MIDSTATE OFFICE PARK
27 MIDSTATE DRIVE, SUITE 218
AUBURN, MA 01501
508-832-6022
FAX: 508-832-4603
W''W.ECSCONSULT.COM

October 21, 2005
Project No. 93-200013.55

Mr. Doug Corb
U.S. Environmental Protection Agency
RPG-NOC Processing
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114

Re: Remediation General Permit: Notice
Exxon Division of Cumberland Farms, Inc.
Cumberland Farms Store # 70027
8 Broadway
Lynnfield, MA
NPDES Permit Exclusion #02-002
Release Tracking Number (RTN) 3-16513

Dear Mr. Corb:

On behalf of Cumberland Farms Inc. (CFI), Environmental Compliance Services, Inc. (ECS) is submitting a Notice of Intent for the Remediation General Permit for the above referenced location.

If you have any questions or require additional information regarding this submittal, feel free to contact me at (508) 832-6022.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Matthew J. Lyne
Environmental Engineer
Sr. Project Manager

cc: Angela Pimental, Cumberland Farms, Inc., 777 Dedham Street, Canton, MA 02021
William Simmons, ECS-Agawam, MA
Robert Kubit, MADEP, Division of Watershed Management, 627 Main Street, Worcester, MA 01608
Auburn Reimbursement Files

MAG91032

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**: Exxon-CFI Gas Station		**Facility/site** address: 8 Broadway, Lynnfield, MA		
Location of **facility/site**: longitude: -71.014846 latitude: 42.502423	Facility SIC code(s): 5541	Street: 8 Broadway		
b) Name of **facility/site owner**: Cumberland Farms, Inc.		Town: Lynnfield		
Email address of owner: apimental@cumberlandfarms.com		State: MA	Zip: 01940	County: Essex
Telephone no.of facility/site **owner**: 781-828-4900				
Fax no. of facility/site **owner**: 781-575-9536		**Owner** is (check one): 1. Federal____ 2. State/Tribal____ 3. Private X 4. other, if so, describe:		
Address of **owner** (if different from site):				
Street: 777 Dedham Street				
Town: Canton	State: MA	Zip: 02021	County: Norfolk	
c) Legal name of **operator**: Environmental Compliance Services, Inc.		**Operator** telephone no: 508-832-6022		
		Operator fax no.: 508-832-4603	**Operator** email: mlyne@ecsconsult.com	
Operator contact name and title: Matthew Lyne, Environmental Engineer				

Address of **operator** (if different from owner): 27 Midstate Drive, Suite 218 Auburn, MA 01501	Street: 27 Midstate Drive, Suite 218		
Town: Auburn	State: MA	Zip: 01501	County: Worcester

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

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes X No___
If "yes," please list:
1. site identification # assigned by the state of NH or MA: 3-16513
2. permit or license # assigned: None
3. state agency contact information: name, location, and telephone number:
Victor Fonkem, MA DEP, Boston, MA, 617-654-6685

f) Is the site/facility covered by any other EPA permit, including:
1. multi-sector storm water general permit? Y___ N X, if Y, number:
2. phase I or II construction storm water general permit? Y___ N X, if Y, number:
3. individual NPDES permit? Y___ N X, if Y, number:
4. 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:
Gasoline impacted groundwater is pumped from 4 recovery wells on-site, passed through 2 bag filters and 3 carbon units (total of 2,000 lbs) for removal of pollutants, and discharged to a storm drain.

b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)? Max. flow 0.0077 Average flow 0.0017 Is maximum flow a **design value**? Y___ N X For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. Max. Flow and Average Flow are based on actual + historical flow measurements. (See attached table)

3) Latitude and longitude of each discharge within 100 feet: pt.1:long. -71.014846 lat. 42.502423; pt.2: long.____ lat.____; pt.3: long.____ lat.____; pt.4:long.____ lat.____; pt.5: long.____ lat.____; pt.6:long.____ lat.____; pt.7: long.____ lat.____; pt.8:long.____ lat.____; etc.

4) If hydrostatic testing, total volume of the discharge (gals): NA	5) Is the discharge intermittent No or seasonal No ? Is discharge ongoing Yes X No_____?
c) Expected dates of discharge (mm/dd/yy): start 1/28/02 end 12/30/07	
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).	

Please see the attached Process + Instrumentation Diagram (Figure 4) which shows the flow schematic

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 min-imum)	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		X	1	grab	SM 2540	10,000	23,000	0.12	23,000	0.1
2. Total Residual Chlorine		X	1	grab	SM 4500	200	900	0.004	900	0.004
3. Total Petroleum Hydrocarbons	X		1	grab	1664	5,000	<5,000	0	<5,000	0
4. Cyanide	X		1	grab	9012 A	10	<10	0	<10	0
5. Benzene	X		1	grab	8260 B	250	<250	0	<250	0
6. Toluene	X		1	grab	8260 B	250	<250	0	<250	0
7. Ethylbenzene	X		1	grab	8260 B	250	<250	0	<250	0
8. (m,p,o) Xylenes	X		1	grab	8260 B	250	<250	0	<250	0
9. Total BTEX[4]	X		1	grab	8260 B	250	<250	0	<250	0

[4] BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	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		1	grab	8260B	250	<250	0	<250	0
11. Methyl-tert-Butyl Ether (MtBE)		X	1	grab	8260B	250	15,000	0.08	15,000	0.08
12. tert-Butyl Alcohol (TBA)	X		1	grab	8260B	10,000	<10,000	0	<10,000	0
13. tert-Amyl Methyl Ether (TAME)		X	1	grab	8260B	250	330	0.002	330	0.002
14. Naphthalene	X		1	grab	8260B	250	<250	0	<250	0
15. Carbon Tetra-chloride	X		1	grab	8260B	250	<250	0	<250	0
16. 1,4 Dichlorobenzene	X		1	grab	8260B	250	<250	0	<250	0
17. 1,2 Dichlorobenzene	X		1	grab	8260B	250	<250	0	<250	0
18. 1,3 Dichlorobenzene	X		1	grab	8260B	250	<250	0	<250	0
19. 1,1 Dichloroethane	X		1	grab	8260B	250	<250	0	<250	0
20. 1,2 Dichloroethane	X		1	grab	8260B	250	<250	0	<250	0
21. 1,1 Dichloroethylene	X		1	grab	8260B	250	<250	0	<250	0
22. cis-1,2 Dichloro-ethylene	X		1	grab	8260B	250	<250	0	<250	0
23. Dichloromethane (Methylene Chloride)	X		1	grab	8260B	1,300	<1,300	0	<1,300	0
24. Tetrachloroethylene	X		1	grab	8260B	250	<250	0	<250	0

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	X		1	grab	8260 B	250	<250	0	<250	0
26. 1,1,2 Trichloroethane	X		1	grab	8260 B	250	<250	0	<250	0
27. Trichloroethylene	X		1	grab	8260 B	250	<250	0	<250	0
28. Vinyl Chloride	X		1	grab	8260 B	250	<250	0	<250	0
29. Acetone	X		1	grab	8260 B	5,000	<5,000	0	<5,000	0
30. 1,4 Dioxane	X		1	grab	8260 B	250,000	<250,000	0	<250,000	0
31. Total Phenols	X		1	grab	625	10	<10	0	<10	0
32. Pentachlorophenol	X		1	grab	625	10	<10	0	<10	0
33. Total Phthalates [5] (Phthalate esthers)	X		1	grab	625	10	<10	0	<10	0
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	X		1	grab	625	10	<10	0	<10	0
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	X		1	grab	625	10	<10	0	<10	0
a. Benzo(a) Anthracene	X		1	grab	625	10	<10	0	<10	0
b. Benzo(a) Pyrene	X		1	grab	625	10	<10	0	<10	0
c. Benzo(b)Fluoranthene	X		1	grab	625	10	<10	0	<10	0
d. Benzo(k) Fluoranthene	X		1	grab	625	10	<10	0	<10	0
e. Chrysene	X		1	grab	625	10	<10	0	<10	0

[5] The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	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	X		1	grab	625	10	<10	0	<10	0
g. Indeno(1,2,3-cd) Pyrene	X		1	grab	625	10	<10	0	<10	0
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	X		1	grab	625	10	<10	0	<10	0
h. Acenaphthene	X		1	grab	625	10	<10	0	<10	0
i. Acenaphthylene	X		1	grab	625	10	<10	0	<10	0
j. Anthracene	X		1	grab	625	10	<10	0	<10	0
k. Benzo(ghi) Perylene	X		1	grab	625	10	<10	0	<10	0
l. Fluoranthene	X		1	grab	625	10	<10	0	<10	0
m. Fluorene	X		1	grab	625	10	<10	0	<10	0
n. Naphthalene-	X		1	grab	625	10	<10	0	<10	0
o. Phenanthrene	X		1	grab	625	10	<10	0	<10	0
p. Pyrene	X		1	grab	625	10	<10	0	<10	0
37. Total Polychlorinated Biphenyls (PCBs)	X		1	grab	608	0.2	<0.2	0	<0.2	0
38. Antimony	X		1	grab	200.7	60	<60	0	<60	0
39. Arsenic	X		1	grab	200.7	10	<10	0	<10	0
40. Cadmium	X		1	grab	200.7	5	<5	0	<5	0
41. Chromium III	X		1	grab	200.7	10	<10	0	<10	0
42. Chromium VI	X		1	grab	200.7	10	<10	0	<10	0

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper	X		1	grab	200.7	25	<25	0	<25	0
44. Lead	X		1	grab	200.7	5	<5	0	<5	0
45. Mercury	X		1	grab	245	0.2	<0.2	0	<0.2	0
46. Nickel	X		1	grab	245	40	<40	0	<40	0
47. Selenium	X		1	grab	200.7	50	<50	0	<50	0
48. Silver	X		1	grab	200.7	7	<7	0	<7	0
49. Zinc	X		1	grab	200.7	200	<200	0	<200	0
50. Iron		X	1	grab	200.7	100	17,000	0.09	17,000	0.09
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 X	If yes, which metals?
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:_____ DF: _____	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:

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:

Gasoline impacted groundwater is treated by bag filters and carbon units. A schematic of the treatment system is provided as Figure 4.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
					X	X
	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 0.76 Maximum flow rate of treatment system 3.49 Design flow rate of treatment system 5

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

None

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 X	River/brook____	Wetlands____	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Treated groundwater is discharged to an unnamed wetlands.

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

d) Provide the state water quality classification of the receiving water NA

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

f) Is the receiving water a listed 303(d) water quality impaired or limited water? 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
Has any consultation with the federal services been completed ? No X or is consultation underway? Yes____ No____
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (~~check~~ one):
a "no jeopardy" opinion? _____ or written concurrence____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
Yes_____ No 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:	Exxon-CFI Gas Station
Operator signature:	[signature]
Title:	Env. Engineer / Project Manager
Date:	10-21-05

ecs

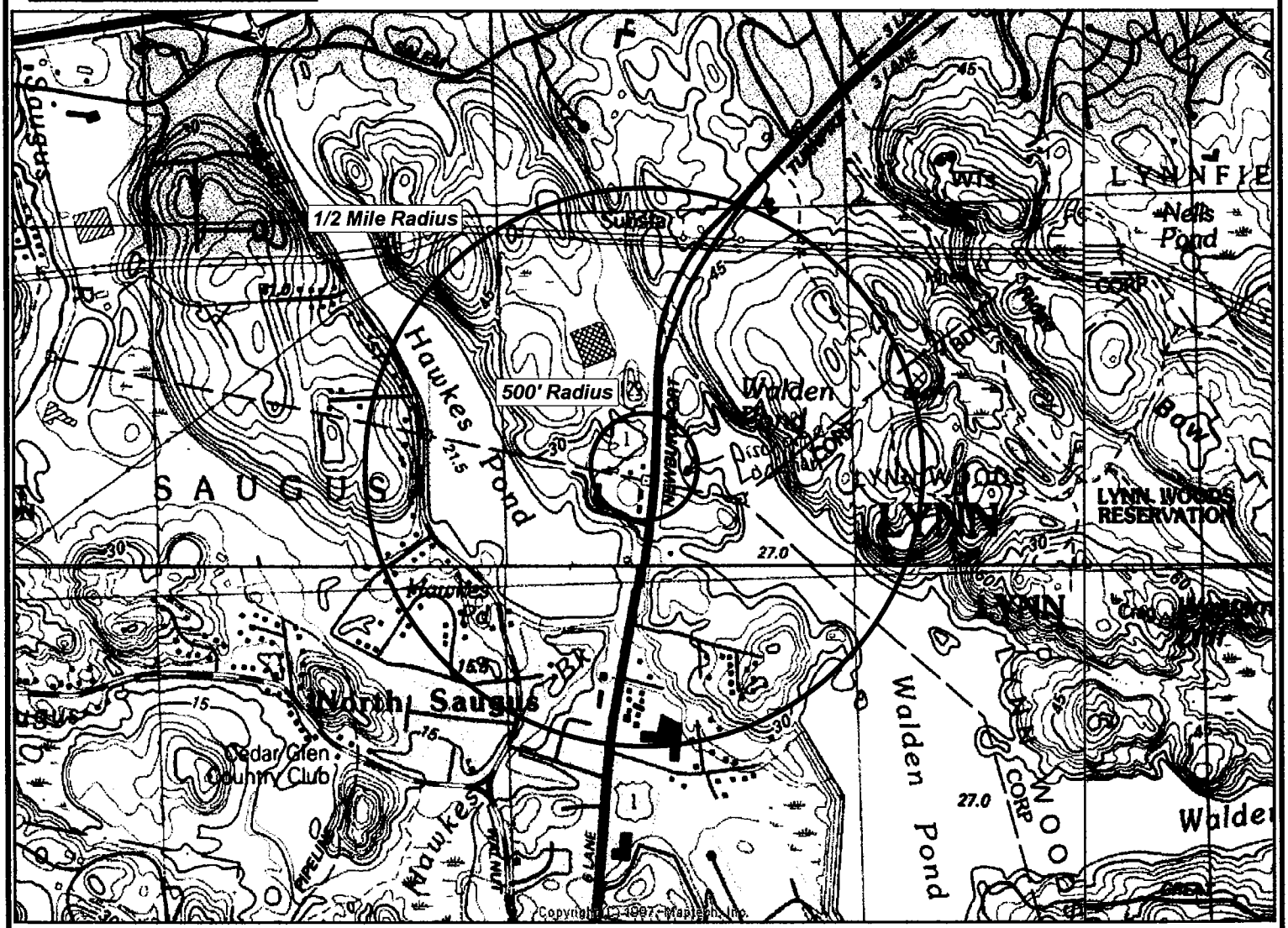
Environmental Compliance Services, Inc.
27A Midstate Drive Suite 218, Auburn, MA 01501
Phone (508)-832-6022 Fax (508)-832-4603
www.ecsconsult.com

SITE LOCUS

Figure: 1

Exxon Div. of CFI Facility #70027
8 Broadway
Lynnfield, MA
01940

Job Number: 93-200013.00



1 1/2 0 1 Mile

1 inch = 1500 feet

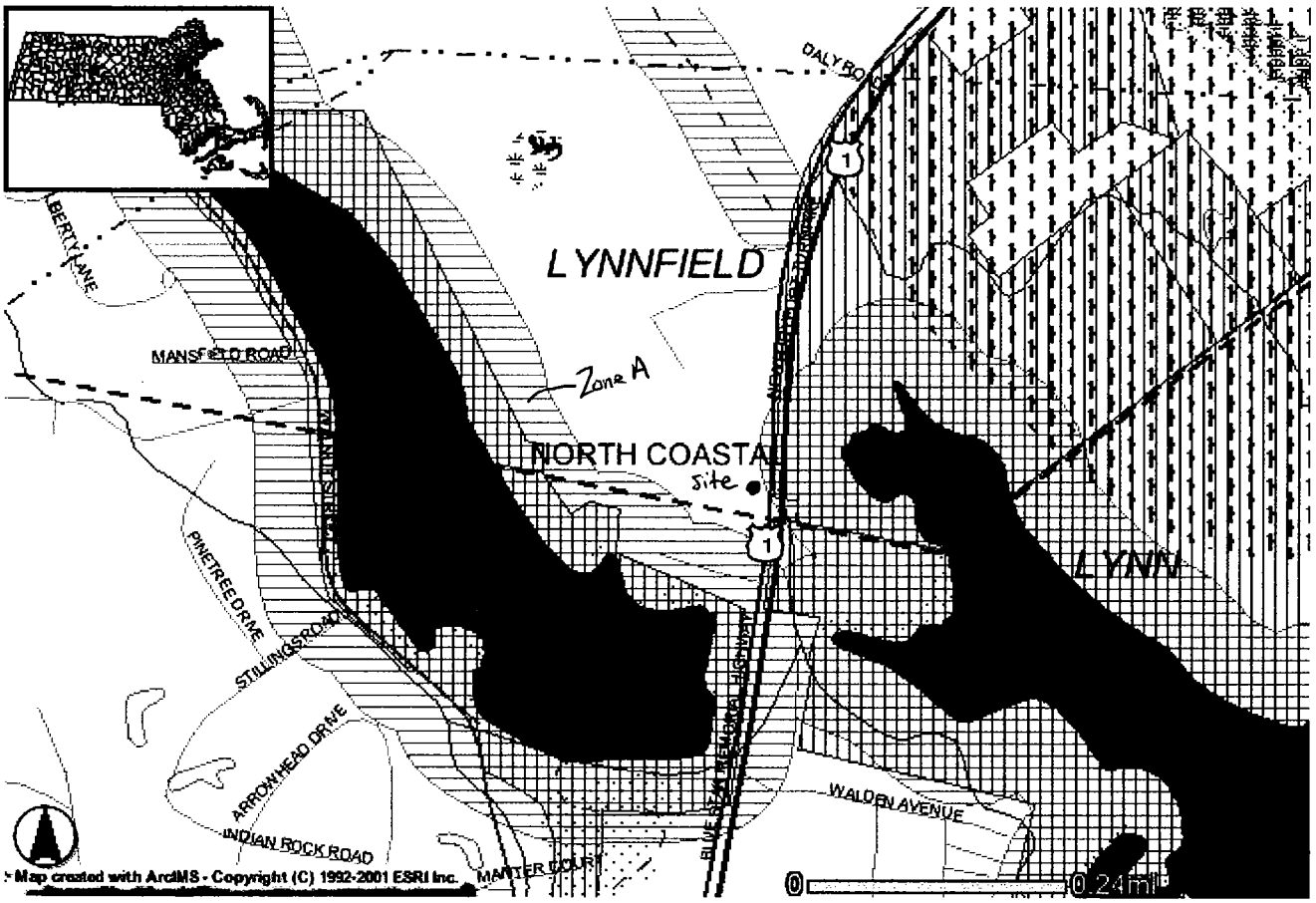
Contour Interval: 3 Meters

North

Base Map: U.S. Geological Survey; Quadrangle Location: Reading, MA

UTM Coordinates: 19 0334401 East / 47 07313 North

Map Edited: 1987 *Map Revised: NA* *Generated By: JRH*



DEP Priority Resource Map Legend

P

DEP MCP 21e Map Legend

- Zone IIs
- IWPAs
- Zone A
- Sole Source Aquifers
- Solid Waste Sites
- Protected Openspace
- ACECs
- NHESP Estimated Habitat of Rare Wildlife in Wetland Areas
- Certified Vernal Pools 2003 NHESP
- Subbasins
- Mass Major Basins
- DEP Region
- Town Arcs
- County Boundaries

Public Water Supplies

- COMMUNITY PUBLIC WATER SUPPLY - GROUNDWATER
- COMMUNITY PUBLIC WATER SUPPLY - SURFACE WATER
- NON COMMUNITY PUBLIC WATER SUPPLY

Aquifers, By Yield

- HIGH YIELD
- MEDIUM YIELD

Non Potential Drinking Water Source Area

- HIGH YIELD
- MEDIUM YIELD

FEMA Floodplains

- 100 YEAR FLOODPLAIN

Hydrography

- WATER
- RESERVOIR
- WETLANDS
- SALTWATER WETLANDS
- FLATS,SHOALS

Rivers and Streams

- PERENNIAL
- INTERMITTENT
- SHORELINE
- MAN MADE SHORE
- DAM
- AQUEDUCT

EOT-OTP Roads

- LIMITED ACCESS HIGHWAY
- MULTILANE HWY, NOT LIMITED ACCESS
- OTHER NUMBERED HWY
- MAJOR ROAD - COLLECTOR
- MINOR STREET OR ROAD, RAMP

