HNO<sub>3</sub> / Cool  
 Preserved: 12-19-05 12:50

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyte
EPA 6010B <sup>1</sup>	MB-1850-W	EPA 3010A	12-20-05 06:06	50 mL	ICP-AE 3000	MWR
EPA 7470A <sup>2</sup>	MP-1776-W	EPA 7470A	12-20-05 11:15	25 mL	CVA-AE PE FIM2	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Total	BRL		mg/L	0.06	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7440-38-2	Arsenic, Total	BRL		mg/L	0.01	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7440-43-9	Cadmium, Total	BRL		mg/L	0.005	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7440-47-3	Chromium, Total	0.06		mg/L	0.01	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7440-50-8	Copper, Total	0.11		mg/L	0.025	1	12-28-05 14:04	EPA 6010B <sup>1</sup>
7439-89-6	Iron, Total	62		mg/L	0.1	1	12-21-05 13:45	EPA 6010B <sup>1</sup>
7439-92-1	Lead, Total	0.028		mg/L	0.005	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	12-20-05 16:49	EPA 7470A <sup>2</sup>
7440-02-0	Nickel, Total	0.06		mg/L	0.04	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7782-49-2	Selenium, Total	BRL		mg/L	0.05	1	12-21-05 13:46	EPA 6010B <sup>1</sup>
7440-22-4	Silver, Total	BRL		mg/L	0.007	1	12-21-05 13:45	EPA 6010B <sup>1</sup>
7440-66-6	Zinc, Total	BRL		mg/L	0.2	1	12-21-05 13:45	EPA 6010B <sup>1</sup>

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 DF Dilution Factor.

# GROUNDWATER ANALYTICAL

## Inorganic Chemistry

Field ID: 58-1  
 Project: CFI Aq Site South Hadley, MA/01.202349.01  
 Client: Environmental Compliance Services, Inc.

Matrix: Aqueous  
 Received: 12-19-05 18:40

Lab ID: 90217-10    Sampled: 12-19-05 12:50    Container: 500 mL Plastic    Preservation: NaOH/Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Cyanide, Total	BRL	mg/L	0.01	1	50 mL	12-28-05 15:18	TCN-1138-AW	EPA 2012A	1	AVB

**Method Reference:** Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

**Report Notations:**  
 BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
 RL Reporting Limit.  
 DF Dilution Factor.  
 1 Instrument ID: Lachat 8000 Autoanalyzer

## Quality Control Report Method Blank

Category: Metals  
Matrix: Aqueous

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B	MB-1850-WB	EPA 3010A	12-20-05 08:06	50 mL	ICH-1 PE 3000	MWR
EPA 7470A	MP-1778-WB	EPA 7470A	12-20-05 11:15	25 mL	CVM-1 PE FMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.06	1	12-21-05 13:27	EPA 6010B
7440-38-2	Arsenic	BRL		mg/L	0.01	1	12-21-05 13:27	EPA 6010B
7440-43-9	Cadmium	BRL		mg/L	0.005	1	12-21-05 13:27	EPA 6010B
7440-47-3	Chromium	BRL		mg/L	0.01	1	12-21-05 13:26	EPA 6010B
7440-50-8	Copper	BRL		mg/L	0.025	1	12-28-05 12:23	EPA 6010B
7439-89-6	Iron	BRL		mg/L	0.1	1	12-21-05 13:27	EPA 6010B
7439-92-1	Lead	BRL		mg/L	0.005	1	12-28-05 13:45	EPA 6010B
7439-97-6	Mercury	BRL		mg/L	0.0002	1	12-20-05 15:24	EPA 7470A
7440-02-0	Nickel	BRL		mg/L	0.04	1	12-21-05 13:27	EPA 6010B
7782-49-2	Selenium	BRL		mg/L	0.05	1	12-21-05 13:27	EPA 6010B
7440-22-4	Silver	BRL		mg/L	0.007	1	12-22-05 13:03	EPA 6010B
7440-66-6	Zinc	BRL		mg/L	0.2	1	12-21-05 13:27	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.  
DF Dilution Factor.

# GROUNDWATER ANALYTICAL

## EPA Method 8260B Volatile Organics by GC/MS

Field ID: 58-1  
 Project: CFI Aq Site South Hadley, MA/01.202349.01  
 Client: Environmental Compliance Services, Inc.  
 Laboratory ID: 90216-04  
 Sampled: 12-19-05 12:50  
 Received: 12-19-05 18:40  
 Analyzed: 12-21-05 22:56  
 Analyst: CCT

Matrix: Aqueous  
 Container: 40 mL VOA Vial  
 Preservation: HCl/Cool  
 QC Batch ID: VM4-3390-W  
 Instrument ID: MS-4 HP 6890  
 Sample Volume: 25 mL  
 Dilution Factor: 2

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	1
74-87-3	Chloromethane	BRL		ug/L	1
75-01-4	Vinyl Chloride	BRL		ug/L	1
74-83-9	Bromomethane	BRL		ug/L	1
75-00-3	Chloroethane	BRL		ug/L	1
75-69-4	Trichlorofluoromethane	BRL		ug/L	1
60-29-7	Diethyl Ether	BRL		ug/L	4
75-35-4	1,1-Dichloroethene	BRL		ug/L	1
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	10
67-64-1	Acetone	BRL		ug/L	20
75-15-0	Carbon Disulfide	BRL		ug/L	10
75-09-2	Methylene Chloride	BRL		ug/L	5
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L	1
1634-04-4	Methyl tert-butyl Ether (MTBE)	BRL		ug/L	1
75-34-3	1,1-Dichloroethane	BRL		ug/L	1
594-20-7	2,2-Dichloropropane	BRL		ug/L	1
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L	1
78-93-3	2-Butanone (MEK)	BRL		ug/L	10
74-97-5	Bromochloromethane	BRL		ug/L	1
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	10
67-66-3	Chloroform	BRL		ug/L	1
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	1
56-23-5	Carbon Tetrachloride	BRL		ug/L	1
563-58-6	1,1-Dichloropropene	BRL		ug/L	1
71-43-2	Benzene	BRL		ug/L	1
107-06-2	1,2-Dichloroethane	BRL		ug/L	1
79-01-6	Trichloroethene	BRL		ug/L	1
78-87-5	1,2-Dichloropropane	BRL		ug/L	1
74-95-3	Dibromomethane	BRL		ug/L	1
75-27-4	Bromodichloromethane	BRL		ug/L	1
123-91-1	1,4-Dioxane	BRL		ug/L	1000
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	1
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	10
108-88-3	Toluene	BRL		ug/L	1
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	1
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	1
127-18-4	Tetrachloroethene	54		ug/L	1
142-28-9	1,3-Dichloropropane	BRL		ug/L	1
591-78-6	2-Hexanone	BRL		ug/L	10
124-48-1	Dibromochloromethane	BRL		ug/L	1
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	1
108-90-7	Chlorobenzene	BRL		ug/L	1
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	1
100-41-4	Ethylbenzene	BRL		ug/L	1
108-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L	1
95-47-6	ortho-Xylene	BRL		ug/L	1

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Groundwater Analytical, Inc., P.O. Box 1200, 228 Main Street, Buzzards Bay, MA 02532

## EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: SB-1  
 Project: CFI Aq Site South Hadley, MA/01.202349.01  
 Client: Environmental Compliance Services, Inc.  
 Laboratory ID: 90216-04  
 Sampled: 12-19-05 12:50  
 Received: 12-19-05 18:40  
 Analyzed: 12-21-05 22:56  
 Analyst: CCT

Matrix: Aqueous  
 Container: 40 mL VOA Vial  
 Preservation: HCl/Cool  
 QC Batch ID: VM4-3390-W  
 Instrument ID: MS-4 HP 6890  
 Sample Volume: 25 mL  
 Dilution Factor: 2

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	1
75-25-2	Bromoform	BRL		ug/L	1
98-82-8	Isopropylbenzene	BRL		ug/L	1
108-86-1	Bromobenzene	BRL		ug/L	1
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	1
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	1
103-65-1	n-Propylbenzene	BRL		ug/L	1
95-49-8	2-Chlorotoluene	BRL		ug/L	1
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	1
106-43-4	4-Chlorotoluene	BRL		ug/L	1
98-06-6	tert-Butylbenzene	BRL		ug/L	1
93-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	1
135-98-8	sec-Butylbenzene	BRL		ug/L	1
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	1
99-87-6	4-Isopropyltoluene	BRL		ug/L	1
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	1
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	1
104-51-8	n-Butylbenzene	BRL		ug/L	1
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	1
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	1
87-68-3	Hexachlorobutadiene	BRL		ug/L	1
91-20-3	Naphthalene	BRL		ug/L	1
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	1
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	40
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	1
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	1
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	1

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	9.1	91 %	70 - 130 %
1,2-Dichloroethane-d <sub>4</sub>	10	9.7	97 %	70 - 130 %
Toluene-d <sub>8</sub>	10	9.0	90 %	70 - 130 %
4-Bromofluorobenzene	10	9.7	97 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample preparation performed by EPA Method 3010B.