Tracks and Trails MHD

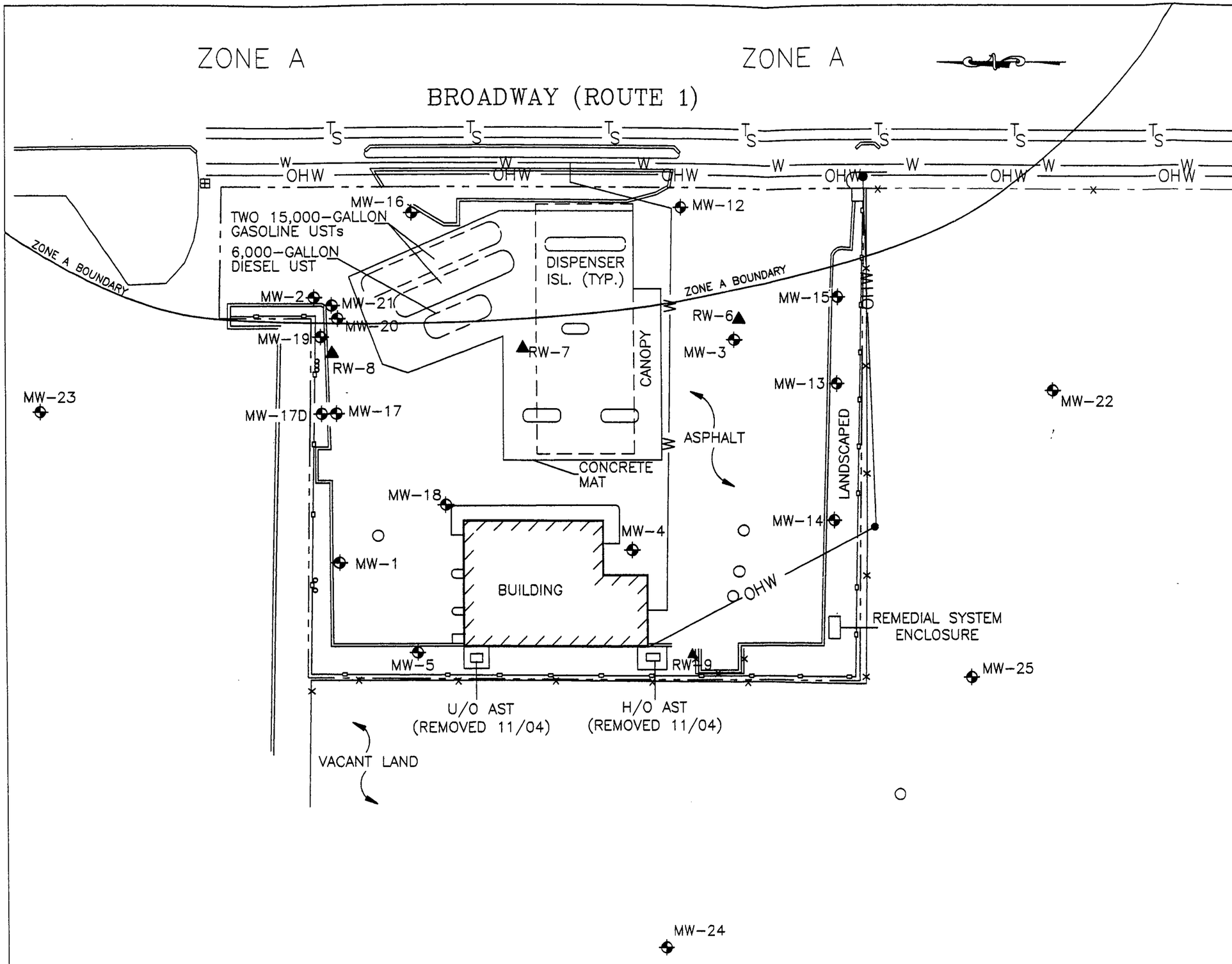
- TRACK
- TRAIL

Transmission Lines

- PIPELINE
- POWERLINE
- TRAIN

MASS GIS

2005



Legend

- Approximate Property Line
- MONITORING WELL
- RECOVERY WELL
- UTILITY POLE
- MANHOLE
- CATCH BASIN
- CHAIN LINK FENCE
- BOARD FENCE
- W — WATER LINE
- S — SEWER LINE
- T — TELEPHONE LINE
- OHU — OVERHEAD WIRES
- REMEDIAL SYSTEM PIPING
- H/O HEATING OIL
- U/O USED OIL
- UST UNDERGROUND STORAGE TANK
- AST ABOVEGROUND STORAGE TANK

General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

This plan was based on a site plan prepared by Geologic Services Corp. (8-31-01)

ecs
27A Midstate Drive, Suite 218 • Auburn, MA 01501
Phone: 508-832-6022 Fax: 508-832-4603

PROJECT:
EXXON DIV. of CFI FACILITY #70027
8 BROADWAY (ROUTE 1)
LYNNFIELD, MASSACHUSETTS

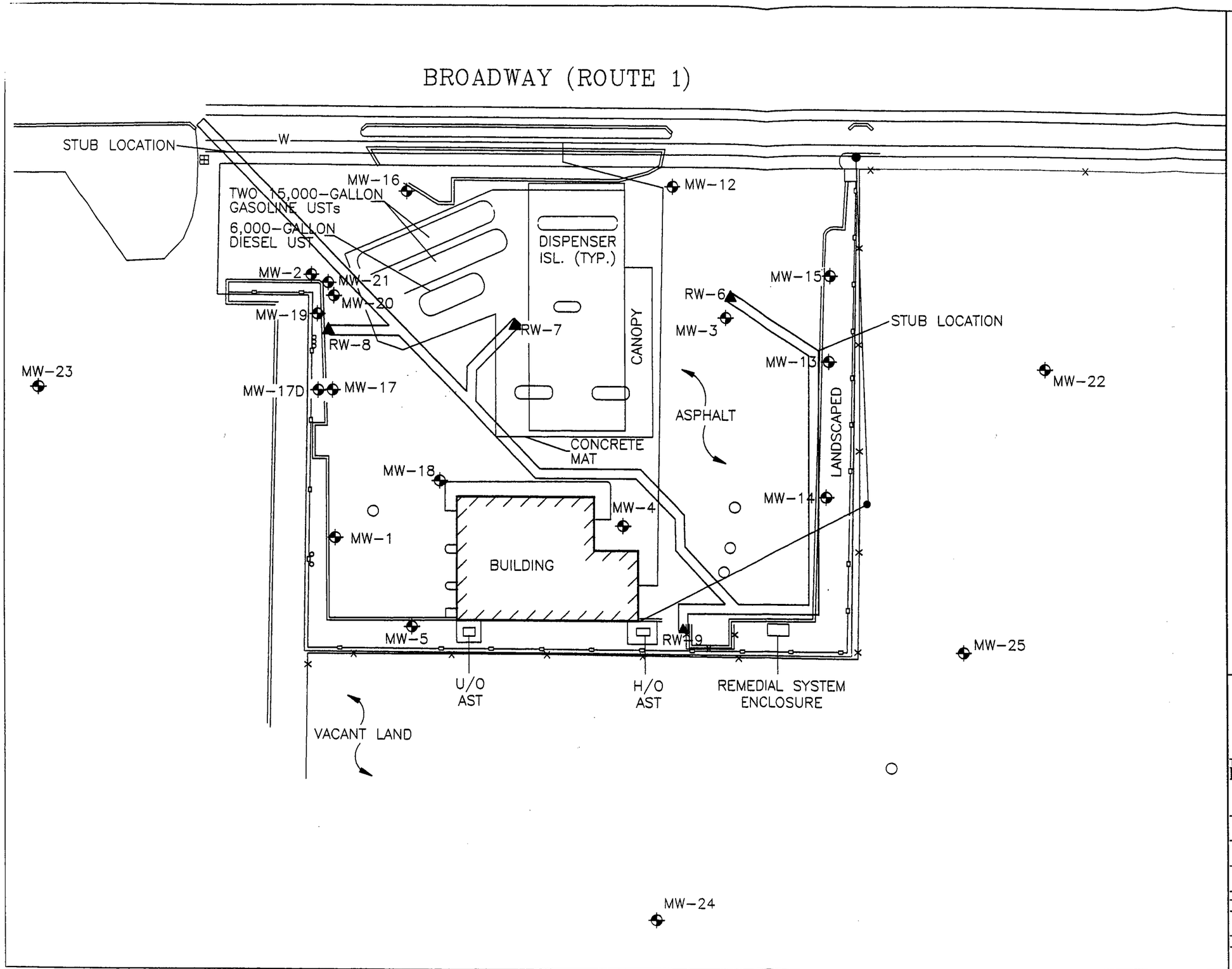
TITLE:
SITE PLAN

CLIENT:
CUMBERLAND FARMS, INC.

GRAPHIC SCALE: 40 20 0 20 40

COMPUTER CADFILE : 200013SP.DWG

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
RRW	ML	ML	ML
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=40'	Jan, 2004	200013	1



Legend

— — — —	Approximate Property Line
◆	MONITORING WELL
▲	RECOVERY WELL
•	UTILITY POLE
○	MANHOLE
⊞	CATCH BASIN
—x—	CHAIN LINK FENCE
—o—o—	BOARD FENCE
—W—	WATER LINE
—S—	SEWER LINE
—T—	TELEPHONE LINE
-OHU-	OVERHEAD WIRES
——	REMEDIAL SYSTEM PIPING
H/O	HEATING OIL
U/O	USED OIL
UST	UNDERGROUND STORAGE TANK
AST	ABOVEGROUND STORAGE TANK

General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

This plan was based on a site plan prepared by Geologic Services Corp. (8-31-01)

ecs
586 Silver Street * Agawam, MA 01001
Phone: 1-800-789-3530 Fax: 413-789-2776

PROJECT:
EXXON DIV. of CFI FACILITY #70027
8 BROADWAY (ROUTE 1)
LYNNFIELD, MASSACHUSETTS

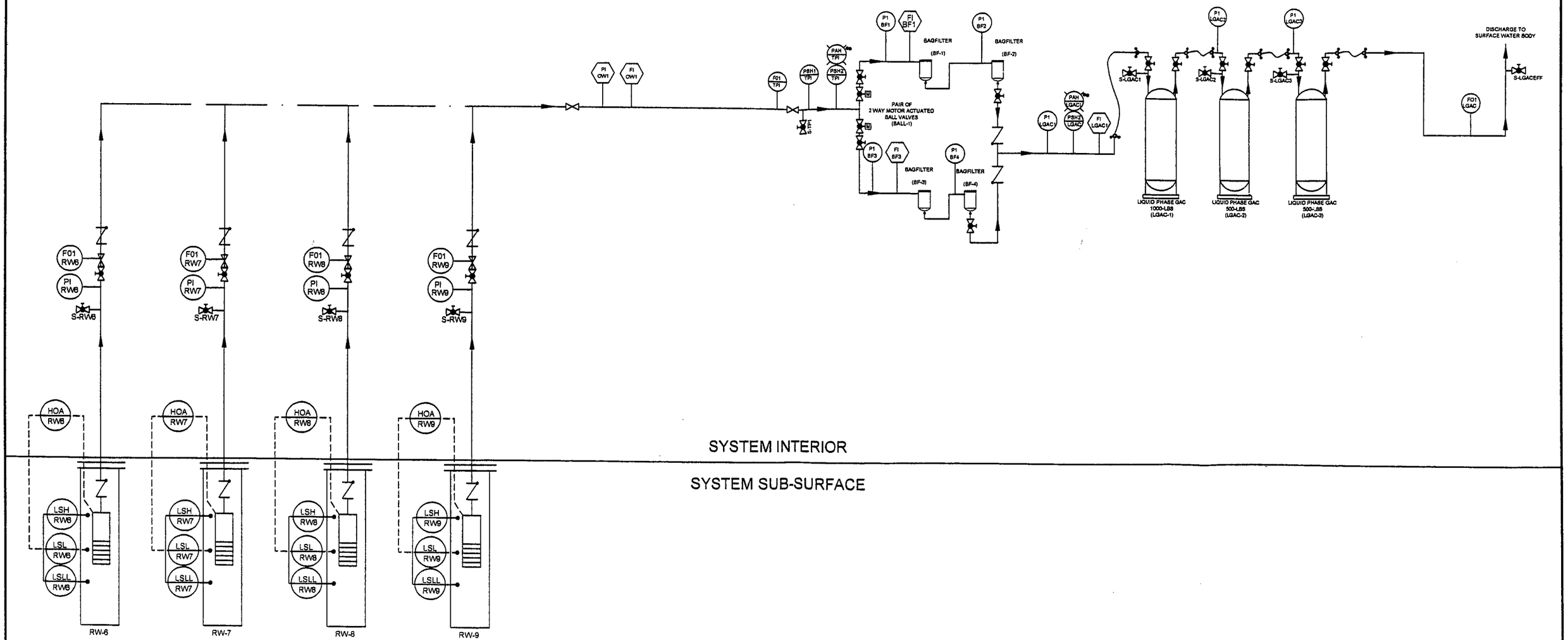
TITLE:
REMEDIATION SYSTEM PIPING PLAN

CLIENT:
CUMBERLAND FARMS, INC.

GRAPHIC SCALE: 40 20 0 20 40

COMPUTER CADFILE : 200013SP.DWG

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
RRW/JH	ML	ML	ML
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=40'	Jan, 2004	200013	3



588 Silver Street * Agawam, MA 01001
Phone: 1-800-789-3530 Fax: 413-789-2776

CLIENT: CUMBERLAND FARMS, INC.

GRAPHIC SCALE: 1 0 1

PROJECT: EXXON DIV. of CFI FACILITY #70027
8 BROADWAY (ROUTE 1)
LYNNFIELD, MASSACHUSETTS

TITLE: PROCESS AND INSTRUMENT DIAGRAM

COMPUTER CADFILE : P&I DIAGRAM.dwg

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JRH	GSC	ML	ML
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
N.T.S.	3/3/04	200013.00	4

INSTRUMENT/VALVE SYMBOLS

- GATE VALVE
- BALL VALVE
- CHECK VALVE
- SAMPLE PORT
- TCV — THREE WAY TEMPERATURE CONTROL VALVE
- SV — SOLENOID VALVE
- PRESSURE RELIEF VALVE
- PRESSURE/VACUUM RELIEF VALVE
- FQI — FLOW TOTALIZER
- I — SYSTEM INTERLOCK
- INSTRUMENT BUBBLE (LOCALLY MOUNTED)
- INSTRUMENT BUBBLE (PANEL MOUNTED)
- 2 — STREAM TAG (USED TO DESIGNATE A STREAM ON A PROCESS FLOW DIAGRAM)
- STREAM LABEL (USED WHEN A STREAM ENTERS OR EXITS THE SYSTEM OR CONTINUES ON ANOTHER DRAWING)
- ELECTRICAL LINKAGE
- MECHANICAL LINKAGE
- PNEUMATIC LINKAGE
- TRANSFER PUMP
- BLOWER/COMPRESSOR

PROCESS EQUIPMENT SYMBOLS

- PARTICULATE FILTER
- BAG FILTER

PROCESS EQUIPMENT SYMBOLS

- WELL PUMP
- UNION or FLEXIBLE COUPLING
- FLEXIBLE HOSE
- FLOW RESTRICTOR
- PC — PULSE COUNTER
- PI — PRESSURE INDICATOR
- FI — FLOW INDICATOR
- VG — VACUUM GAUGE
- TI — TEMPERATURE INDICATOR

ABBREVIATIONS

LE	LEVEL ELEMENT
LT	LEVEL TRANSMITTER
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW LOW
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
PI	PRESSURE INDICATOR
VG	VACUUM GAUGE
VSL	VACUUM SWITCH LOW
M	MOTOR STARTER
I	SYSTEM INTERLOCK
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PSL	PRESSURE SWITCH LOW
PSH	PRESSURE SWITCH HIGH
PCV	PRESSURE CONTROL VALVE
PAH	PRESSURE ALARM HIGH
FT	FLOW TRANSMITTER
FE	FLOW ELEMENT
FM	FLOW METER
LCV	LEVEL CONTROL VALVE
GV	GATE VALVE
CV	CHECK VALVE
BV	BALL VALVE
BF	BAG FILTER
T	TANK
TE	TEMPERATURE ELEMENT
TC	TEMPERATURE CONTROLLER
TIC	TEMPERATURE INDICATING CONTROLLER
TCV	TEMPERATURE CONTROL VALVE
FS	FLOW SWITCH
FSL	FLOW SWITCH LOW
FSH	FLOW SWITCH HIGH
PSE	PRESSURE SAFETY EQUIPMENT
FT	FLOW TRANSMITTER
FCV	FLOW CONTROL VALVE
P	PUMP
K	BLOWER/COMPRESSOR
S	SEPARATOR
C	COLUMNS (GAC, AIR STRIPPER, ETC.)
CF	CARTRIDGE FILTER
GW	GROUNDWATER
TF	TOTAL FLUIDS
HV	HYDROCARBON VAPOR
TW	TAP WATER
A	SCH 40 PVC
B	SCH 80 PVC
CS	CARBON STEEL
D	TUBING/HOSE
E	DEFINED BY VENDOR
SP	SAMPLE PORT
SV	SOLENOID VALVE
O_2	OXYGEN

PIPING & INSTRUMENTATION DIAGRAM GENERAL NOTES

1.) All lines on the P and ID will be labeled as follows: Two letters will indicate the type of service, followed by a dash, the area number, and a number from 01 to 99, followed by the internal diameter of the line in inches, followed by the material designations. The types of service are as follows:

AA – Ambient Air
OW – Oily Water
GW – Groundwater
HV – Hydrocarbon Vapor
LH – Liquid Hydrocarbon
AD – Acid
BA – Base
OX – Oxygen

Piping material designations are as follows:
A – Schedule 40 PVC
B – Schedule 80 PVC
C – Carbon Steel
D – Tubing
E – Defined by Vendor

For example the designation for the first groundwater line in area 10 constructed from 2" Schedule 40 PVC would be GW–1005–2"–A

2.) All instrumentaion nomenclature, abgreviations, and symbols shall conform to the Instrument Society of America (ISA) standards.

3.) The operation of all system interlocks will be shown at the bottom of the drawing, or on a seperate sheet elsewhere in the written specifications.

4.) The major equipment will be summarized at the bottom of the page, or elsewhere in the written specifications, and will show in addition to the name of the piece of equipment, the maximum flowrate, the material of construction, and the horsepower where applicable.

PROCESS FLOW DIAGRAM GENERAL NOTES

1.) The first treatment system installed on the site will be designated as AREA 10. All equipment that is a part of this system will be designated by a letter followed by a dash, the area number and a number from 01 to 99 in increments of 5. For example P–1005 followed by P–1010. Followed by P–1010, The second treatment sytem on a site will be designated area 20 an so on.

2.) All seperators will be designated as S–XXXX. This includes vapor/liquid separators, particulate filters, and oil/water seperators.

3.) All blowers will be designated as B–XXXX. Blowers that can do a 2 to 1 or greater compression are considered compressors and will be designated K–XXXX.

4.) All columns will be designated as C–XXXX. This includes activated carbon, tray aerators, air strippers, and sparge tanks.

5.) Storage tanks will be designated T–XXXX. This includes sumps and secondary containment.

6.) All process streams which enter of leave the system, or have undergone a change will have a stream tag. Information will be provided on the flowrates, pressure, temperature, pH, specific gravity, containment concentrations, and any other information required to fully understand the process. Stream tags will start at 1 and increase sequentially.

7.) Any questions concerning specifications, flows, pressures, rates, etc., should be directed to the project engineer prior to the submission of bids.

GCS MARIN
588 Silver Streeet * Agawam, MA 01001
Phone: 1-800-789-3530 Fax: 413-789-2776

CLIENT: CUMBERLAND FARMS, INC.

GRAPHIC SCALE:

PROJECT: EXXON DIV. of CFI FACILITY #70027
8 BROADWAY (ROUTE 1)
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TITLE: PROCESS AND INSTRUMENT DIAGRAM

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DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JRH	GSC	ML	ML
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
N.T.S.	3/3/04	200013.00	4–1

TABLE 1
SUMMARY OF GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA
CFI Division of Exxon
8 Broadway
Lynnfield, Massachusetts

Sample Date	Sample Location	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total VOC* (µg/L)	MTBE (µg/L)	TPH (mg/L)	pH	Actual Totalizer Readings (gallons)	Cumulative Flow (gallons)	Avg. Flow (gpm)	Hydrocarbon Mass Removed (Lbs)	Cumulative Mass Removed (Lbs)
01/28/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	22.7	<0.53	NA	NA	NA	NA	NA	NA
01/28/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.52	NM	0	0	0.00	0.00	0
01/30/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	38.9	<0.53	NA			NA	NA	NA
01/30/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.56	NM	2,162.5	2,162.5	0.75	0.00011	0.0001
02/11/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	113.0	<0.53	NA			0.00	NA	NA
02/11/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.54	NM	10,360.8	10,360.8	0.47	0.00107	0.0012
02/14/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	87.0	2.8	NA			0.00	NA	NA
02/14/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.52	NM	25,086.1	25,086.1	3.41	0.00253	0.0037
02/22/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	37.1	<0.53	NA			0.00	NA	NA
02/22/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.53	NM	52,205.3	52,205.3	2.35	0.00290	0.0066
03/01/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	29.0	<0.52	NA			0.00	NA	NA
03/01/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.53	NM	87,423.7	87,423.7	3.49	0.00200	0.0086
03/07/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	23.5	<0.51	NA			0.00	NA	NA
03/07/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.51	NM	107,131.8	107,131.8	2.28	0.00089	0.0095
04/08/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	9.4	<0.54	NA			0.00	NA	NA
04/08/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.51	NM	209,653.0	209,653.0	2.22	0.00290	0.0124
05/16/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	5.8	<0.62	NA			0.00	NA	NA
05/16/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.62	NM	254,477.7	254,477.7	0.82	0.00059	0.0130
06/06/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	11.3	<0.60	NA			0.00	NA	NA
06/06/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.60	NM	300,449.3	300,449.3	1.52	0.00068	0.0137
07/01/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	13.1	<0.63	NA			0.00	NA	NA
07/01/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.63	NM	347,715.8	347,715.8	1.31	0.00099	0.0147
08/08/02	Influent	<1.0	<1.0	<1.0	<1.0	ND	11.7	<0.60	NA			0.00	NA	NA
08/08/02	Effluent	<1.0	<1.0	<1.0	<1.0	ND	<1.0	<0.63	NM	389,452.5	389,452.5	0.76	0.00089	0.0156
09/18/02	Influent	<0.50	<0.50	<0.50	<0.50	ND	8.4	<0.61	NA			0.00	NA	NA
09/18/02	Effluent	0.6	<0.50	<0.50	<0.50	0.6	<0.50	<0.61	NM	405,477.1	405,477.1	0.27	0.00028	0.0158
11/11/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	1.2	<0.61	NA			0.00	NA	NA
11/11/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.63	NM	422,580.2	422,580.2	0.22	0.00014	0.0160
11/25/02	Influent	<0.50	<1.0	<1.0	<1.0	ND	25.8	<0.61	NA			0.00	NA	NA
11/25/02	Effluent	<0.50	<1.0	<1.0	<1.0	ND	<1.0	<0.61	NM	423,225.8	423,225.8	0.03	0.00001	0.0160
03/31/03	Influent	<0.50	<1.0	<1.0	<1.0	ND	10.6	<0.63	NA			0.00	NA	NA
03/31/03	Effluent	0.76	<1.0	<1.0	<1.0	0.76	<1.0	<0.63	NM	455,642.2	455,642.2	0.18	0.00102	0.0170
04/09/03	Influent	<1.0	<1.0	<1.0	<1.0	ND	28.6	<0.61	NA	NA	NA	NA	NA	NA
04/09/03	Effluent	<1.0	<1.0	<1.0	<1.0	ND	<1.0	<0.61	NM	NM	NM	NM	NM	0.0000
05/07/03	Influent	<1.0	<1.0	<1.0	<1.0	ND	83.7	<0.63	NA			NA	NA	NA
05/07/03	Effluent	<1.0	<1.0	<1.0	<1.0	ND	<1.0	<0.63	NM	512,306.9	512,306.9	NM	NM	0.0000
06/16/03	Influent	<1.0	<1.0	<1.0	<1.0	ND	450.0	<0.64	NA			0.00	NA	NA
06/16/03	Effluent	<1.0	<1.0	<1.0	<1.0	ND	<1.0	<0.64	NM	598,210.7	598,210.7	1.49	0.03944	0.0394
07/07/03	Influent	2.9	<1.0	<1.0	<1.0	2.9	752.0	<0.61	NA			0.00	NA	NA
07/07/03	Effluent	<1.0	<1.0	<1.0	<1.0	ND	<1.0	<0.61	NM	631,308.2	631,308.2	1.09	0.03422	0.0737
09/11/03	Influent	< 1	< 1	< 1	< 3	ND	45.8	10.9	NA			0.00	NA	NA
09/11/03	Effluent	< 1	< 1	< 1	< 3	ND	< 1	22.3	NM	685,443.3	685,443.3	0.57	0.03715	0.1108
12/03/03	Influent	< 100	< 100	< 100	< 300	ND	12,000	0.9	NA			0.00	NA	NA
12/03/03	Effluent	< 1	< 1	< 1	< 3	ND	< 1	< 0.6	NM	697,353.0	697,353.0	0.10	0.12341	0.2342
01/07/04	Influent	< 10	< 10	< 10	< 20	ND	1,600	< 0.5	NA			0.00	NA	NA
01/07/04	Effluent	< 1	< 1	< 1	< 2	ND	< 5	< 0.5	NM	740,514.0	740,514.0	0.86	0.50494	0.7392

TABLE 1
SUMMARY OF GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA
CFI Division of Exxon
8 Broadway
Lynnfield, Massachusetts

Sample Date	Sample Location	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total VOC* (µg/L)	MTBE (µg/L)	TPH (mg/L)	pH	Actual Totalizer Readings (gallons)	Cumulative Flow (gallons)	Avg. Flow (gpm)	Hydrocarbon Mass Removed (Lbs)	Cumulative Mass Removed (Lbs)
02/10/04	Influent	< 10	< 10	< 10	< 20	ND	1,100	< 0.5	NA			0.00	NA	NA
02/10/04	Effluent	< 1	< 1	< 1	< 2	ND	< 5	< 0.5	NM	794,341.0	794,341.0	1.10	0.12502	0.8642
03/05/04	Influent	< 10	< 10	< 10	< 20	ND	1,100	< 0.5	NA			0.00	NA	NA
03/05/04	Effluent	< 1	< 1	< 1	< 2	ND	< 5	< 0.5	NM	810,672.0	810,672.0	0.47	0.03091	0.8951
4/29/2004	Influent	NA	NA	NA	NA	NA	NA	NA	NA			0.00	0	0
4/29/2004	Effluent	NA	NA	NA	NA	NA	NA	NA	NM	911,190	911,190	1.27	0	0
5/7/2004	Influent	<10	<10	<10	<20	ND	1,200	<0.5	NA			0.00	NA	NA
5/7/2004	Effluent	<1	<1	<1	<2	ND	<5	<0.5	NM	921,042	921,042	0.86	0.02034	0.91543
6/17/2004	Influent	<10	<10	<10	<20	ND	1,300	0.6	NA			0.00	NA	NA
6/17/2004	Effluent	<1	<1	<1	<2	ND	<5	<0.5	NM	968,518	968,518	0.80	0.10210	1.01753
7/9/2004	Influent	NA	NA	NA	NA	NA	NA	NA	NA			0.00	0	0
7/9/2004	Effluent	NA	NA	NA	NA	NA	NA	NA	NM	990,994	990,994	0.71	0	0
8/25/2004	Influent	<25	<25	<25	<50	ND	4,900	<0.5	NA			0.00	NA	NA
8/25/2004	Effluent	<1	<1	<1	<2	ND	<5	<0.5	NM	1,019,686	1,019,686	0.42	0.24188	1.25941
9/24/2004	Influent	<5	<5	<5	<10	ND	510	2.1	NA			0.00	NA	NA
9/24/2004	Effluent	<1	<1	<1	<2	ND	<5	0.9	NM	1,049,348	1,049,348	0.69	0.13804	1.39746
10/3/2004	Influent	NA	NA	NA	NA	NA	NA	NA	NA			0.00		0
10/3/2004	Effluent	NA	NA	NA	NA	NA	NA	NA	NM	1,068,920	1,068,920	1.51	0.00000	1.39746
11/18/2004	Influent	NA	NA	NA	NA	NA	0	NA	NA			0.00	0	NA
11/18/2004	Effluent	NA	NA	NA	NA	NA	NA	NA	NM	1,068,920	1,068,920	0.00	0	1.39746
12/22/2004	Influent	< 5	< 5	< 5	< 10	ND	480	0.9	NA			0.00		
12/22/2004	Effluent	< 1	< 1	< 1	< 2	ND	< 5	<0.2	NM	1,101,100	1,101,100	0.66	0.01329	1.41074
1/7/2005	Influent	<2	<2	<2	<4	ND	240	<0.5	NA			0.00		
1/7/2005	Effluent	< 1	< 1	< 1	< 2	ND	< 5	<0.5	NM	1,115,800	1,115,800	0.64	0.00910	1.41985
2/2/2005	Influent	<50	<50	<50	<100	ND	8,400	0.8	NA			0.00		
2/2/2005	Effluent	< 1	< 1	< 1	< 2	ND	< 5	<0.5	NM	1,140,174	1,140,174	0.65	0.18116	1.60100
3/16/2005	Influent	<200	<200	<200	<400	ND	40,000	0.6	NA					
3/16/2005	Effluent	<1	< 1	< 1	< 2	ND	< 5	<0.2	NM	1,151,823	1,151,823	0.19	0.48501	2.08601
PERMIT LIMITS		5	NA	NA	NA	100	70	5	NA	NA	NA	NA	NA	NA
												0.76		

Groundwater Treatment System Started on January 28, 2002.
Mass Removal calculations only include MTBE concentrations, all others compounds are insignificant.
ND = Not detected at or above method detection limit.
NS = Not Sampled.
NA = Not Applicable
NM = Not Measured
TPH = Total Petroleum Hydrocarbons analyzed by EPH Method 8100.
VOCs = Volatile Organic Compounds analyzed by EPH Method 602.
Italics inidcates measurements estimated.

Note: * The total for Benzene, Toluene, Ethybenzene, and Xylenes (BTEX).

GROUNDWATER ANALYTICAL

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

October 18, 2005

Mr. Matt Lyne
Environmental Compliance Services, Inc.
27 Midstate Dr.
Suite 218
Auburn, MA 01501

LABORATORY REPORT

Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**
Lab ID: **88184**
Received: **10-06-05**

Dear Matt:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority 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 #70021 8 Broadway (Rt. 1 S)/93-200013.55** Delivery: **GWA Courier** Temperature: **2'C**
Client: **Environmental Compliance Services, Inc.** Airbill: **n/a** Chain of Custody: **Present**
Lab ID: **88184** Lab Receipt: **10-06-05** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-1	GWTS Influent		Aqueous	10/6/05 10:50	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C666515	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666504	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666495	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-2	GWTS Influent		Aqueous	10/6/05 10:50	EPA 625 Semivolatile Organics				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682149	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
C682152	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-3	GWTS Influent		Aqueous	10/6/05 10:50	EPA 608 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682150	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
C682151	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-4	GWTS Influent		Aqueous	10/6/05 10:50	EPA 8011 EDB				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C666503	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666484	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666483	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-5	GWTS Influent		Aqueous	10/6/05 10:50	EPA 200.7 Sb As Cd Cr Cu Fe Pb Ni Se Ag Zn Dissolved EPA 245.1 Hg				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682171	250 mL Plastic	n/a	n/a	HNO3	n/a	n/a	n/a		
C682172	250 mL Plastic	n/a	n/a	HNO3	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-6	GWTS Influent		Aqueous	10/6/05 10:50	EPA 1664 Hexane Extractable Material				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C660536	1 L Amber Glass	Proline	BX18019	H2SO4	R-4600B	09-12-05	09-15-05		
C660530	1 L Amber Glass	Proline	BX18019	H2SO4	R-4600B	09-12-05	09-15-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-7	GWTS Influent		Aqueous	10/6/05 10:50	SM 2540 D Total Suspended Solids				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614752	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-8	GWTS Influent		Aqueous	10/6/05 10:50	EPA 7196A Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614748	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-9	GWTS Influent		Aqueous	10/6/05 10:50	EPA 9012A Total Cyanide				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C667693	500 mL Plastic	Proline	BX17932	NaOH	R-4387B	09-07-05	n/a		

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

GROUNDWATER ANALYTICAL

Sample Receipt Report (Continued)

Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55** Delivery: **GWA Courier** Temperature: **2'C**
Client: **Environmental Compliance Services, Inc.** Airbill: **n/a** Chain of Custody: **Present**
Lab ID: **88184** Lab Receipt: **10-06-05** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-10	GWTS Influent		Aqueous	10/6/05 10:50	SM 4500-Cl G				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C614732	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	HCl/Cool
Laboratory ID:	88184-01	QC Batch ID:	VM4-3311-W
Sampled:	10-06-05 10:50	Instrument ID:	MS-4 HP 6890
Received:	10-06-05 18:20	Sample Volume:	25 mL
Analyzed:	10-12-05 22:31	Dilution Factor:	500
Analyst:	CCT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	250
74-87-3	Chloromethane	BRL		ug/L	250
75-01-4	Vinyl Chloride	BRL		ug/L	250
74-83-9	Bromomethane	BRL		ug/L	250
75-00-3	Chloroethane	BRL		ug/L	250
75-69-4	Trichlorofluoromethane	BRL		ug/L	250
60-29-7	Diethyl Ether	BRL		ug/L	1000
75-35-4	1,1-Dichloroethene	BRL		ug/L	250
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	2500
67-64-1	Acetone	BRL		ug/L	5000
75-15-0	Carbon Disulfide	BRL		ug/L	2500
75-09-2	Methylene Chloride	BRL		ug/L	1300
156-60-5	*trans*-1,2-Dichloroethene	BRL		ug/L	250
1634-04-4	Methyl *tert*-butyl Ether (MTBE)	**15,000**		ug/L	250
75-34-3	1,1-Dichloroethane	BRL		ug/L	250
594-20-7	2,2-Dichloropropane	BRL		ug/L	250
156-59-2	*cis*-1,2-Dichloroethene	BRL		ug/L	250
78-93-3	2-Butanone (MEK)	BRL		ug/L	2500
74-97-5	Bromochloromethane	BRL		ug/L	250
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	2500
67-66-3	Chloroform	BRL		ug/L	250
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	250
56-23-5	Carbon Tetrachloride	BRL		ug/L	250
563-58-6	1,1-Dichloropropene	BRL		ug/L	250
71-43-2	Benzene	BRL		ug/L	250
107-06-2	1,2-Dichloroethane	BRL		ug/L	250
79-01-6	Trichloroethene	BRL		ug/L	250
78-87-5	1,2-Dichloropropane	BRL		ug/L	250
74-95-3	Dibromomethane	BRL		ug/L	250
75-27-4	Bromodichloromethane	BRL		ug/L	250
123-91-1	1,4-Dioxane	BRL		ug/L	250000
10061-01-5	*cis*-1,3-Dichloropropene	BRL		ug/L	250
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	2500
108-88-3	Toluene	BRL		ug/L	250
10061-02-6	*trans*-1,3-Dichloropropene	BRL		ug/L	250
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	250
127-18-4	Tetrachloroethene	BRL		ug/L	250
142-28-9	1,3-Dichloropropane	BRL		ug/L	250
591-78-6	2-Hexanone	BRL		ug/L	2500
124-48-1	Dibromochloromethane	BRL		ug/L	250
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	250
108-90-7	Chlorobenzene	BRL		ug/L	250
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	250
100-41-4	Ethylbenzene	BRL		ug/L	250
108-38-3/106-42-3	*meta*-Xylene and *para*-Xylene	BRL		ug/L	250
95-47-6	*ortho*-Xylene	BRL		ug/L	250

GROUNDWATER ANALYTICAL

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

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	HCl/Cool
Laboratory ID:	88184-01	QC Batch ID:	VM4-3311-W
Sampled:	10-06-05 10:50	Instrument ID:	MS-4 HP 6890
Received:	10-06-05 18:20	Sample Volume:	25 mL
Analyzed:	10-12-05 22:31	Dilution Factor:	500
Analyst:	CCT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	250
75-25-2	Bromoform	BRL		ug/L	250
98-82-8	Isopropylbenzene	BRL		ug/L	250
108-86-1	Bromobenzene	BRL		ug/L	250
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	250
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	250
103-65-1	*n*-Propylbenzene	BRL		ug/L	250
95-49-8	2-Chlorotoluene	BRL		ug/L	250
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	250
106-43-4	4-Chlorotoluene	BRL		ug/L	250
98-06-6	*tert*-Butylbenzene	BRL		ug/L	250
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	250
135-98-8	*sec*-Butylbenzene	BRL		? ug/L	250
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	250
99-87-6	4-Isopropyltoluene	BRL		ug/L	250
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	250
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	250
104-51-8	*n*-Butylbenzene	BRL		ug/L	250
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	250
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	250
87-68-3	Hexachlorobutadiene	BRL		ug/L	250
91-20-3	Naphthalene	BRL		ug/L	250
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	250
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	10000
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	250
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	250
994-05-8	*tert*-Amyl Methyl Ether (TAME)	**330**		ug/L	250

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.3	**83** %	70 - 130 %
1,2-Dichloroethane-d_4	10	8.7	**87** %	70 - 130 %
Toluene-d_8	10	8.7	**87** %	70 - 130 %
4-Bromofluorobenzene	10	9.1	**91** %	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.

GROUNDWATER ANALYTICAL

EPA Method 625
Semivolatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-02	QC Batch ID:	SV-1758-F
Sampled:	10-06-05 10:50	Instrument ID:	MS-3 HP 5890
Received:	10-06-05 18:20	Sample Volume:	1000 mL
Extracted:	10-13-05 23:50	Final Volume:	1 mL
Analyzed:	10-14-05 19:39	Dilution Factor:	1
Analyst:	JJT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
108-95-2	Phenol	BRL		ug/L	10
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	10
95-57-8	2-Chlorophenol	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-95-3	Nitrobenzene	BRL		ug/L	10
78-59-1	Isophorone	BRL		ug/L	10
88-75-5	2-Nitrophenol	BRL		ug/L	10
105-67-9	2,4-Dimethylphenol	BRL		ug/L	10
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	10
120-83-2	2,4-Dichlorophenol	BRL		ug/L	10
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	10
91-20-3	Naphthalene	BRL		ug/L	10
87-68-3	Hexachlorobutadiene	BRL		ug/L	10
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	10
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	10
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	10
91-58-7	2-Chloronaphthalene	BRL		ug/L	10
131-11-3	Dimethyl phthalate	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	10
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	10
84-66-2	Diethyl phthalate	BRL		ug/L	10
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	10
86-30-6	N-Nitrosodiphenylamine[1]	BRL		ug/L	10
122-66-7	1,2-Diphenylhydrazine [0]	BRL		ug/L	10
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	10
118-74-1	Hexachlorobenzene	BRL		ug/L	10
87-86-5	Pentachlorophenol	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
92-87-5	Benzidine	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10

GROUNDWATER ANALYTICAL

EPA Method 625 (Continued)
Semivolatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-02	QC Batch ID:	SV-1758-F
Sampled:	10-06-05 10:50	Instrument ID:	MS-3 HP 5890
Received:	10-06-05 18:20	Sample Volume:	1000 mL
Extracted:	10-13-05 23:50	Final Volume:	1 mL
Analyzed:	10-14-05 19:39	Dilution Factor:	1
Analyst:	JJT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
85-68-7	Butyl benzyl phthalate	BRL		ug/L	10
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	10
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL	?	ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	90	45 %	15 - 110 %
Phenol-d5	200	71	36 %	15 - 110 %
Nitrobenzene-d5	100	53	53 %	30 - 130 %
2-Fluorobiphenyl	100	58	58 %	30 - 130 %
2,4,6-Tribromophenol	200	130	66 %	15 - 110 %
Terphenyl-d14	100	76	76 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

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.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

EPA Method 608
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-03	QC Batch ID:	PB-1165-F
Sampled:	10-06-05 10:50	Instrument ID:	GC-6 HP 5890
Received:	10-06-05 18:20	Sample Weight:	1000 mL
Extracted:	10-11-05 07:00	Final Volume:	1 mL
Cleaned Up:	10-12-05 14:00	Dilution Factor:	1
Analyzed:	10-13-05 13:51		
Analyst:	CRL		

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

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro-*m*-xylene	0.20	0.18	89 %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.15	75 %	30 - 150 %
Second	Tetrachloro-*m*-xylene	0.20	0.18	88 %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.16	78 %	30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). 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.