Report Notations: BRL indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

# GROUNDWATER ANALYTICAL

## EPA Method 8260B Volatile Organics by GC/MS

Field ID: B-1  
 Project: CFI-507 Newton St. South Hadley/01-202349.00  
 Client: Environmental Compliance Services  
 Laboratory ID: 76819-07  
 Sampled: 09-21-04 14:50  
 Received: 09-22-04 09:45  
 Analyzed: 09-23-04 18:49  
 Analyst: TRA

Matrix: Aqueous  
 Container: 40 mL VOA Vial  
 Preservation: HCl/Cool  
 QC Batch ID: VM4-2999-W  
 Instrument ID: MS-4 HP 6890  
 Sample Volume: 25 mL  
 Dilution Factor: 2

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Sample ID	Compound Name	Matrix	Concentration	Reporting Unit
75-71-8	Dichlorodifluoromethane	BRL		ug/L 1
74-87-3	Chloromethane	BRL		ug/L 1
75-01-4	Vinyl Chloride	BRL		ug/L 7
74-83-9	Bromomethane	BRL		ug/L 1
75-00-3	Chloroethane	BRL		ug/L 1
75-69-4	Trichlorofluoromethane	BRL		ug/L 1
60-29-7	Diethyl Ether	BRL		ug/L 4
75-35-4	1,1-Dichloroethene	BRL		ug/L 1
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L 10
67-64-1	Acetone	BRL		ug/L 20
75-15-0	Carbon Disulfide	BRL		ug/L 10
75-09-2	Methylene Chloride	BRL		ug/L 5
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L 1
1634-04-4	Methyl tert-butyl Ether (MTBE)	BRL		ug/L 1
75-34-3	1,1-Dichloroethane	BRL		ug/L 1
594-20-7	2,2-Dichloropropane	BRL		ug/L 1
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L 1
78-93-3	2-Butanone (MEK)	BRL		ug/L 10
74-97-5	Bromochloromethane	BRL		ug/L 1
109-89-9	Tetrahydrofuran (THF)	BRL		ug/L 10
67-66-3	Chloroform	BRL		ug/L 1
71-55-6	1,1,1-Trichloroethane	BRL		ug/L 1
56-23-5	Carbon Tetrachloride	BRL		ug/L 1
563-58-6	1,1-Dichloropropene	BRL		ug/L 1
71-43-2	Benzene	BRL		ug/L 1
107-06-2	1,2-Dichloroethane	BRL		ug/L 1
79-01-6	Trichloroethene	BRL		ug/L 1
78-87-5	1,2-Dichloropropane	BRL		ug/L 1
74-95-3	Dibromomethane	BRL		ug/L 1
75-27-4	Bromodichloromethane	BRL		ug/L 1
123-91-1	1,4-Dioxane	BRL		ug/L 1,000
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L 1
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L 10
108-88-3	Toluene	BRL		ug/L 1
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L 1
79-00-5	1,1,2-Trichloroethane	BRL		ug/L 1
127-18-4	Tetrachloroethene	BRL	60	ug/L 1
142-28-9	1,3-Dichloropropane	BRL		ug/L 1
591-78-6	2-Hexanone	BRL		ug/L 10
124-48-1	Dibromochloromethane	BRL		ug/L 1
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L 1
108-90-7	Chlorobenzene	BRL		ug/L 1
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L 1
100-41-4	Ethylbenzene	BRL		ug/L 1
106-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L 1
95-47-6	ortho-Xylene	BRL		ug/L 1

# GROUNDWATER ANALYTICAL

## EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: B-1  
 Project: CFI-507 Newton St. South Hadley/01-202349.00  
 Client: Environmental Compliance Services  
 Laboratory ID: 76819-07  
 Sampled: 09-21-04 14:50  
 Received: 09-22-04 09:45  
 Analyzed: 09-23-04 18:49  
 Analyst: TRA

Matrix: Aqueous  
 Container: 40 mL VOA Vial  
 Preservation: HCl/Cool  
 QC Batch ID: VM4-2999-W  
 Instrument ID: MS-4 HP 6890  
 Sample Volume: 25 mL  
 Dilution Factor: 2

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Sample ID	Analyte	Concentration	Matrix	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	1
75-25-2	Bromoform	BRL		ug/L	1
90-82-8	Isopropylbenzene	BRL		ug/L	1
108-06-1	Bromobenzene	BRL		ug/L	1
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	1
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	1
103-65-1	n-Propylbenzene	BRL		ug/L	1
95-49-8	2-Chlorotoluene	BRL		ug/L	1
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	1
106-43-4	4-Chlorotoluene	BRL		ug/L	1
98-06-6	tert-Butylbenzene	BRL		ug/L	1
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	1
135-98-8	sec-Butylbenzene	BRL		ug/L	1
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	1
99-87-6	4-Isopropyltoluene	BRL		ug/L	1
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	1
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	1
104-51-8	n-Butylbenzene	BRL		ug/L	1
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	1
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	1
87-68-3	Hexachlorobutadiene	BRL		ug/L	1
91-20-3	Naphthalene	BRL		ug/L	1
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	1
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	1
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	40
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	1
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	1

QC Sample	Spiked	Measured	Recovery %	QC Limit
Dibromofluoromethane	10	8.5	85 %	70 - 130 %
1,2-Dichloroethane-d <sub>4</sub>	10	8.7	87 %	70 - 130 %
Toluene-d <sub>8</sub>	10	8.4	84 %	70 - 130 %
4-Bromofluorobenzene	10	7.9	79 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).  
 Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.