GROUNDWATER ANALYTICAL

EPA Method 8011
EDB and DBCP by GC/ECD

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-04	QC Batch ID:	PV-0796-E
Sampled:	10-06-05 10:50	Instrument ID:	GC-5 HP 5890
Received:	10-06-05 18:20	Sample Volume:	34 mL
Extracted:	10-11-05 18:00	Final Volume:	1 mL
Analyzed:	10-11-05 19:57	Dilution Factor:	1
Analyst:	CRL		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

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.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	250 mL Plastic
Client:	Environmental Compliance Services, Inc.	Preservation:	HNO3 / Cool
Laboratory ID:	88184-05	Preserved:	10-06-05 18:20
Sampled:	10-06-05 10:50	Filtered:	10-06-05 18:20
Received:	10-06-05 18:20		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 200.7[1]	MB-1719-W	EPA 200.7	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR
EPA 245[2]	MP-1754-W	#REF!	10-17-05 12:45	25 mL	CVAA-1 PE FIMS	MFP
EPA 245.1[3]	MB-1719-W	EPA 3010A	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Dissolved	BRL		mg/L	0.06	1	10-12-05 11:35	EPA 200.7[1]
7440-38-2	Arsenic, Dissolved	BRL		mg/L	0.01	1	10-12-05 11:35	EPA 200.7[1]
7440-43-9	Cadmium, Dissolved	BRL		mg/L	0.005	1	10-12-05 11:35	EPA 200.7[1]
7440-47-3	Chromium, Dissolved	BRL		mg/L	0.01	1	10-12-05 11:34	EPA 200.7[1]
7440-50-8	Copper, Dissolved	BRL		mg/L	0.025	1	10-12-05 11:34	EPA 200.7[1]
7439-89-6	Iron, Dissolved	17		mg/L	0.1	1	10-12-05 11:34	EPA 200.7[1]
7439-92-1	Lead, Dissolved	BRL		mg/L	0.005	1	10-12-05 16:17	EPA 200.7[1]
7439-97-6	Mercury, Dissolved	BRL		mg/L	0.0002	1	10-17-05 17:34	EPA 245[2]
7440-02-0	Nickel, Dissolved	BRL		mg/L	0.04	1	10-12-05 11:35	EPA 245.1[3]
7782-49-2	Selenium, Dissolved	BRL		mg/L	0.05	1	10-12-05 11:35	EPA 200.7[1]
7440-22-4	Silver, Dissolved	BRL		mg/L	0.007	1	10-12-05 16:17	EPA 200.7[1]
7440-66-6	Zinc, Dissolved	BRL		mg/L	0.2	1	10-12-05 11:35	EPA 200.7[1]

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

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

GROUNDWATER ANALYTICAL

Inorganic Chemistry

Field ID: **GWTS Influent** Matrix: **Aqueous**
Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55** Received: **10-06-05 18:20**
Client: **Environmental Compliance Services, Inc.**

Lab ID: **88184-06** Sampled: **10-06-05 10:50** 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	5	1	930 mL	10-12-05 12:00	HO-0194-W	EPA 1664	3	JK

Lab ID: **88184-07** Sampled: **10-06-05 10:50** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	**23**	mg/L	10	1	100 mL	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	EB

Lab ID: **88184-08** Sampled: **10-06-05 10:50** Container: **1 L 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	10-07-05 12:00	HC-0230-W	EPA 7196A	1	JK

Lab ID: **88184-09** Sampled: **10-06-05 10:50** 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	10-12-05 09:20	TCN-1113-W	EPA 9012A	1	AVB

Lab ID: **88184-10** Sampled: **10-06-05 10:50** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	**0.9**	mg/L	0.2	1	5 mL	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD

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

Project Narrative

Project:	**CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**	Lab ID:	**88184**
Client:	**Environmental Compliance Services, Inc.**	Received:	**10-06-05 18:20**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. Project 88184 was processed for Priority Turnaround, per Matt Lyne, 10-07-05.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 8260B Non-conformance: Sample 88184-01. Laboratory control sample (LCS) analyte tert Butyl Alcohol was above recommended recovery limits for QC batch VM4-3311-W.
2. EPA 8260B Note: Sample 88184-01. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
3. EPA 625 Non-conformance: Laboratory Control Sample (LCS) analyte Benzidine was above recommended limits ? for QC Batch SV-1758-F.

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

GROUNDWATER ANALYTICAL

228 Main Street, P.O. Box 1200
Buzzards Bay, MA 02532
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www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

№ 100757

Project Name: CFI# 70027 8 Broadway (Lft. 1 S) Lynnfield, MA	Firm: ECS
Project Number: 93-200013.55	Address: 27 Midstate Drive Suite 218
Sampler Name: J. Hoffne	City / State / Zip: Auburn, MA, 01501
Project Manager: Matt Lyne	Telephone: 508-832-6022

INSTRUCTIONS: Use separate line for each container (except replicates).

TURNAROUND

- [x] STANDARD (10 Business Days)
- [ ] PRIORITY (5 Business Days)
- [x] RUSH (RAN- 8887 (48 hrs))
  (Rush requires Rush Authorization Number)
- [x] Please Email to: mlyne@ecsconsult.com
- [ ] Please FAX to: _____

BILLING

- [ ] Purchase Order No.: _____
- [x] Third Party Billing: 70027
- [ ] GWA Quote: _____

ANALYSIS REQUEST

OPTIONS: TIC Search

SDWA: 524.2 MTBE; 525.2

NPDES: 624; 625 Sucks

RCRA/TE: 8260B TCL MTBE; 8260B MA PETROLEUM; 8260B; 8021B Aromatics; 8021B Halocarbons; 8021B; 8260C; 8270C PAHs only; 8081A Pesticides; 8082 PCBs; 8151A Herbicides; 8011 EDB/DBCP; 8 RCRA; 5 RCRA; MA Lead Metals; 23 TAL

Volatiles: 602-MTBE; 601; 601/602-MTBE

Semivolatiles: Acid Only; BN Only; TIC Search

Pest/Herb/PCBs Extractable: 608 Pesticides; 608 PCBs; 625

Pest/Herb/PCBs Vol.: 531.1; 515.1; 504.1 EDB/DBCP

Metals: Specify for Water Samples; Total; Dissolved; Lead and Copper; 13 Priority Pollutant

Specify: Barium, Chromium III, Mercury, Selenium, Zinc, Iron, Silver, Antimony, Arsenic, Cadmium, Chromium VI, Copper, Lead, Nickel, Thallium, Vanadium

Petroleum Hydrocarbon Ext. TPH: Specify: Diesel Range Organics (DRO); MA DRO; CT ETPH; MA DEP EPH wall targets; EPH Carbon Ranges only; EPH w/4 PAHs; Hydrocarbon Fingerprint (GC/FID by ASTM D3328-90-Mod.); TPH by GC/FID (8015B Mod) Quantitative Only; Gasoline Range Organics (GRO); ME GRO; MA DEP TPH wall targets; VPH Carbon ranges only

Vol. TPH

Haz. Waste: TCLP: SPLP; 8 Metals; Corrosivity (as pH); Reactivity; Pesticides; Herbicides; Semi VOA; Pesticides; Pb only; VOA; Paint Filter; Ignitability (as Flashpoint); 13 Priority Pollutant; MA Basic Disposal Criteria 8260B TPH by GC, PCBs, 5 Metals, Corrosivity, Ignitability, Reactivity

General Chemistry: Nitrate; Nitrite; Chlorine; Fluoride; Sulfide; Dissolved Phosphorus; Ammonia; TKN; Total Phosphorus; Total N (as NO2-NO3-TKN); Oil & Grease; COD; TOC; BOD; TDS; TSS; Alkalinity; Cyanide, Total; Cyanide, Physiologically Available; pH; Dissolved Oxygen; Turbidity

Other: Total Coliform; Fecal Coliform; HPC; Hex Chrome (CR6); Cyanide; Residual Chlorine

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	Matrix	Type	Container(s)	Preservation	Filtered	LABORATORY NUMBER (Lab Use Only)
10/6/05	10:50	GWTS influent	GROUNDWATER	COMPOSITE	NUMBER 6; 40mL VOA Vial; 1L/32 oz Amber Glass 6; 1L/32 oz Plastic 5	HCl; HNO3; H2SO4; NaOH; Methanol; Sodium Bisulfate; ICE	YES	
—	—	~~Trip Blank~~						
		Dissolved Metals: Antimony, Arsenic, Cadmium, Chromium III, Chromium VI, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc, Iron						

REMARKS / SPECIAL INSTRUCTIONS

[illegible]

Jonathan Hoffne

DATA QUALITY OBJECTIVES

Regulatory Program

State	Standard	Deliverables
[ ] CT	[x] MCP GW-1/S-1	[ ] PWS Form
[ ] ME	[ ] MCP GW-2/S-2	[ ] MWRA
[x] MA	[ ] NY STARS	[ ] _____
[ ] NH	[ ] Drinking Water	
[ ] NY	[ ] Wastewater	
[ ] RI	[ ] Waste Disposal	
[ ] VT	[ ] Dredge Material	
[ ] ___	[ ] _____	

Project Specific QC

Many regulatory programs and EPA methods require project specific QC. Project specific QC includes Sample Duplicates, Matrix Spikes, and/or Matrix Spike Duplicates. Laboratory QC is not project specific unless prearranged. Project specific QC samples are charged on a per sample basis. **Each MS, MSD and Sample Duplicate requires an additional sample aliquot.**

Project Specific QC Required
- [ ] Sample Duplicate
- [ ] Matrix Spike
- [ ] Matrix Spike Duplicate

Selection of QC Sample
- [ ] Please use sample: _____

CHAIN-OF-CUSTODY RECORD

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.

Relinquished by Sampler:	Date / Time	Received by:	Receipt Temperature:
Jonathan Hoffne	10/6/05 1200	[signature]	[x] Ice [ ] Refrigerated [ ] 4 C Recommended 2
Relinquished by:	**Date / Time**	**Received by:**	**Container Count:**
[signature]	10/6/05 1120		17
Relinquished by:	**Date / Time**	**Received by Laboratory:**	**Shipping/Airbill Number:**
		[signature]	

Method of Shipment: [x] GWA Courier [ ] Express Mail [ ] Federal Express [ ] UPS [ ] Hand [ ] _____

Custody Seal Number:

GROUNDWATER ANALYTICAL

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans,* US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste,* US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA 608	Instrument ID:	GC-6 HP 5890	Instrument ID:	GC-6 HP 5890
QC Batch ID:	PB-1165-F	Extracted:	10-11-05 12:00	Extracted:	10-11-05 12:00
Matrix:	Aqueous	Cleaned Up:	10-12-05 14:00	Cleaned Up:	10-12-05 14:00
Units:	ug/L	Analyzed:	10-13-05 04:18	Analyzed:	10-13-05 04:53
		Analyst:	CRL	Analyst:	CRL

CAS Number	Analyte	LCS					LCS Duplicate							QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD			
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	5.0	4.1	4.1	82%	82%	5.0	5.0	4.9	99%	98%	19 %	17 %	40 - 140%	30 %
11096-82-5	Aroclor 1260	5.0	4.2	4.2	84%	85%	5.0	4.8	4.9	96%	98%	14 %	15 %	40 - 140%	30 %

QC Surrogate Compound	Surrogate Recovery											QC Limits
Tetrachloro-*m*-xylene	0.20	0.14	0.14	72%	70%	0.20	0.19	0.18	94%	89%		30 - 150 %
Decachlorobiphenyl	0.20	0.13	0.14	67%	69%	0.20	0.18	0.18	90%	92%		30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 608	Instrument ID:	GC-6 HP 5890
QC Batch ID:	PB-1165-F	Extracted:	10-11-05 12:00
Matrix:	Aqueous	Cleaned Up:	10-12-05 14:00
		Analyzed:	10-13-05 03:43
		Analyst:	CRL

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-*m*-xylene	0.20	0.18	88 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	85 %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.17	85 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	87 %	30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). 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, Inc., P.O. Box 1200, 228 Main Street, Buzzards Bay, MA 02532

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category: **Metals**
Matrix: **Aqueous**
Units: **mg/L**

Analysis Method	QC Batch ID	Prep Method	Prepared	Instrument ID	Analyst
EPA 200.7	MB-1719-WL	EPA 200.7	10-11-05 10:10	ICP-1 PE 3000	MWR
EPA 245.1	MP-1754-WL	EPA 245.1	10-17-05 12:45	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits	Analyzed	Method
7440-36-0	Antimony	5.0	4.4	**88 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-38-2	Arsenic	5.0	5.0	**100 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-43-9	Cadmium	1.0	1.0	**100 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-47-3	Chromium	1.0	0.99	**99 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-50-8	Copper	1.0	0.95	**95 %**	85-115 %	10-12-05 11:01	EPA 200.7
7439-89-6	Iron	5.0	4.8	**97 %**	85-115 %	10-12-05 11:01	EPA 200.7
7439-92-1	Lead	5.0	5.0	**100 %**	85-115 %	10-12-05 15:44	EPA 200.7
7439-97-6	Mercury	0.0010	0.0009	**94 %**	85-115 %	10-17-05 17:28	EPA 245.1
7440-02-0	Nickel	1.0	1.0	**98 %**	85-115 %	10-12-05 11:01	EPA 200.7
7782-49-2	Selenium	5.0	5.1	**102 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-22-4	Silver	0.5	0.6	**111 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-66-6	Zinc	1.0	1.0	**104 %**	85-115 %	10-12-05 11:01	EPA 200.7

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **Metals**
Matrix: **Aqueous**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 200.7	MB-1719-WB	EPA 200.7	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR
EPA 245.1	MP-1754-WB	EPA 245.1	10-17-05 12:45	25 mL	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.06	1	10-12-05 10:58	EPA 200.7
7440-38-2	Arsenic	BRL		mg/L	0.01	1	10-12-05 10:58	EPA 200.7
7440-43-9	Cadmium	BRL		mg/L	0.005	1	10-12-05 10:58	EPA 200.7
7440-47-3	Chromium	BRL		mg/L	0.01	1	10-12-05 10:58	EPA 200.7
7440-50-8	Copper	BRL		mg/L	0.025	1	10-12-05 10:58	EPA 200.7
7439-89-6	Iron	BRL		mg/L	0.1	1	10-12-05 10:58	EPA 200.7
7439-92-1	Lead	BRL		mg/L	0.005	1	10-12-05 15:39	EPA 200.7
7439-97-6	Mercury	BRL		mg/L	0.0002	1	10-17-05 17:28	EPA 245.1
7440-02-0	Nickel	BRL		mg/L	0.04	1	10-12-05 10:58	EPA 200.7
7782-49-2	Selenium	BRL		mg/L	0.05	1	10-12-05 10:58	EPA 200.7
7440-22-4	Silver	BRL		mg/L	0.007	1	10-12-05 10:58	EPA 200.7
7440-66-6	Zinc	BRL		mg/L	0.2	1	10-12-05 10:58	EPA 200.7

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:17
Units:	ug/L	Analyst:	JJT

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
62-75-9	N-Nitrosodimethylamine	50	31	**61 %**	40 - 140 %
108-95-2	Phenol	50	23	**47 %**	30 - 130 %
111-44-4	Bis(2-chloroethyl) ether	50	36	**72 %**	40 - 140 %
95-57-8	2-Chlorophenol	50	34	**69 %**	30 - 130 %
541-73-1	1,3-Dichlorobenzene	50	34	**68 %**	40 - 140 %
106-46-7	1,4-Dichlorobenzene	50	33	**67 %**	40 - 140 %
95-50-1	1,2-Dichlorobenzene	50	33	**67 %**	40 - 140 %
108-60-1	Bis(2-chloroisopropyl) ether	50	36	**72 %**	40 - 140 %
621-64-7	N-Nitrosodi-*n*-propylamine	50	38	**76 %**	40 - 140 %
67-72-1	Hexachloroethane	50	34	**67 %**	40 - 140 %
98-95-3	Nitrobenzene	50	38	**76 %**	40 - 140 %
78-59-1	Isophorone	50	37	**73 %**	40 - 140 %
88-75-5	2-Nitrophenol	50	37	**74 %**	30 - 130 %
105-67-9	2,4-Dimethylphenol	50	36	**72 %**	30 - 130 %
111-91-1	Bis(2-chloroethoxy) methane	50	38	**75 %**	40 - 140 %
120-83-2	2,4-Dichlorophenol	50	37	**74 %**	30 - 130 %
120-82-1	1,2,4-Trichlorobenzene	50	36	**73 %**	40 - 140 %
91-20-3	Naphthalene	50	36	**71 %**	40 - 140 %
87-68-3	Hexachlorobutadiene	50	32	**64 %**	40 - 140 %
59-50-7	4-Chloro-3-methylphenol	50	39	**79 %**	30 - 130 %
77-47-4	Hexachlorocyclopentadiene	50	37	**75 %**	40 - 140 %
88-06-2	2,4,6-Trichlorophenol	50	39	**78 %**	30 - 130 %
91-58-7	2-Chloronaphthalene	50	38	**76 %**	40 - 140 %
131-11-3	Dimethyl phthalate	50	41	**83 %**	40 - 140 %
208-96-8	Acenaphthylene	50	39	**78 %**	40 - 140 %
606-20-2	2,6-Dinitrotoluene	50	40	**81 %**	40 - 140 %
83-32-9	Acenaphthene	50	41	**81 %**	40 - 140 %
51-28-5	2,4-Dinitrophenol	50	42	**84 %**	30 - 130 %
100-02-7	4-Nitrophenol	50	30	**61 %**	30 - 130 %
121-14-2	2,4-Dinitrotoluene	50	42	**83 %**	40 - 140 %
84-66-2	Diethyl phthalate	50	42	**84 %**	40 - 140 %
7005-72-3	4-Chlorophenyl phenyl ether	50	40	**80 %**	40 - 140 %
86-73-7	Fluorene	50	38	**77 %**	40 - 140 %
534-52-1	4,6-Dinitro-2-methylphenol	50	41	**81 %**	30 - 130 %
86-30-6	N-Nitrosodiphenylamine†	50	42	**84 %**	40 - 140 %
122-66-7	1,2-Diphenylhydrazine ◊	50	39	**79 %**	40 - 140 %
101-55-3	4-Bromophenyl phenyl ether	50	45	**90 %**	40 - 140 %
118-74-1	Hexachlorobenzene	50	40	**80 %**	40 - 140 %
87-86-5	Pentachlorophenol	50	39	**77 %**	30 - 130 %
85-01-8	Phenanthrene	50	41	**82 %**	40 - 140 %
120-12-7	Anthracene	50	42	**84 %**	40 - 140 %
84-74-2	Di-*n*-butyl phthalate	50	46	**92 %**	40 - 140 %
206-44-0	Fluoranthene	50	41	**83 %**	40 - 140 %
92-87-5	Benzidine	50	184	**368 %** q	40 - 140 %
129-00-0	Pyrene	50	42	**84 %**	40 - 140 %
85-68-7	Butyl benzyl phthalate	50	42	**83 %**	40 - 140 %
91-94-1	3,3'-Dichlorobenzidine	50	42	**83 %**	40 - 140 %
56-55-3	Benzo[a]anthracene	50	42	**85 %**	40 - 140 %
218-01-9	Chrysene	50	41	**82 %**	40 - 140 %

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:17
Units:	ug/L	Analyst:	JJT

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
117-81-7	Bis(2-ethylhexyl) phthalate	50	43	**86 %**	40 - 140 %
117-84-0	Di-*n*-octyl phthalate	50	46	**91 %**	40 - 140 %
205-99-2	Benzo[b]fluoranthene	50	42	**84 %**	40 - 140 %
207-08-9	Benzo[k]fluoranthene	50	43	**86 %**	40 - 140 %
50-32-8	Benzo[a]pyrene	50	43	**85 %**	40 - 140 %
193-39-5	Indeno[1,2,3-c,d]pyrene	50	39	**79 %**	40 - 140 %
53-70-3	Dibenzo[a,h]anthracene	50	38	**75 %**	40 - 140 %
191-24-2	Benzo[g,h,i]perylene	50	37	**74 %**	40 - 140 %

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	110	**56 %**	15 - 110 %
Phenol-d5	200	91	**45 %**	15 - 110 %
Nitrobenzene-d5	100	69	**69 %**	30 - 130 %
2-Fluorobiphenyl	100	77	**77 %**	30 - 130 %
2,4,6-Tribromophenol	200	160	**80 %**	15 - 110 %
Terphenyl-d14	100	79	**79 %**	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

q Recovery outside recommended limits.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:58
		Analyst:	JJT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
108-95-2	Phenol	BRL		ug/L	10
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	10
95-57-8	2-Chlorophenol	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-95-3	Nitrobenzene	BRL		ug/L	10
78-59-1	Isophorone	BRL		ug/L	10
88-75-5	2-Nitrophenol	BRL		ug/L	10
105-67-9	2,4-Dimethylphenol	BRL		ug/L	10
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	10
120-83-2	2,4-Dichlorophenol	BRL		ug/L	10
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	10
91-20-3	Naphthalene	BRL		ug/L	10
87-68-3	Hexachlorobutadiene	BRL		ug/L	10
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	10
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	10
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	10
91-58-7	2-Chloronaphthalene	BRL		ug/L	10
131-11-3	Dimethyl phthalate	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	10
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	10
84-66-2	Diethyl phthalate	BRL		ug/L	10
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	10
86-30-6	N-Nitrosodiphenylamine†	BRL		ug/L	10
122-66-7	1,2-Diphenylhydrazine ◊	BRL		ug/L	10
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	10
118-74-1	Hexachlorobenzene	BRL		ug/L	10
87-86-5	Pentachlorophenol	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
92-87-5	Benzidine	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10
85-68-7	Butyl benzyl phthalate	BRL		ug/L	10
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:58
		Analyst:	JJT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	10
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	94	47 %	15 - 110 %
Phenol-d5	200	73	37 %	15 - 110 %
Nitrobenzene-d5	100	56	56 %	30 - 130 %
2-Fluorobiphenyl	100	62	62 %	30 - 130 %
2,4,6-Tribromophenol	200	140	68 %	15 - 110 %
Terphenyl-d14	100	75	75 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

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.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WL	Analyzed:	10-12-05 21:03	Analyzed:	10-12-05 21:32
Matrix:	Aqueous	Analyst:	CCT	Analyst:	CCT
Units:	ug/L				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	9.9	99 %	10	11	106 %	6 %	70 - 130 %	25%
74-87-3	Chloromethane	10	9.1	91 %	10	9.3	93 %	2 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	9.3	93 %	10	9.7	97 %	5 %	70 - 130 %	25%
74-83-9	Bromomethane	10	8.7	87 %	10	8.8	88 %	2 %	70 - 130 %	25%
75-00-3	Chloroethane	10	9.5	95 %	10	9.7	97 %	2 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	8.3	83 %	10	9.5	95 %	13 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	20	102 %	20	20	102 %	1 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	9.2	92 %	10	9.7	97 %	6 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	20	102 %	20	21	105 %	3 %	70 - 130 %	25%
67-64-1	Acetone	20	21	104 %	20	21	104 %	0 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	19	96 %	20	20	98 %	2 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	9.5	95 %	10	9.1	91 %	4 %	70 - 130 %	25%
156-60-5	*trans*-1,2-Dichloroethene	10	9.5	95 %	10	9.5	95 %	0 %	70 - 130 %	25%
1634-04-4	Methyl *tert*-butyl Ether (MTBE)	10	9.8	98 %	10	9.7	97 %	1 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	9.3	93 %	10	9.7	97 %	4 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	8.7	87 %	10	9.3	93 %	7 %	70 - 130 %	25%
156-59-2	*cis*-1,2-Dichloroethene	10	9.6	96 %	10	10	100 %	4 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	23	115 %	20	22	109 %	5 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	10	103 %	10	10	102 %	1 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	23	116 %	20	20	101 %	14 %	70 - 130 %	25%
67-66-3	Chloroform	10	9.4	94 %	10	10	100 %	5 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	8.9	89 %	10	9.7	97 %	8 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	8.6	86 %	10	9.6	96 %	11 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	10	101 %	10	10	105 %	3 %	70 - 130 %	25%
71-43-2	Benzene	10	9.8	98 %	10	10	102 %	4 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	9.9	99 %	10	10	101 %	2 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	9.6	96 %	10	10	103 %	8 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	9.9	99 %	10	10	102 %	3 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	10	101 %	10	10	102 %	1 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	10	104 %	10	11	109 %	4 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	160	82 %	200	160	78 %	6 %	70 - 130 %	25%
10061-01-5	*cis*-1,3-Dichloropropene	10	9.8	98 %	10	10	101 %	3 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	21	106 %	20	21	103 %	3 %	70 - 130 %	25%
108-88-3	Toluene	10	10	101 %	10	11	108 %	7 %	70 - 130 %	25%
10061-02-6	*trans*-1,3-Dichloropropene	10	11	110 %	10	11	109 %	1 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	106 %	10	10	103 %	3 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	10	104 %	10	11	110 %	6 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	11	109 %	10	11	106 %	3 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	23	116 %	20	23	113 %	3 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	11	110 %	10	11	107 %	3 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	11	107 %	10	11	110 %	2 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	9.8	98 %	10	10	101 %	3 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	9.9	99 %	10	10	100 %	2 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	11	108 %	10	11	113 %	4 %	70 - 130 %	25%
108-38-3/106-42-3	*meta*-Xylene and *para*-Xylene	20	21	106 %	20	22	110 %	3 %	70 - 130 %	25%
95-47-6	*ortho*-Xylene	10	10	101 %	10	10	104 %	4 %	70 - 130 %	25%
100-42-5	Styrene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
75-25-2	Bromoform	10	12	116 %	10	11	110 %	6 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	11	106 %	10	11	110 %	4 %	70 - 130 %	25%

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WL	Analyzed:	10-12-05 21:03	Analyzed:	10-12-05 21:32
Matrix:	Aqueous	Analyst:	CCT	Analyst:	CCT
Units:	ug/L				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
108-86-1	Bromobenzene	10	11	111 %	10	11	112 %	2 %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	11	111 %	10	11	108 %	3 %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	12	117 %	10	11	107 %	9 %	70 - 130 %	25%
103-65-1	*n*-Propylbenzene	10	11	111 %	10	12	116 %	5 %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	11	112 %	10	11	113 %	1 %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	108 %	10	11	112 %	3 %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	11	108 %	10	11	110 %	2 %	70 - 130 %	25%
98-06-6	*tert*-Butylbenzene	10	11	105 %	10	11	110 %	4 %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	108 %	10	11	111 %	2 %	70 - 130 %	25%
135-98-8	*sec*-Butylbenzene	10	11	111 %	10	12	116 %	5 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	104 %	10	11	108 %	4 %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	11	112 %	10	12	116 %	4 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	11	105 %	10	11	108 %	2 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
104-51-8	*n*-Butylbenzene	10	11	107 %	10	11	112 %	5 %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	12	116 %	10	11	106 %	8 %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	8.7	87 %	10	8.9	89 %	2 %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	11	107 %	10	11	111 %	4 %	70 - 130 %	25%
91-20-3	Naphthalene	10	8.4	84 %	10	8.5	85 %	1 %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	8.5	85 %	10	8.7	87 %	2 %	70 - 130 %	25%
75-65-0	*tert*-Butyl Alcohol (TBA)	200	280	140 % q	200	220	110 %	24 %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	9.7	97 %	10	10	100 %	3 %	70 - 130 %	25%
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	10	9.5	95 %	10	9.4	94 %	1 %	70 - 130 %	25%
994-05-8	*tert*-Amyl Methyl Ether (TAME)	10	9.2	92 %	10	9	90 %	2 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	8.5	85 %	10	8.1	81 %		70 - 130 %
1,2-Dichloroethane-d_4	10	9.4	94 %	10	9.5	95 %		70 - 130 %
Toluene-d_8	10	9.2	92 %	10	9.3	93 %		70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	10	9.2	92 %		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: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WB	Analyzed:	10-12-05 22:01
Matrix:	Aqueous	Analyst:	CCT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	0.5
95-47-6	*ortho*- Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WB	Analyzed:	10-12-05 22:01
Matrix:	Aqueous	Analyst:	CCT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	*n*-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	*tert*-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	*sec*-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	*n*-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.3	83 %	70 - 130 %
1,2-Dichloroethane-d_4	10	8.8	88 %	70 - 130 %
Toluene-d_8	10	8.8	88 %	70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	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.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

Category: **Inorganics**
Matrix: **Aqueous**
Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 9012A	TCN-1113-W	EPA 9012A	10/11/2005 11:00	10/12/2005 9:03	Lachat 8000 Autoanalyzer	AVB
LCSD	EPA 9012A	TCN-1113-W	EPA 9012A	10/11/2005 11:00	10/12/2005 9:04	Lachat 8000 Autoanalyzer	AVB

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Cyanide, Total	0.45	0.46	102%	0.45	0.47	104%	1 %	80-120%	20 %	EPA 9012A

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	mg/L	80	80	**100 %**	80 - 120 %	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	MW
Chlorine, Total Residual	mg/L	1	1	**97 %**	80 - 120 %	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	mg/L	0.1	0.1	**98 %**	80 - 120 %	10-07-05 00:00	HC-0230-W	EPA 7196A	1	JK
Oil and Grease, Total	mg/L	40	41	**103 %**	78 - 114 %	10-12-05 00:00	HO-0194-W	EPA 1664	3	JK

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: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	BRL	mg/L	10	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	MW
Chlorine, Total Residual	BRL	mg/L	0.2	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	BRI	mg/L	0.01	10-07-05 00:00	HC-0230-W	EPA 7196A	1	JK
Oil and Grease, Total	BRL	mg/L	5	10-12-05 00:00	HO-0194-W	EPA 1664	3	JK
Cyanide, Total	BRL	mg/L	0.01	10-12-05 09:03	TCN-1113-W	EPA 9012A	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.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 8011	Instrument ID:	GC-5 HP 5890
QC Batch ID:	PV-0796-E	Extracted:	10-11-05 09:00
Matrix:	Aqueous	Analyzed:	10-11-05 16:29
Units:	ug/L	Analyst:	CRL

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.21	**102 %**	**106 %**	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.20	0.21	0.22	**106 %**	**108 %**	70 - 130 %

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

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 8011	Instrument ID:	GC-5 HP 5890
QC Batch ID:	PV-0796-E	Extracted:	10-11-05 09:00
Matrix:	Aqueous	Analyzed:	10-11-05 18:41
		Analyst:	CRL

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

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.

GROUNDWATER ANALYTICAL

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

http://www.groundwateranalytical.com/qualifications.htm

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
http://www.floridadep.org/labs/qa/dohforms.htm

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
http://www.state.me.us/dhs/eng/water/Compliance.htm

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
http://www.des.state.nh.us/asp/NHELAP/labsview.asp

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
http://www.wadsworth.org/labcert/elap/comm.html

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
http://www.dep.state.pa.us/Labs/Registered/

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
http://www.vermontdrinkingwater.org/wsops/labtable.PDF

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

GROUNDWATER ANALYTICAL

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October 18, 2005

Mr. Matt Lyne
Environmental Compliance Services, Inc.
27 Midstate Dr.
Suite 218
Auburn, MA 01501

LABORATORY REPORT

Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**
Lab ID: **88184**
Received: **10-06-05**

Dear Matt:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority 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 #70021 8 Broadway (Rt. 1 S)/93-200013.55** Delivery: **GWA Courier** Temperature: **2'C**
Client: **Environmental Compliance Services, Inc.** Airbill: **n/a** Chain of Custody: **Present**
Lab ID: **88184** Lab Receipt: **10-06-05** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-1	GWTS Influent		Aqueous	10/6/05 10:50	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C666515	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666504	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666495	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-2	GWTS Influent		Aqueous	10/6/05 10:50	EPA 625 Semivolatile Organics				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682149	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
C682152	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-3	GWTS Influent		Aqueous	10/6/05 10:50	EPA 608 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682150	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
C682151	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-4	GWTS Influent		Aqueous	10/6/05 10:50	EPA 8011 EDB				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C666503	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666484	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666483	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-5	GWTS Influent		Aqueous	10/6/05 10:50	EPA 200.7 Sb As Cd Cr Cu Fe Pb Ni Se Ag Zn Dissolved EPA 245.1 Hg				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682171	250 mL Plastic	n/a	n/a	HNO3	n/a	n/a	n/a		
C682172	250 mL Plastic	n/a	n/a	HNO3	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-6	GWTS Influent		Aqueous	10/6/05 10:50	EPA 1664 Hexane Extractable Material				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C660536	1 L Amber Glass	Proline	BX18019	H2SO4	R-4600B	09-12-05	09-15-05		
C660530	1 L Amber Glass	Proline	BX18019	H2SO4	R-4600B	09-12-05	09-15-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-7	GWTS Influent		Aqueous	10/6/05 10:50	SM 2540 D Total Suspended Solids				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614752	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-8	GWTS Influent		Aqueous	10/6/05 10:50	EPA 7196A Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614748	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-9	GWTS Influent		Aqueous	10/6/05 10:50	EPA 9012A Total Cyanide				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C667693	500 mL Plastic	Proline	BX17932	NaOH	R-4387B	09-07-05	n/a		

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

GROUNDWATER ANALYTICAL

Sample Receipt Report (Continued)

Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55** Delivery: **GWA Courier** Temperature: **2'C**
Client: **Environmental Compliance Services, Inc.** Airbill: **n/a** Chain of Custody: **Present**
Lab ID: **88184** Lab Receipt: **10-06-05** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-10	GWTS Influent		Aqueous	10/6/05 10:50	SM 4500-Cl G				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614732	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	HCl/Cool
Laboratory ID:	88184-01	QC Batch ID:	VM4-3311-W
Sampled:	10-06-05 10:50	Instrument ID:	MS-4 HP 6890
Received:	10-06-05 18:20	Sample Volume:	25 mL
Analyzed:	10-12-05 22:31	Dilution Factor:	500
Analyst:	CCT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	250
74-87-3	Chloromethane	BRL		ug/L	250
75-01-4	Vinyl Chloride	BRL		ug/L	250
74-83-9	Bromomethane	BRL		ug/L	250
75-00-3	Chloroethane	BRL		ug/L	250
75-69-4	Trichlorofluoromethane	BRL		ug/L	250
60-29-7	Diethyl Ether	BRL		ug/L	1000
75-35-4	1,1-Dichloroethene	BRL		ug/L	250
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	2500
67-64-1	Acetone	BRL		ug/L	5000
75-15-0	Carbon Disulfide	BRL		ug/L	2500
75-09-2	Methylene Chloride	BRL		ug/L	1300
156-60-5 ?	*trans*- 1,2-Dichloroethene	BRL		ug/L	250
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	15,000		ug/L	250
75-34-3	1,1-Dichloroethane	BRL		ug/L	250
594-20-7	2,2-Dichloropropane	BRL		ug/L	250
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	250
78-93-3	2-Butanone (MEK)	BRL		ug/L	2500
74-97-5	Bromochloromethane	BRL		ug/L	250
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	2500
67-66-3	Chloroform	BRL		ug/L	250
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	250
56-23-5	Carbon Tetrachloride	BRL		ug/L	250
563-58-6	1,1-Dichloropropene	BRL		ug/L	250
71-43-2	Benzene	BRL		ug/L	250
107-06-2	1,2-Dichloroethane	BRL		ug/L	250
79-01-6	Trichloroethene	BRL		ug/L	250
78-87-5	1,2-Dichloropropane	BRL		ug/L	250
74-95-3	Dibromomethane	BRL		ug/L	250
75-27-4	Bromodichloromethane	BRL		ug/L	250
123-91-1	1,4-Dioxane	BRL		ug/L	250000
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	250
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	2500
108-88-3	Toluene	BRL		ug/L	250
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	250
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	250
127-18-4	Tetrachloroethene	BRL		ug/L	250
142-28-9	1,3-Dichloropropane	BRL		ug/L	250
591-78-6	2-Hexanone	BRL		ug/L	2500
124-48-1	Dibromochloromethane	BRL		ug/L	250
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	250
108-90-7	Chlorobenzene	BRL		ug/L	250
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	250
100-41-4	Ethylbenzene	BRL		ug/L	250
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	250
95-47-6	*ortho*- Xylene	BRL		ug/L	250

GROUNDWATER ANALYTICAL

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

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	HCl/Cool
Laboratory ID:	88184-01	QC Batch ID:	VM4-3311-W
Sampled:	10-06-05 10:50	Instrument ID:	MS-4 HP 6890
Received:	10-06-05 18:20	Sample Volume:	25 mL
Analyzed:	10-12-05 22:31	Dilution Factor:	500
Analyst:	CCT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	250
75-25-2	Bromoform	BRL		ug/L	250
98-82-8	Isopropylbenzene	BRL		ug/L	250
108-86-1	Bromobenzene	BRL		ug/L	250
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	250
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	250
103-65-1	*n*-Propylbenzene	BRL		ug/L	250
95-49-8	2-Chlorotoluene	BRL		ug/L	250
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	250
106-43-4	4-Chlorotoluene	BRL		ug/L	250
98-06-6	*tert*-Butylbenzene	BRL		ug/L	250
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	250
135-98-8	*sec*-Butylbenzene	BRL	?	ug/L	250
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	250
99-87-6	4-Isopropyltoluene	BRL		ug/L	250
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	250
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	250
104-51-8	*n*-Butylbenzene	BRL		ug/L	250
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	250
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	250
87-68-3	Hexachlorobutadiene	BRL		ug/L	250
91-20-3	Naphthalene	BRL		ug/L	250
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	250
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	10000
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	250
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	250
994-05-8	*tert*-Amyl Methyl Ether (TAME)	**330**		ug/L	250

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.3	**83 %**	70 - 130 %
1,2-Dichloroethane-d_4	10	8.7	**87 %**	70 - 130 %
Toluene-d_8	10	8.7	**87 %**	70 - 130 %
4-Bromofluorobenzene	10	9.1	**91 %**	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.

GROUNDWATER ANALYTICAL

EPA Method 625
Semivolatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-02	QC Batch ID:	SV-1758-F
Sampled:	10-06-05 10:50	Instrument ID:	MS-3 HP 5890
Received:	10-06-05 18:20	Sample Volume:	1000 mL
Extracted:	10-13-05 23:50	Final Volume:	1 mL
Analyzed:	10-14-05 19:39	Dilution Factor:	1
Analyst:	JJT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
108-95-2	Phenol	BRL		ug/L	10
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	10
95-57-8	2-Chlorophenol	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-95-3	Nitrobenzene	BRL		ug/L	10
78-59-1	Isophorone	BRL		ug/L	10
88-75-5	2-Nitrophenol	BRL		ug/L	10
105-67-9	2,4-Dimethylphenol	BRL		ug/L	10
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	10
120-83-2	2,4-Dichlorophenol	BRL		ug/L	10
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	10
91-20-3	Naphthalene	BRL		ug/L	10
87-68-3	Hexachlorobutadiene	BRL		ug/L	10
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	10
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	10
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	10
91-58-7	2-Chloronaphthalene	BRL		ug/L	10
131-11-3	Dimethyl phthalate	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	10
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	10
84-66-2	Diethyl phthalate	BRL		ug/L	10
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	10
86-30-6	N-Nitrosodiphenylamine[†]	BRL		ug/L	10
122-66-7	1,2-Diphenylhydrazine[0]	BRL		ug/L	10
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	10
118-74-1	Hexachlorobenzene	BRL		ug/L	10
87-86-5	Pentachlorophenol	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
92-87-5	Benzidine	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10

GROUNDWATER ANALYTICAL

EPA Method 625 (Continued)
Semivolatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-02	QC Batch ID:	SV-1758-F
Sampled:	10-06-05 10:50	Instrument ID:	MS-3 HP 5890
Received:	10-06-05 18:20	Sample Volume:	1000 mL
Extracted:	10-13-05 23:50	Final Volume:	1 mL
Analyzed:	10-14-05 19:39	Dilution Factor:	1
Analyst:	JJT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
85-68-7	Butyl benzyl phthalate	BRL		ug/L	10
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	10
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	90	45 %	15 - 110 %
Phenol-d5	200	71	36 %	15 - 110 %
Nitrobenzene-d5	100	53	53 %	30 - 130 %
2-Fluorobiphenyl	100	58	58 %	30 - 130 %
2,4,6-Tribromophenol	200	130	66 %	15 - 110 %
Terphenyl-d14	100	76	76 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

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.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

EPA Method 608
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-03	QC Batch ID:	PB-1165-F
Sampled:	10-06-05 10:50	Instrument ID:	GC-6 HP 5890
Received:	10-06-05 18:20	Sample Weight:	1000 mL
Extracted:	10-11-05 07:00	Final Volume:	1 mL
Cleaned Up:	10-12-05 14:00	Dilution Factor:	1
Analyzed:	10-13-05 13:51		
Analyst:	CRL		

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

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.18	89 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.15	75 %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.18	88 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.16	78 %	30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). 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.

GROUNDWATER ANALYTICAL

EPA Method 8011
EDB and DBCP by GC/ECD

Field ID:	**GWTS Influent**	Matrix:	**Aqueous**
Project:	**CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**88184-04**	QC Batch ID:	**PV-0796-E**
Sampled:	**10-06-05 10:50**	Instrument ID:	**GC-5 HP 5890**
Received:	**10-06-05 18:20**	Sample Volume:	**34 mL**
Extracted:	**10-11-05 18:00**	Final Volume:	**1 mL**
Analyzed:	**10-11-05 19:57**	Dilution Factor:	**1**
Analyst:	**CRL**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

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.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	250 mL Plastic
Client:	Environmental Compliance Services, Inc.	Preservation:	HNO3 / Cool
Laboratory ID:	88184-05	Preserved:	10-06-05 18:20
Sampled:	10-06-05 10:50	Filtered:	10-06-05 18:20
Received:	10-06-05 18:20		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 200.7[1]	MB-1719-W	EPA 200.7	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR
EPA 245[2]	MP-1754-W	#REF!	10-17-05 12:45	25 mL	CVAA-1 PE FIMS	MFP
EPA 245.1[3]	MB-1719-W	EPA 3010A	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Dissolved	BRL		mg/L	0.06	1	10-12-05 11:35	EPA 200.7[1]
7440-38-2	Arsenic, Dissolved	BRL		mg/L	0.01	1	10-12-05 11:35	EPA 200.7[1]
7440-43-9	Cadmium, Dissolved	BRL		mg/L	0.005	1	10-12-05 11:35	EPA 200.7[1]
7440-47-3	Chromium, Dissolved	BRL		mg/L	0.01	1	10-12-05 11:34	EPA 200.7[1]
7440-50-8	Copper, Dissolved	BRL		mg/L	0.025	1	10-12-05 11:34	EPA 200.7[1]
7439-89-6	Iron, Dissolved	17		mg/L	0.1	1	10-12-05 11:34	EPA 200.7[1]
7439-92-1	Lead, Dissolved	BRL		mg/L	0.005	1	10-12-05 16:17	EPA 200.7[1]
7439-97-6	Mercury, Dissolved	BRL		mg/L	0.0002	1	10-17-05 17:34	EPA 245[2]
7440-02-0	Nickel, Dissolved	BRL		mg/L	0.04	1	10-12-05 11:35	EPA 245.1[3]
7782-49-2	Selenium, Dissolved	BRL		mg/L	0.05	1	10-12-05 11:35	EPA 200.7[1]
7440-22-4	Silver, Dissolved	BRL		mg/L	0.007	1	10-12-05 16:17	EPA 200.7[1]
7440-66-6	Zinc, Dissolved	BRL		mg/L	0.2	1	10-12-05 11:35	EPA 200.7[1]

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

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

GROUNDWATER ANALYTICAL

Inorganic Chemistry

Field ID: **GWTS Influent** Matrix: **Aqueous**
Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55** Received: **10-06-05 18:20**
Client: **Environmental Compliance Services, Inc.**

Lab ID: **88184-06** Sampled: **10-06-05 10:50** 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	5	1	930 mL	10-12-05 12:00	HO-0194-W	EPA 1664	3	JK

Lab ID: **88184-07** Sampled: **10-06-05 10:50** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	23	mg/L	10	1	100 mL	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	EB

Lab ID: **88184-08** Sampled: **10-06-05 10:50** Container: **1 L 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	10-07-05 12:00	HC-0230-W	EPA 7196A	1	JK

Lab ID: **88184-09** Sampled: **10-06-05 10:50** 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	10-12-05 09:20	TCN-1113-W	EPA 9012A	1	AVB

Lab ID: **88184-10** Sampled: **10-06-05 10:50** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	0.9	mg/L	0.2	1	5 mL	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD

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

Project Narrative

Project:	**CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**	Lab ID:	**88184**
Client:	**Environmental Compliance Services, Inc.**	Received:	**10-06-05 18:20**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. Project 88184 was processed for Priority Turnaround, per Matt Lyne, 10-07-05.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 8260B Non-conformance: Sample 88184-01. Laboratory control sample (LCS) analyte tert Butyl Alcohol was above recommended recovery limits for QC batch VM4-3311-W.
2. EPA 8260B Note: Sample 88184-01. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
3. EPA 625 Non-conformance: Laboratory Control Sample (LCS) analyte Benzidine was above recommended limits for QC Batch SV-1758-F.

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GROUNDWATER ANALYTICAL

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CHAIN-OF-CUSTODY RECORD AND WORK ORDER

№ 100757

Project Name: CFI # 70027 8 Broadway (Rt. 1 S) Lynnfield, MA	Firm: ECS
Project Number: 93-200013.55	Address: 27 Midstate Drive Suite 218
Sampler Name: J. Hoffne	City / State / Zip: Auburn, MA, 01501
Project Manager: Matt Lyne	Telephone: 508-832-6022

INSTRUCTIONS: Use separate line for each container (except replicates).

TURNAROUND

- [x] STANDARD (10 Business Days)
- [ ] PRIORITY (5 Business Days)
- [x] RUSH (RAN- 8887 (48 hrs))
  (Rush requires Rush Authorization Number)
  - [x] Please Email to: mlyne@ecsconsult.com
  - [ ] Please FAX to: _____

BILLING

- [ ] Purchase Order No.: _____
- [x] Third Party Billing: 70027
- [ ] GWA Quote: _____

ANALYSIS REQUEST

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	Matrix: GROUNDWATER	DRINKING WATER	WASTEWATER	SOIL	OTHER SOLID	OIL/ORGANIC LIQUID	Type: COMPOSITE	GRAB	Container(s): NUMBER	40mL VOA Vial	60mL/2 oz Glass	120mL/4 oz Amber Glass	250mL/8 oz Glass	500mL/16 oz Glass	1L/32 oz Amber Glass	250mL/8 oz Plastic	500mL/16 oz Plastic	1L/32 oz Plastic	120mL Sterile	Preservation: HCl	HNO3	H2SO4	NaOH	Methanol	Sodium Bisulfate	ICE	Filtered: YES	NO	LABORATORY NUMBER (Lab Use Only)
10/6/05	10:50	GWTS influent	X							X	19	6					6			5		X	X				X	X			
—	—	~~Trip Blank~~									~~1~~																				
		Dissolved Metals:																													
		Antimony, Arsenic																													
		Cadmium, Chromium III																													
		Chromium VI, Copper																													
		Lead, Mercury, Nickel																													
		Selenium, Silver																													
		Zinc, Iron																													

OPTIONS

- Volatiles: [ ] TIC Search
- Semivolatiles: [ ] Acid Only [ ] B/N Only [ ] TIC Search

SDWA

- Volatiles: [ ] 524.2 MTBE
- Semivolatiles: [ ] 525.2
- Pest/Herb/PCBs Extractable: [ ] 505 [ ] 508
- Pest/Herb/PCBs Vol.: [ ] 531.1 [ ] 515.1 [ ] 504.1 EDB/DBCP
- Metals: [ ] Lead and Copper

NPDES

- Volatiles: [ ] 624 [ ] 602+MTBE [ ] 601 [ ] 601/602+MTBE
- Semivolatiles: [x] 625 Sucks [ ] 625 PAHs only
- Pest/Herb/PCBs Extractable: [ ] 608 Pesticides [x] 608 PCBs
- Pest/Herb/PCBs Vol.: [ ] 615
- Metals: [ ] 13 Priority Pollutant

RCRA/21E

- Volatiles: [ ] 8260B TCL+MTBE [ ] 8260B NH PETROLEUM [x] 8260B
- Volatiles: [ ] 8021B Aromatics [ ] 8021B Halocarbons [ ] 8021B
- Semivolatiles: [ ] 8270C [ ] 8270C PAHs only
- Pest/Herb/PCBs Extractable: [ ] 8081A Pesticides [ ] 8082 PCBs
- Pest/Herb/PCBs Vol.: [ ] 8151A Herbicides [x] 8011 EDB/DBCP
- Metals: [ ] 8 RCRA [ ] 5 RCRA [ ] MA List Metals [ ] 23 TAL
- [x] Specify: Antimony, Arsenic, Cadmium, Chromium III, Chromium VI, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc, Iron
- Specify for Water Samples: [ ] Total [x] Dissolved

Petroleum Hydrocarbon

- Ext. TPH: [ ] Diesel Range Organics (DRO) [ ] ME DRO [ ] CT ETPH [ ] MA DEP EPH w/all targets + EPH Carbon Ranges only [ ] EPH w/4 PAHs [ ] Hydrocarbon Fingerprint (GC-FID by ASTM D3328-00-Mod.)
- Vol. TPH: [ ] TPH by GC/FID (8015B Mod) Quantitative Only [ ] Gasoline Range Organics (GRO) [ ] ME GRO [ ] MA DEP VPH w/all targets + VPH Carbon ranges only

Haz. Waste

- [ ] TCLP: SPLP 8 Metals [ ] Pb only [ ] VOAs [ ] Semi VOAs [ ] Pesticides [ ] Herbicides [ ] Corrosivity (as pH) [ ] Reactivity [ ] Ignitability (as Flashpoint) [ ] Paint Filter [ ] MA Base Disposal Criteria: 8260B TPH by GC, PCBs, 5 Metals, Corrosivity, Ignitability, Reactivity

General Chemistry

- [ ] Nitrate [ ] Nitrite [ ] Chloride [ ] Fluoride [ ] Sulfate
- [ ] Dissolved Phosphorus [ ] Ammonia [ ] TKN [ ] Total Phosphorus [ ] Total N (as NO2+NO3+TKN) [ ] Oil & Grease [ ] COD [ ] TOC [x] BOD [x] TSS [x] TS [ ] Alkalinity [ ] Cyanide Total [ ] Cyanide, Physically Available [ ] pH [ ] Dissolved Oxygen [ ] Turbidity

Other

- [x] Total Coliform [ ] Fecal Coliform [ ] HPC
- [x] Hexavalent Chromium (CR-6)
- [x] Cyanide
- [x] Residual Chlorine

REMARKS / SPECIAL INSTRUCTIONS

[illegible]

Jonathan Hoffne

DATA QUALITY OBJECTIVES

Regulatory Program

State	Standard	Deliverables
[ ] CT	[x] MCP GW-1/S-1	[ ] PWS Form
[ ] ME	[ ] MCP GW-2/S-2	[ ] MWRA
[x] MA	[ ] NY STARS	[ ] _____
[ ] NH	[ ] Drinking Water	
[ ] NY	[ ] Wastewater	
[ ] RI	[ ] Waste Disposal	
[ ] VT	[ ] Dredge Material	
[ ] ___	[ ] _____	

Project Specific QC

Many regulatory programs and EPA methods require project specific QC. Project specific QC includes Sample Duplicates, Matrix Spikes, and/or Matrix Spike Duplicates. Laboratory QC is not project specific unless prearranged. Project specific QC samples are charged on a per sample basis. **Each MS, MSD and Sample Duplicate requires an additional sample aliquot.**

Project Specific QC Required
- [ ] Sample Duplicate
- [ ] Matrix Spike
- [ ] Matrix Spike Duplicate

Selection of QC Sample
- [ ] Please use sample: _____

CHAIN-OF-CUSTODY RECORD

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.

Relinquished by Sampler:	Date / Time	Received by:	Receipt Temperature:
[signature]	10/6/05 1200	[signature]	2 (Ice / Refrigerated / 4°C Recommended)
Relinquished by: [signature]	10/6/05 1200	Received by:	Container Count: 17
Relinquished by:	Date / Time	Received by Laboratory: [signature]	Shipping/Airbill Number:

Method of Shipment: [x] GWA Courier [ ] Express Mail [ ] Federal Express [ ] UPS [ ] Hand [ ] _____

Custody Seal Number:

GROUNDWATER ANALYTICAL

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans,* US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste,* US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA 608	Instrument ID:	GC-6 HP 5890	Instrument ID:	GC-6 HP 5890
QC Batch ID:	PB-1165-F	Extracted:	10-11-05 12:00	Extracted:	10-11-05 12:00
Matrix:	Aqueous	Cleaned Up:	10-12-05 14:00	Cleaned Up:	10-12-05 14:00
Units:	ug/L	Analyzed:	10-13-05 04:18	Analyzed:	10-13-05 04:53
		Analyst:	CRL	Analyst:	CRL

CAS Number	Analyte	LCS					LCS Duplicate							QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD			
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	5.0	4.1	4.1	82%	82%	5.0	5.0	4.9	99%	98%	19 %	17 %	40 - 140%	30 %
11096-82-5	Aroclor 1260	5.0	4.2	4.2	84%	85%	5.0	4.8	4.9	96%	98%	14 %	15 %	40 - 140%	30 %

QC Surrogate Compound	Surrogate Recovery											QC Limits
Tetrachloro-*m*-xylene	0.20	0.14	0.14	72%	70%	0.20	0.19	0.18	94%	89%		30 - 150 %
Decachlorobiphenyl	0.20	0.13	0.14	67%	69%	0.20	0.18	0.18	90%	92%		30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 608	Instrument ID:	GC-6 HP 5890
QC Batch ID:	PB-1165-F	Extracted:	10-11-05 12:00
Matrix:	Aqueous	Cleaned Up:	10-12-05 14:00
		Analyzed:	10-13-05 03:43
		Analyst:	CRL

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-*m*-xylene	0.20	0.18	**88** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	**85** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.17	**85** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	**87** %	30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). 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, Inc., P.O. Box 1200, 228 Main Street, Buzzards Bay, MA 02532

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category: **Metals**
Matrix: **Aqueous**
Units: **mg/L**

Analysis Method	QC Batch ID	Prep Method	Prepared	Instrument ID	Analyst
EPA 200.7	MB-1719-WL	EPA 200.7	10-11-05 10:10	ICP-1 PE 3000	MWR
EPA 245.1	MP-1754-WL	EPA 245.1	10-17-05 12:45	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits	Analyzed	Method
7440-36-0	Antimony	5.0	4.4	**88 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-38-2	Arsenic	5.0	5.0	**100 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-43-9	Cadmium	1.0	1.0	**100 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-47-3	Chromium	1.0	0.99	**99 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-50-8	Copper	1.0	0.95	**95 %**	85-115 %	10-12-05 11:01	EPA 200.7
7439-89-6	Iron	5.0	4.8	**97 %**	85-115 %	10-12-05 11:01	EPA 200.7
7439-92-1	Lead	5.0	5.0	**100 %**	85-115 %	10-12-05 15:44	EPA 200.7
7439-97-6	Mercury	0.0010	0.0009	**94 %**	85-115 %	10-17-05 17:28	EPA 245.1
7440-02-0	Nickel	1.0	1.0	**98 %**	85-115 %	10-12-05 11:01	EPA 200.7
7782-49-2	Selenium	5.0	5.1	**102 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-22-4	Silver	0.5	0.6	**111 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-66-6	Zinc	1.0	1.0	**104 %**	85-115 %	10-12-05 11:01	EPA 200.7

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **Metals**
Matrix: **Aqueous**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 200.7	MB-1719-WB	EPA 200.7	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR
EPA 245.1	MP-1754-WB	EPA 245.1	10-17-05 12:45	25 mL	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.06	1	10-12-05 10:58	EPA 200.7
7440-38-2	Arsenic	BRL		mg/L	0.01	1	10-12-05 10:58	EPA 200.7
7440-43-9	Cadmium	BRL		mg/L	0.005	1	10-12-05 10:58	EPA 200.7
7440-47-3	Chromium	BRL		mg/L	0.01	1	10-12-05 10:58	EPA 200.7
7440-50-8	Copper	BRL		mg/L	0.025	1	10-12-05 10:58	EPA 200.7
7439-89-6	Iron	BRL		mg/L	0.1	1	10-12-05 10:58	EPA 200.7
7439-92-1	Lead	BRL		mg/L	0.005	1	10-12-05 15:39	EPA 200.7
7439-97-6	Mercury	BRL		mg/L	0.0002	1	10-17-05 17:28	EPA 245.1
7440-02-0	Nickel	BRL		mg/L	0.04	1	10-12-05 10:58	EPA 200.7
7782-49-2	Selenium	BRL		mg/L	0.05	1	10-12-05 10:58	EPA 200.7
7440-22-4	Silver	BRL		mg/L	0.007	1	10-12-05 10:58	EPA 200.7
7440-66-6	Zinc	BRL		mg/L	0.2	1	10-12-05 10:58	EPA 200.7

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:17
Units:	ug/L	Analyst:	JJT

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
62-75-9	N-Nitrosodimethylamine	50	31	**61** %	40 - 140 %
108-95-2	Phenol	50	23	**47** %	30 - 130 %
111-44-4	Bis(2-chloroethyl) ether	50	36	**72** %	40 - 140 %
95-57-8	2-Chlorophenol	50	34	**69** %	30 - 130 %
541-73-1	1,3-Dichlorobenzene	50	34	**68** %	40 - 140 %
106-46-7	1,4-Dichlorobenzene	50	33	**67** %	40 - 140 %
95-50-1	1,2-Dichlorobenzene	50	33	**67** %	40 - 140 %
108-60-1	Bis(2-chloroisopropyl) ether	50	36	**72** %	40 - 140 %
621-64-7	N-Nitrosodi-*n*-propylamine	50	38	**76** %	40 - 140 %
67-72-1	Hexachloroethane	50	34	**67** %	40 - 140 %
98-95-3	Nitrobenzene	50	38	**76** %	40 - 140 %
78-59-1	Isophorone	50	37	**73** %	40 - 140 %
88-75-5	2-Nitrophenol	50	37	**74** %	30 - 130 %
105-67-9	2,4-Dimethylphenol	50	36	**72** %	30 - 130 %
111-91-1	Bis(2-chloroethoxy) methane	50	38	**75** %	40 - 140 %
120-83-2	2,4-Dichlorophenol	50	37	**74** %	30 - 130 %
120-82-1	1,2,4-Trichlorobenzene	50	36	**73** %	40 - 140 %
91-20-3	Naphthalene	50	36	**71** %	40 - 140 %
87-68-3	Hexachlorobutadiene	50	32	**64** %	40 - 140 %
59-50-7	4-Chloro-3-methylphenol	50	39	**79** %	30 - 130 %
77-47-4	Hexachlorocyclopentadiene	50	37	**75** %	40 - 140 %
88-06-2	2,4,6-Trichlorophenol	50	39	**78** %	30 - 130 %
91-58-7	2-Chloronaphthalene	50	38	**76** %	40 - 140 %
131-11-3	Dimethyl phthalate	50	41	**83** %	40 - 140 %
208-96-8	Acenaphthylene	50	39	**78** %	40 - 140 %
606-20-2	2,6-Dinitrotoluene	50	40	**81** %	40 - 140 %
83-32-9	Acenaphthene	50	41	**81** %	40 - 140 %
51-28-5	2,4-Dinitrophenol	50	42	**84** %	30 - 130 %
100-02-7	4-Nitrophenol	50	30	**61** %	30 - 130 %
121-14-2	2,4-Dinitrotoluene	50	42	**83** %	40 - 140 %
84-66-2	Diethyl phthalate	50	42	**84** %	40 - 140 %
7005-72-3	4-Chlorophenyl phenyl ether	50	40	**80** %	40 - 140 %
86-73-7	Fluorene	50	38	**77** %	40 - 140 %
534-52-1	4,6-Dinitro-2-methylphenol	50	41	**81** %	30 - 130 %
86-30-6	N-Nitrosodiphenylamine†	50	42	**84** %	40 - 140 %
122-66-7	1,2-Diphenylhydrazine ◊	50	39	**79** %	40 - 140 %
101-55-3	4-Bromophenyl phenyl ether	50	45	**90** %	40 - 140 %
118-74-1	Hexachlorobenzene	50	40	**80** %	40 - 140 %
87-86-5	Pentachlorophenol	50	39	**77** %	30 - 130 %
85-01-8	Phenanthrene	50	41	**82** %	40 - 140 %
120-12-7	Anthracene	50	42	**84** %	40 - 140 %
84-74-2	Di-*n*-butyl phthalate	50	46	**92** %	40 - 140 %
206-44-0	Fluoranthene	50	41	**83** %	40 - 140 %
92-87-5	Benzidine	50	184	**368** % q	40 - 140 %
129-00-0	Pyrene	50	42	**84** %	40 - 140 %
85-68-7	Butyl benzyl phthalate	50	42	**83** %	40 - 140 %
91-94-1	3,3'-Dichlorobenzidine	50	42	**83** %	40 - 140 %
56-55-3	Benzo[a]anthracene	50	42	**85** %	40 - 140 %
218-01-9	Chrysene	50	41	**82** %	40 - 140 %

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:17
Units:	ug/L	Analyst:	JJT

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
117-81-7	Bis(2-ethylhexyl) phthalate	50	43	**86** %	40 - 140 %
117-84-0	Di-*n*-octyl phthalate	50	46	**91** %	40 - 140 %
205-99-2	Benzo[b]fluoranthene	50	42	**84** %	40 - 140 %
207-08-9	Benzo[k]fluoranthene	50	43	**86** %	40 - 140 %
50-32-8	Benzo[a]pyrene	50	43	**85** %	40 - 140 %
193-39-5	Indeno[1,2,3-c,d]pyrene	50	39	**79** %	40 - 140 %
53-70-3	Dibenzo[a,h]anthracene	50	38	**75** %	40 - 140 %
191-24-2	Benzo[g,h,i]perylene	50	37	**74** %	40 - 140 %

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	110	**56** %	15 - 110 %
Phenol-d5	200	91	**45** %	15 - 110 %
Nitrobenzene-d5	100	69	**69** %	30 - 130 %
2-Fluorobiphenyl	100	77	**77** %	30 - 130 %
2,4,6-Tribromophenol	200	160	**80** %	15 - 110 %
Terphenyl-d14	100	79	**79** %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

q Recovery outside recommended limits.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: EPA Method 625
QC Batch ID: SV-1758-F
Matrix: Aqueous

Instrument ID: MS-3 HP 5890
Extracted: 10-13-05 23:50
Analyzed: 10-14-05 18:58
Analyst: JJT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
108-95-2	Phenol	BRL		ug/L	10
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	10
95-57-8	2-Chlorophenol	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-95-3	Nitrobenzene	BRL		ug/L	10
78-59-1	Isophorone	BRL		ug/L	10
88-75-5	2-Nitrophenol	BRL		ug/L	10
105-67-9	2,4-Dimethylphenol	BRL		ug/L	10
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	10
120-83-2	2,4-Dichlorophenol	BRL		ug/L	10
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	10
91-20-3	Naphthalene	BRL		ug/L	10
87-68-3	Hexachlorobutadiene	BRL		ug/L	10
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	10
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	10
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	10
91-58-7	2-Chloronaphthalene	BRL		ug/L	10
131-11-3	Dimethyl phthalate	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	10
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	10
84-66-2	Diethyl phthalate	BRL		ug/L	10
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	10
86-30-6	N-Nitrosodiphenylamine†	BRL		ug/L	10
122-66-7	1,2-Diphenylhydrazine ◊	BRL		ug/L	10
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	10
118-74-1	Hexachlorobenzene	BRL		ug/L	10
87-86-5	Pentachlorophenol	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
92-87-5	Benzidine	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10
85-68-7	Butyl benzyl phthalate	BRL		ug/L	10
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:58
		Analyst:	JJT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	10
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	94	47 %	15 - 110 %
Phenol-d5	200	73	37 %	15 - 110 %
Nitrobenzene-d5	100	56	56 %	30 - 130 %
2-Fluorobiphenyl	100	62	62 %	30 - 130 %
2,4,6-Tribromophenol	200	140	68 %	15 - 110 %
Terphenyl-d14	100	75	75 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

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.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WL	Analyzed:	10-12-05 21:03	Analyzed:	10-12-05 21:32
Matrix:	Aqueous	Analyst:	CCT	Analyst:	CCT
Units:	ug/L				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	9.9	99 %	10	11	106 %	6 %	70 - 130 %	25%
74-87-3	Chloromethane	10	9.1	91 %	10	9.3	93 %	2 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	9.3	93 %	10	9.7	97 %	5 %	70 - 130 %	25%
74-83-9	Bromomethane	10	8.7	87 %	10	8.8	88 %	2 %	70 - 130 %	25%
75-00-3	Chloroethane	10	9.5	95 %	10	9.7	97 %	2 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	8.3	83 %	10	9.5	95 %	13 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	20	102 %	20	20	102 %	1 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	9.2	92 %	10	9.7	97 %	6 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	20	102 %	20	21	105 %	3 %	70 - 130 %	25%
67-64-1	Acetone	20	21	104 %	20	21	104 %	0 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	19	96 %	20	20	98 %	2 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	9.5	95 %	10	9.1	91 %	4 %	70 - 130 %	25%
156-60-5	*trans*-1,2-Dichloroethene	10	9.5	95 %	10	9.5	95 %	0 %	70 - 130 %	25%
1634-04-4	Methyl *tert*-butyl Ether (MTBE)	10	9.8	98 %	10	9.7	97 %	1 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	9.3	93 %	10	9.7	97 %	4 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	8.7	87 %	10	9.3	93 %	7 %	70 - 130 %	25%
156-59-2	*cis*-1,2-Dichloroethene	10	9.6	96 %	10	10	100 %	4 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	23	115 %	20	22	109 %	5 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	10	103 %	10	10	102 %	1 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	23	116 %	20	20	101 %	14 %	70 - 130 %	25%
67-66-3	Chloroform	10	9.4	94 %	10	10	100 %	5 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	8.9	89 %	10	9.7	97 %	8 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	8.6	86 %	10	9.6	96 %	11 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	10	101 %	10	10	105 %	3 %	70 - 130 %	25%
71-43-2	Benzene	10	9.8	98 %	10	10	102 %	4 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	9.9	99 %	10	10	101 %	2 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	9.6	96 %	10	10	103 %	8 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	9.9	99 %	10	10	102 %	3 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	10	101 %	10	10	102 %	1 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	10	104 %	10	11	109 %	4 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	160	82 %	200	160	78 %	6 %	70 - 130 %	25%
10061-01-5	*cis*-1,3-Dichloropropene	10	9.8	98 %	10	10	101 %	3 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	21	106 %	20	21	103 %	3 %	70 - 130 %	25%
108-88-3	Toluene	10	10	101 %	10	11	108 %	7 %	70 - 130 %	25%
10061-02-6	*trans*-1,3-Dichloropropene	10	11	110 %	10	11	109 %	1 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	106 %	10	10	103 %	3 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	10	104 %	10	11	110 %	6 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	11	109 %	10	11	106 %	3 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	23	116 %	20	23	113 %	3 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	11	110 %	10	11	107 %	3 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	11	107 %	10	11	110 %	2 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	9.8	98 %	10	10	101 %	3 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	9.9	99 %	10	10	100 %	2 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	11	108 %	10	11	113 %	4 %	70 - 130 %	25%
108-38-3/106-42-3	*meta*-Xylene and *para*-Xylene	20	21	106 %	20	22	110 %	3 %	70 - 130 %	25%
95-47-6	*ortho*-Xylene	10	10	101 %	10	10	104 %	4 %	70 - 130 %	25%
100-42-5	Styrene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
75-25-2	Bromoform	10	12	116 %	10	11	110 %	6 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	11	106 %	10	11	110 %	4 %	70 - 130 %	25%

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WL	Analyzed:	10-12-05 21:03	Analyzed:	10-12-05 21:32
Matrix:	Aqueous	Analyst:	CCT	Analyst:	CCT
Units:	ug/L				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
108-86-1	Bromobenzene	10	11	111 %	10	11	112 %	2 %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	11	111 %	10	11	108 %	3 %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	12	117 %	10	11	107 %	9 %	70 - 130 %	25%
103-65-1	*n*-Propylbenzene	10	11	111 %	10	12	116 %	5 %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	11	112 %	10	11	113 %	1 %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	108 %	10	11	112 %	3 %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	11	108 %	10	11	110 %	2 %	70 - 130 %	25%
98-06-6	*tert*-Butylbenzene	10	11	105 %	10	11	110 %	4 %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	108 %	10	11	111 %	2 %	70 - 130 %	25%
135-98-8	*sec*-Butylbenzene	10	11	111 %	10	12	116 %	5 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	104 %	10	11	108 %	4 %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	11	112 %	10	12	116 %	4 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	11	105 %	10	11	108 %	2 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
104-51-8	*n*-Butylbenzene	10	11	107 %	10	11	112 %	5 %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	12	116 %	10	11	106 %	8 %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	8.7	87 %	10	8.9	89 %	2 %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	11	107 %	10	11	111 %	4 %	70 - 130 %	25%
91-20-3	Naphthalene	10	8.4	84 %	10	8.5	85 %	1 %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	8.5	85 %	10	8.7	87 %	2 %	70 - 130 %	25%
75-65-0	*tert*-Butyl Alcohol (TBA)	200	280	140 % q	200	220	110 %	24 %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	9.7	97 %	10	10	100 %	3 %	70 - 130 %	25%
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	10	9.5	95 %	10	9.4	94 %	1 %	70 - 130 %	25%
994-05-8	*tert*-Amyl Methyl Ether (TAME)	10	9.2	92 %	10	9	90 %	2 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	8.5	85 %	10	8.1	81 %		70 - 130 %
1,2-Dichloroethane-d_4	10	9.4	94 %	10	9.5	95 %		70 - 130 %
Toluene-d_8	10	9.2	92 %	10	9.3	93 %		70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	10	9.2	92 %		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: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **EPA Method 8260B**
QC Batch ID: **VM4-3311-WB**
Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
Analyzed: **10-12-05 22:01**
Analyst: **CCT**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	0.5
95-47-6	*ortho*- Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WB	Analyzed:	10-12-05 22:01
Matrix:	Aqueous	Analyst:	CCT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	*n*-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	*tert*-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	*sec*-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	*n*-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.3	83 %	70 - 130 %
1,2-Dichloroethane-d_4	10	8.8	88 %	70 - 130 %
Toluene-d_8	10	8.8	88 %	70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	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.

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

Category: **Inorganics**
Matrix: **Aqueous**
Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 9012A	TCN-1113-W	EPA 9012A	10/11/2005 11:00	10/12/2005 9:03	Lachat 8000 Autoanalyzer	AVB
LCSD	EPA 9012A	TCN-1113-W	EPA 9012A	10/11/2005 11:00	10/12/2005 9:04	Lachat 8000 Autoanalyzer	AVB

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Cyanide, Total	0.45	0.46	102%	0.45	0.47	104%	1 %	80-120%	20 %	EPA 9012A

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	mg/L	80	80	**100 %**	80 - 120 %	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	MW
Chlorine, Total Residual	mg/L	1	1	**97 %**	80 - 120 %	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	mg/L	0.1	0.1	**98 %**	80 - 120 %	10-07-05 00:00	HC-0230-W	EPA 7196A	1	JK
Oil and Grease, Total	mg/L	40	41	**103 %**	78 - 114 %	10-12-05 00:00	HO-0194-W	EPA 1664	3	JK

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: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	BRL	mg/L	10	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	MW
Chlorine, Total Residual	BRL	mg/L	0.2	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	BRI	mg/L	0.01	10-07-05 00:00	HC-0230-W	EPA 7196A	1	JK
Oil and Grease, Total	BRL	mg/L	5	10-12-05 00:00	HO-0194-W	EPA 1664	3	JK
Cyanide, Total	BRL	mg/L	0.01	10-12-05 09:03	TCN-1113-W	EPA 9012A	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.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 8011	Instrument ID:	GC-5 HP 5890
QC Batch ID:	PV-0796-E	Extracted:	10-11-05 09:00
Matrix:	Aqueous	Analyzed:	10-11-05 16:29
Units:	ug/L	Analyst:	CRL

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.21	102 %	106 %	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.20	0.21	0.22	106 %	108 %	70 - 130 %

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

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8011**	Instrument ID:	**GC-5 HP 5890**
QC Batch ID:	**PV-0796-E**	Extracted:	**10-11-05 09:00**
Matrix:	**Aqueous**	Analyzed:	**10-11-05 18:41**
		Analyst:	**CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

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.

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

GROUNDWATER ANALYTICAL

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

http://www.groundwateranalytical.com/qualifications.htm

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
http://www.floridadep.org/labs/qa/dohforms.htm

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
http://www.state.me.us/dhs/eng/water/Compliance.htm

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
http://www.des.state.nh.us/asp/NHELAP/labsview.asp

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
http://www.wadsworth.org/labcert/elap/comm.html

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
http://www.dep.state.pa.us/Labs/Registered/

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
http://www.vermontdrinkingwater.org/wsops/labtable.PDF

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

GROUNDWATER ANALYTICAL

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October 18, 2005

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Auburn, MA 01501

LABORATORY REPORT

Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**
Lab ID: **88184**
Received: **10-06-05**

Dear Matt:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority 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 #70021 8 Broadway (Rt. 1 S)/93-200013.55** Delivery: **GWA Courier** Temperature: **2'C**
Client: **Environmental Compliance Services, Inc.** Airbill: **n/a** Chain of Custody: **Present**
Lab ID: **88184** Lab Receipt: **10-06-05** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-1	GWTS Influent		Aqueous	10/6/05 10:50	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C666515	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666504	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666495	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-2	GWTS Influent		Aqueous	10/6/05 10:50	EPA 625 Semivolatile Organics				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682149	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
C682152	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-3	GWTS Influent		Aqueous	10/6/05 10:50	EPA 608 PCBs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682150	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		
C682151	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-4	GWTS Influent		Aqueous	10/6/05 10:50	EPA 8011 EDB				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C666503	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666484	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		
C666483	40 mL VOA Vial	Proline	BX18188	HCl	R-4469D	09-26-05	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-5	GWTS Influent		Aqueous	10/6/05 10:50	EPA 200.7 Sb As Cd Cr Cu Fe Pb Ni Se Ag Zn Dissolved EPA 245.1 Hg				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C682171	250 mL Plastic	n/a	n/a	HNO3	n/a	n/a	n/a		
C682172	250 mL Plastic	n/a	n/a	HNO3	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-6	GWTS Influent		Aqueous	10/6/05 10:50	EPA 1664 Hexane Extractable Material				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C660536	1 L Amber Glass	Proline	BX18019	H2SO4	R-4600B	09-12-05	09-15-05		
C660530	1 L Amber Glass	Proline	BX18019	H2SO4	R-4600B	09-12-05	09-15-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-7	GWTS Influent		Aqueous	10/6/05 10:50	SM 2540 D Total Suspended Solids				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614752	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-8	GWTS Influent		Aqueous	10/6/05 10:50	EPA 7196A Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614748	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-9	GWTS Influent		Aqueous	10/6/05 10:50	EPA 9012A Total Cyanide				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C667693	500 mL Plastic	Proline	BX17932	NaOH	R-4387B	09-07-05	n/a		

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

GROUNDWATER ANALYTICAL

Sample Receipt Report (Continued)

Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55** Delivery: **GWA Courier** Temperature: **2'C**
Client: **Environmental Compliance Services, Inc.** Airbill: **n/a** Chain of Custody: **Present**
Lab ID: **88184** Lab Receipt: **10-06-05** Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
88184-10	GWTS Influent		Aqueous	10/6/05 10:50	SM 4500-Cl G				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C614732	1 L Plastic	Proline	BX18326	None	n/a	n/a	09-30-05		

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	**GWTS Influent**	Matrix:	**Aqueous**
Project:	**CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HCl/Cool**
Laboratory ID:	**88184-01**	QC Batch ID:	**VM4-3311-W**
Sampled:	**10-06-05 10:50**	Instrument ID:	**MS-4 HP 6890**
Received:	**10-06-05 18:20**	Sample Volume:	**25 mL**
Analyzed:	**10-12-05 22:31**	Dilution Factor:	**500**
Analyst:	**CCT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	250
74-87-3	Chloromethane	BRL		ug/L	250
75-01-4	Vinyl Chloride	BRL		ug/L	250
74-83-9	Bromomethane	BRL		ug/L	250
75-00-3	Chloroethane	BRL		ug/L	250
75-69-4	Trichlorofluoromethane	BRL		ug/L	250
60-29-7	Diethyl Ether	BRL		ug/L	1000
75-35-4	1,1-Dichloroethene	BRL		ug/L	250
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	2500
67-64-1	Acetone	BRL		ug/L	5000
75-15-0	Carbon Disulfide	BRL		ug/L	2500
75-09-2	Methylene Chloride	BRL		ug/L	1300
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	? 250
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	**15,000**		ug/L	250
75-34-3	1,1-Dichloroethane	BRL		ug/L	250
594-20-7	2,2-Dichloropropane	BRL		ug/L	250
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	250
78-93-3	2-Butanone (MEK)	BRL		ug/L	2500
74-97-5	Bromochloromethane	BRL		ug/L	250
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	2500
67-66-3	Chloroform	BRL		ug/L	250
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	250
56-23-5	Carbon Tetrachloride	BRL		ug/L	250
563-58-6	1,1-Dichloropropene	BRL		ug/L	250
71-43-2	Benzene	BRL		ug/L	250
107-06-2	1,2-Dichloroethane	BRL		ug/L	250
79-01-6	Trichloroethene	BRL		ug/L	250
78-87-5	1,2-Dichloropropane	BRL		ug/L	250
74-95-3	Dibromomethane	BRL		ug/L	250
75-27-4	Bromodichloromethane	BRL		ug/L	250
123-91-1	1,4-Dioxane	BRL		ug/L	250000
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	250
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	2500
108-88-3	Toluene	BRL		ug/L	250
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	250
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	250
127-18-4	Tetrachloroethene	BRL		ug/L	250
142-28-9	1,3-Dichloropropane	BRL		ug/L	250
591-78-6	2-Hexanone	BRL		ug/L	2500
124-48-1	Dibromochloromethane	BRL		ug/L	250
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	250
108-90-7	Chlorobenzene	BRL		ug/L	250
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	250
100-41-4	Ethylbenzene	BRL		ug/L	250
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	250
95-47-6	*ortho*- Xylene	BRL		ug/L	250

GROUNDWATER ANALYTICAL

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

Field ID:	**GWTS Influent**	Matrix:	**Aqueous**
Project:	**CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HCl/Cool**
Laboratory ID:	**88184-01**	QC Batch ID:	**VM4-3311-W**
Sampled:	**10-06-05 10:50**	Instrument ID:	**MS-4 HP 6890**
Received:	**10-06-05 18:20**	Sample Volume:	**25 mL**
Analyzed:	**10-12-05 22:31**	Dilution Factor:	**500**
Analyst:	**CCT**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	250
75-25-2	Bromoform	BRL		ug/L	250
98-82-8	Isopropylbenzene	BRL		ug/L	250
108-86-1	Bromobenzene	BRL		ug/L	250
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	250
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	250
103-65-1	*n*-Propylbenzene	BRL		ug/L	250
95-49-8	2-Chlorotoluene	BRL		ug/L	250
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	250
106-43-4	4-Chlorotoluene	BRL		ug/L	250
98-06-6	*tert*-Butylbenzene	BRL		ug/L	250
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	250
135-98-8	*sec*-Butylbenzene	BRL		ug/L	250
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	250
99-87-6	4-Isopropyltoluene	BRL		ug/L	250
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	250
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	250
104-51-8	*n*-Butylbenzene	BRL		ug/L	250
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	250
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	250
87-68-3	Hexachlorobutadiene	BRL		ug/L	250
91-20-3	Naphthalene	BRL		ug/L	250
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	250
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	10000
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	250
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	250
994-05-8	*tert*-Amyl Methyl Ether (TAME)	**330**		ug/L	250

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.3	**83 %**	70 - 130 %
1,2-Dichloroethane-d_4	10	8.7	**87 %**	70 - 130 %
Toluene-d_8	10	8.7	**87 %**	70 - 130 %
4-Bromofluorobenzene	10	9.1	**91 %**	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.

GROUNDWATER ANALYTICAL

EPA Method 625
Semivolatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-02	QC Batch ID:	SV-1758-F
Sampled:	10-06-05 10:50	Instrument ID:	MS-3 HP 5890
Received:	10-06-05 18:20	Sample Volume:	1000 mL
Extracted:	10-13-05 23:50	Final Volume:	1 mL
Analyzed:	10-14-05 19:39	Dilution Factor:	1
Analyst:	JJT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
108-95-2	Phenol	BRL		ug/L	10
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	10
95-57-8	2-Chlorophenol	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-95-3	Nitrobenzene	BRL		ug/L	10
78-59-1	Isophorone	BRL		ug/L	10
88-75-5	2-Nitrophenol	BRL		ug/L	10
105-67-9	2,4-Dimethylphenol	BRL		ug/L	10
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	10
120-83-2	2,4-Dichlorophenol	BRL		ug/L	10
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	10
91-20-3	Naphthalene	BRL		ug/L	10
87-68-3	Hexachlorobutadiene	BRL		ug/L	10
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	10
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	10
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	10
91-58-7	2-Chloronaphthalene	BRL		ug/L	10
131-11-3	Dimethyl phthalate	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	10
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	10
84-66-2	Diethyl phthalate	BRL		ug/L	10
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	10
86-30-6	N-Nitrosodiphenylamine†	BRL		ug/L	10
122-66-7	1,2-Diphenylhydrazine ◊	BRL		ug/L	10
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	10
118-74-1	Hexachlorobenzene	BRL		ug/L	10
87-86-5	Pentachlorophenol	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
92-87-5	Benzidine	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10

GROUNDWATER ANALYTICAL

EPA Method 625 (Continued)
Semivolatile Organics by GC/MS

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-02	QC Batch ID:	SV-1758-F
Sampled:	10-06-05 10:50	Instrument ID:	MS-3 HP 5890
Received:	10-06-05 18:20	Sample Volume:	1000 mL
Extracted:	10-13-05 23:50	Final Volume:	1 mL
Analyzed:	10-14-05 19:39	Dilution Factor:	1
Analyst:	JJT		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
85-68-7	Butyl benzyl phthalate	BRL		ug/L	10
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	10
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	90	45 %	15 - 110 %
Phenol-d5	200	71	36 %	15 - 110 %
Nitrobenzene-d5	100	53	53 %	30 - 130 %
2-Fluorobiphenyl	100	58	58 %	30 - 130 %
2,4,6-Tribromophenol	200	130	66 %	15 - 110 %
Terphenyl-d14	100	76	76 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

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.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

EPA Method 608
Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-03	QC Batch ID:	PB-1165-F
Sampled:	10-06-05 10:50	Instrument ID:	GC-6 HP 5890
Received:	10-06-05 18:20	Sample Weight:	1000 mL
Extracted:	10-11-05 07:00	Final Volume:	1 mL
Cleaned Up:	10-12-05 14:00	Dilution Factor:	1
Analyzed:	10-13-05 13:51		
Analyst:	CRL		

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

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.18	89 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.15	75 %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.18	88 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.16	78 %	30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). 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.

GROUNDWATER ANALYTICAL

EPA Method 8011
EDB and DBCP by GC/ECD

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	88184-04	QC Batch ID:	PV-0796-E
Sampled:	10-06-05 10:50	Instrument ID:	GC-5 HP 5890
Received:	10-06-05 18:20	Sample Volume:	34 mL
Extracted:	10-11-05 18:00	Final Volume:	1 mL
Analyzed:	10-11-05 19:57	Dilution Factor:	1
Analyst:	CRL		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

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.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID:	GWTS Influent	Matrix:	Aqueous
Project:	CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55	Container:	250 mL Plastic
Client:	Environmental Compliance Services, Inc.	Preservation:	HNO3 / Cool
Laboratory ID:	88184-05	Preserved:	10-06-05 18:20
Sampled:	10-06-05 10:50	Filtered:	10-06-05 18:20
Received:	10-06-05 18:20		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 200.7[1]	MB-1719-W	EPA 200.7	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR
EPA 245[2]	MP-1754-W	#REF!	10-17-05 12:45	25 mL	CVAA-1 PE FIMS	MFP
EPA 245.1[3]	MB-1719-W	EPA 3010A	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Dissolved	BRL		mg/L	0.06	1	10-12-05 11:35	EPA 200.7[1]
7440-38-2	Arsenic, Dissolved	BRL		mg/L	0.01	1	10-12-05 11:35	EPA 200.7[1]
7440-43-9	Cadmium, Dissolved	BRL		mg/L	0.005	1	10-12-05 11:35	EPA 200.7[1]
7440-47-3	Chromium, Dissolved	BRL		mg/L	0.01	1	10-12-05 11:34	EPA 200.7[1]
7440-50-8	Copper, Dissolved	BRL		mg/L	0.025	1	10-12-05 11:34	EPA 200.7[1]
7439-89-6	Iron, Dissolved	17		mg/L	0.1	1	10-12-05 11:34	EPA 200.7[1]
7439-92-1	Lead, Dissolved	BRL		mg/L	0.005	1	10-12-05 16:17	EPA 200.7[1]
7439-97-6	Mercury, Dissolved	BRL		mg/L	0.0002	1	10-17-05 17:34	EPA 245[2]
7440-02-0	Nickel, Dissolved	BRL		mg/L	0.04	1	10-12-05 11:35	EPA 245.1[3]
7782-49-2	Selenium, Dissolved	BRL		mg/L	0.05	1	10-12-05 11:35	EPA 200.7[1]
7440-22-4	Silver, Dissolved	BRL		mg/L	0.007	1	10-12-05 16:17	EPA 200.7[1]
7440-66-6	Zinc, Dissolved	BRL		mg/L	0.2	1	10-12-05 11:35	EPA 200.7[1]

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

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: **GWTS Influent** Matrix: **Aqueous**
Project: **CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55** Received: **10-06-05 18:20**
Client: **Environmental Compliance Services, Inc.**

Lab ID: **88184-06** Sampled: **10-06-05 10:50** 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	5	1	930 mL	10-12-05 12:00	HO-0194-W	EPA 1664	3	JK

Lab ID: **88184-07** Sampled: **10-06-05 10:50** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	23	mg/L	10	1	100 mL	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	EB

Lab ID: **88184-08** Sampled: **10-06-05 10:50** Container: **1 L 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	10-07-05 12:00	HC-0230-W	EPA 7196A	1	JK

Lab ID: **88184-09** Sampled: **10-06-05 10:50** 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	10-12-05 09:20	TCN-1113-W	EPA 9012A	1	AVB

Lab ID: **88184-10** Sampled: **10-06-05 10:50** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	0.9	mg/L	0.2	1	5 mL	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD

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

Project Narrative

Project:	**CFI #70021 8 Broadway (Rt. 1 S)/93-200013.55**	Lab ID:	**88184**
Client:	**Environmental Compliance Services, Inc.**	Received:	**10-06-05 18:20**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. Project 88184 was processed for Priority Turnaround, per Matt Lyne, 10-07-05.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 8260B Non-conformance: Sample 88184-01. Laboratory control sample (LCS) analyte tert Butyl Alcohol was above recommended recovery limits for QC batch VM4-3311-W.
2. EPA 8260B Note: Sample 88184-01. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
3. EPA 625 Non-conformance: Laboratory Control Sample (LCS) analyte Benzidine was above recommended limits for QC Batch SV-1758-F.

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

GROUNDWATER ANALYTICAL

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Buzzards Bay, MA 02532
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www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

№ 100757

Project Name: CFI # 70027 8 Broadway (Rt. 1 S) Lynnfield, MA	Firm: ECS
Project Number: 93-200013.55	Address: 27 Midstate Drive Suite 218
Sampler Name: J. Hoffne	City / State / Zip: Auburn, MA, 01501
Project Manager: Matt Lyne	Telephone: 508-832-6022

INSTRUCTIONS: Use separate line for each container (except replicates).

TURNAROUND

- [x] STANDARD (10 Business Days)
- [ ] PRIORITY (5 Business Days)
- [x] RUSH (RAN- 8/8/7 (48 hrs))
  (Rush requires Rush Authorization Number)
  - [x] Please Email to: mlyne@ecsconsult.com
  - [ ] Please FAX to: _____

BILLING

- [ ] Purchase Order No.: _____
- [x] Third Party Billing: 70027
- [ ] GWA Quote: _____

ANALYSIS REQUEST

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	Matrix: GROUNDWATER	DRINKING WATER	WASTEWATER	SOIL	OTHER SOLID	OIL/ORGANIC LIQUID	Type: COMPOSITE	GRAB	Container(s) NUMBER	40mL VOA Vial	60mL/2 oz Glass	120mL/4 oz Amber Glass	250mL/8 oz Glass	500mL/16 oz Glass	1L/32 oz Amber Glass	250mL/8 oz Plastic	500mL/16 oz Plastic	1L/32 oz Plastic	120mL Sterile	Preservation: HCl	HNO3	H2SO4	NaOH	Methanol	Sodium Bisulfite	ICE	Filtered: YES	NO	LABORATORY NUMBER (Lab Use Only)
10/6/05	10:50	GWTS influent	X							X	176						6			5		X		X			X	X		
—	—	~~Trip Blank~~									~~1~~																			
		Dissolved Metals:																												
		Antimony, Arsenic																												
		Cadmium, Chromium III																												
		Chromium VI, Copper																												
		Lead, Mercury, Nickel																												
		Selenium, Silver																												
		Zinc, Iron																												

Analysis	Laboratory Number
Volatiles: 624	X
Semivolatiles: 625	X
Pest/Herb/PCBs: 608	X
Metals: 8011 EDB/DBCP	X
Metals: Specify: Dissolved Metals (Antimony, Arsenic, Cadmium, Chromium III, Chromium VI, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc, Iron)	X
Petroleum Hydrocarbon: Ext. TPH: Diesel Range Organics (DRO) - ME DRO	X
General Chemistry: TSS	X
Other: Total Coliform - HPC	X
Other: Hex. Chrome (CR-6)	X
Other: Cyanide	X
Other: [illegible]	X

REMARKS / SPECIAL INSTRUCTIONS

[illegible]

DATA QUALITY OBJECTIVES

Regulatory Program

State	Standard	Deliverables
[ ] CT	[x] MCP GW-1/S-1	[ ] PWS Form
[ ] ME	[ ] MCP GW-2/S-2	[ ] MWRA
[x] MA	[ ] NY STARS	[ ] _____
[ ] NH	[ ] Drinking Water	
[ ] NY	[ ] Wastewater	
[ ] RI	[ ] Waste Disposal	
[ ] VT	[ ] Dredge Material	
[ ] ___	[ ] _____	

Project Specific QC

Many regulatory programs and EPA methods require project specific QC. Project specific QC includes Sample Duplicates, Matrix Spikes, and/or Matrix Spike Duplicates. Laboratory QC is not project specific unless prearranged. Project specific QC samples are charged on a per sample basis. **Each MS, MSD and Sample Duplicate requires an additional sample aliquot.**

Project Specific QC Required
- [ ] Sample Duplicate
- [ ] Matrix Spike
- [ ] Matrix Spike Duplicate

Selection of QC Sample
- [ ] Please use sample: _____

CHAIN-OF-CUSTODY RECORD

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.

Relinquished by Sampler:	Date	Time	Received by:	Receipt Temperature:
[signature]	10/6/05	1200	[signature]	[x] Ice [ ] Refrigerated [ ] 6 C Recommended — 2
Relinquished by:	**Date**	**Time**	**Received by:**	**Container Count:**
[signature]	10/6/05	1200		17
Relinquished by:	**Date**	**Time**	**Received by Laboratory:**	**Shipping/Airbill Number:**
			[signature]	

Method of Shipment: [x] GWA Courier [ ] Express Mail [ ] Federal Express [ ] UPS [ ] Hand [ ] _____

Custody Seal Number:

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans,* US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste,* US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA 608	Instrument ID:	GC-6 HP 5890	Instrument ID:	GC-6 HP 5890
QC Batch ID:	PB-1165-F	Extracted:	10-11-05 12:00	Extracted:	10-11-05 12:00
Matrix:	Aqueous	Cleaned Up:	10-12-05 14:00	Cleaned Up:	10-12-05 14:00
Units:	ug/L	Analyzed:	10-13-05 04:18	Analyzed:	10-13-05 04:53
		Analyst:	CRL	Analyst:	CRL

CAS Number	Analyte	LCS					LCS Duplicate							QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD			
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	5.0	4.1	4.1	82%	82%	5.0	5.0	4.9	99%	98%	19 %	17 %	40 - 140%	30 %
11096-82-5	Aroclor 1260	5.0	4.2	4.2	84%	85%	5.0	4.8	4.9	96%	98%	14 %	15 %	40 - 140%	30 %

QC Surrogate Compound	Surrogate Recovery											QC Limits
Tetrachloro-*m*-xylene	0.20	0.14	0.14	72%	70%	0.20	0.19	0.18	94%	89%		30 - 150 %
Decachlorobiphenyl	0.20	0.13	0.14	67%	69%	0.20	0.18	0.18	90%	92%		30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 608	Instrument ID:	GC-6 HP 5890
QC Batch ID:	PB-1165-F	Extracted:	10-11-05 12:00
Matrix:	Aqueous	Cleaned Up:	10-12-05 14:00
		Analyzed:	10-13-05 03:43
		Analyst:	CRL

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-*m*-xylene	0.20	0.18	**88** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	**85** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.17	**85** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.17	**87** %	30 - 150 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986). 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, Inc., P.O. Box 1200, 228 Main Street, Buzzards Bay, MA 02532

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category: **Metals**
Matrix: **Aqueous**
Units: **mg/L**

Analysis Method	QC Batch ID	Prep Method	Prepared	Instrument ID	Analyst
EPA 200.7	MB-1719-WL	EPA 200.7	10-11-05 10:10	ICP-1 PE 3000	MWR
EPA 245.1	MP-1754-WL	EPA 245.1	10-17-05 12:45	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits	Analyzed	Method
7440-36-0	Antimony	5.0	4.4	**88 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-38-2	Arsenic	5.0	5.0	**100 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-43-9	Cadmium	1.0	1.0	**100 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-47-3	Chromium	1.0	0.99	**99 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-50-8	Copper	1.0	0.95	**95 %**	85-115 %	10-12-05 11:01	EPA 200.7
7439-89-6	Iron	5.0	4.8	**97 %**	85-115 %	10-12-05 11:01	EPA 200.7
7439-92-1	Lead	5.0	5.0	**100 %**	85-115 %	10-12-05 15:44	EPA 200.7
7439-97-6	Mercury	0.0010	0.0009	**94 %**	85-115 %	10-17-05 17:28	EPA 245.1
7440-02-0	Nickel	1.0	1.0	**98 %**	85-115 %	10-12-05 11:01	EPA 200.7
7782-49-2	Selenium	5.0	5.1	**102 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-22-4	Silver	0.5	0.6	**111 %**	85-115 %	10-12-05 11:01	EPA 200.7
7440-66-6	Zinc	1.0	1.0	**104 %**	85-115 %	10-12-05 11:01	EPA 200.7

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **Metals**
Matrix: **Aqueous**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 200.7	MB-1719-WB	EPA 200.7	10-11-05 10:10	50 mL	ICP-1 PE 3000	MWR
EPA 245.1	MP-1754-WB	EPA 245.1	10-17-05 12:45	25 mL	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.06	1	10-12-05 10:58	EPA 200.7
7440-38-2	Arsenic	BRL		mg/L	0.01	1	10-12-05 10:58	EPA 200.7
7440-43-9	Cadmium	BRL		mg/L	0.005	1	10-12-05 10:58	EPA 200.7
7440-47-3	Chromium	BRL		mg/L	0.01	1	10-12-05 10:58	EPA 200.7
7440-50-8	Copper	BRL		mg/L	0.025	1	10-12-05 10:58	EPA 200.7
7439-89-6	Iron	BRL		mg/L	0.1	1	10-12-05 10:58	EPA 200.7
7439-92-1	Lead	BRL		mg/L	0.005	1	10-12-05 15:39	EPA 200.7
7439-97-6	Mercury	BRL		mg/L	0.0002	1	10-17-05 17:28	EPA 245.1
7440-02-0	Nickel	BRL		mg/L	0.04	1	10-12-05 10:58	EPA 200.7
7782-49-2	Selenium	BRL		mg/L	0.05	1	10-12-05 10:58	EPA 200.7
7440-22-4	Silver	BRL		mg/L	0.007	1	10-12-05 10:58	EPA 200.7
7440-66-6	Zinc	BRL		mg/L	0.2	1	10-12-05 10:58	EPA 200.7

Method Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:17
Units:	ug/L	Analyst:	JJT

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
62-75-9	N-Nitrosodimethylamine	50	31	**61 %**	40 - 140 %
108-95-2	Phenol	50	23	**47 %**	30 - 130 %
111-44-4	Bis(2-chloroethyl) ether	50	36	**72 %**	40 - 140 %
95-57-8	2-Chlorophenol	50	34	**69 %**	30 - 130 %
541-73-1	1,3-Dichlorobenzene	50	34	**68 %**	40 - 140 %
106-46-7	1,4-Dichlorobenzene	50	33	**67 %**	40 - 140 %
95-50-1	1,2-Dichlorobenzene	50	33	**67 %**	40 - 140 %
108-60-1	Bis(2-chloroisopropyl) ether	50	36	**72 %**	40 - 140 %
621-64-7	N-Nitrosodi-*n*-propylamine	50	38	**76 %**	40 - 140 %
67-72-1	Hexachloroethane	50	34	**67 %**	40 - 140 %
98-95-3	Nitrobenzene	50	38	**76 %**	40 - 140 %
78-59-1	Isophorone	50	37	**73 %**	40 - 140 %
88-75-5	2-Nitrophenol	50	37	**74 %**	30 - 130 %
105-67-9	2,4-Dimethylphenol	50	36	**72 %**	30 - 130 %
111-91-1	Bis(2-chloroethoxy) methane	50	38	**75 %**	40 - 140 %
120-83-2	2,4-Dichlorophenol	50	37	**74 %**	30 - 130 %
120-82-1	1,2,4-Trichlorobenzene	50	36	**73 %**	40 - 140 %
91-20-3	Naphthalene	50	36	**71 %**	40 - 140 %
87-68-3	Hexachlorobutadiene	50	32	**64 %**	40 - 140 %
59-50-7	4-Chloro-3-methylphenol	50	39	**79 %**	30 - 130 %
77-47-4	Hexachlorocyclopentadiene	50	37	**75 %**	40 - 140 %
88-06-2	2,4,6-Trichlorophenol	50	39	**78 %**	30 - 130 %
91-58-7	2-Chloronaphthalene	50	38	**76 %**	40 - 140 %
131-11-3	Dimethyl phthalate	50	41	**83 %**	40 - 140 %
208-96-8	Acenaphthylene	50	39	**78 %**	40 - 140 %
606-20-2	2,6-Dinitrotoluene	50	40	**81 %**	40 - 140 %
83-32-9	Acenaphthene	50	41	**81 %**	40 - 140 %
51-28-5	2,4-Dinitrophenol	50	42	**84 %**	30 - 130 %
100-02-7	4-Nitrophenol	50	30	**61 %**	30 - 130 %
121-14-2	2,4-Dinitrotoluene	50	42	**83 %**	40 - 140 %
84-66-2	Diethyl phthalate	50	42	**84 %**	40 - 140 %
7005-72-3	4-Chlorophenyl phenyl ether	50	40	**80 %**	40 - 140 %
86-73-7	Fluorene	50	38	**77 %**	40 - 140 %
534-52-1	4,6-Dinitro-2-methylphenol	50	41	**81 %**	30 - 130 %
86-30-6	N-Nitrosodiphenylamine[†]	50	42	**84 %**	40 - 140 %
122-66-7	1,2-Diphenylhydrazine [◊]	50	39	**79 %**	40 - 140 %
101-55-3	4-Bromophenyl phenyl ether	50	45	**90 %**	40 - 140 %
118-74-1	Hexachlorobenzene	50	40	**80 %**	40 - 140 %
87-86-5	Pentachlorophenol	50	39	**77 %**	30 - 130 %
85-01-8	Phenanthrene	50	41	**82 %**	40 - 140 %
120-12-7	Anthracene	50	42	**84 %**	40 - 140 %
84-74-2	Di-*n*-butyl phthalate	50	46	**92 %**	40 - 140 %
206-44-0	Fluoranthene	50	41	**83 %**	40 - 140 %
92-87-5	Benzidine	50	184	**368 %** q	40 - 140 %
129-00-0	Pyrene	50	42	**84 %**	40 - 140 %
85-68-7	Butyl benzyl phthalate	50	42	**83 %**	40 - 140 %
91-94-1	3,3'-Dichlorobenzidine	50	42	**83 %**	40 - 140 %
56-55-3	Benzo[a]anthracene	50	42	**85 %**	40 - 140 %
218-01-9	Chrysene	50	41	**82 %**	40 - 140 %

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:17
Units:	ug/L	Analyst:	JJT

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
117-81-7	Bis(2-ethylhexyl) phthalate	50	43	**86 %**	40 - 140 %
117-84-0	Di-*n*-octyl phthalate	50	46	**91 %**	40 - 140 %
205-99-2	Benzo[b]fluoranthene	50	42	**84 %**	40 - 140 %
207-08-9	Benzo[k]fluoranthene	50	43	**86 %**	40 - 140 %
50-32-8	Benzo[a]pyrene	50	43	**85 %**	40 - 140 %
193-39-5	Indeno[1,2,3-c,d]pyrene	50	39	**79 %**	40 - 140 %
53-70-3	Dibenzo[a,h]anthracene	50	38	**75 %**	40 - 140 %
191-24-2	Benzo[g,h,i]perylene	50	37	**74 %**	40 - 140 %

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	110	**56 %**	15 - 110 %
Phenol-d5	200	91	**45 %**	15 - 110 %
Nitrobenzene-d5	100	69	**69 %**	30 - 130 %
2-Fluorobiphenyl	100	77	**77 %**	30 - 130 %
2,4,6-Tribromophenol	200	160	**80 %**	15 - 110 %
Terphenyl-d14	100	79	**79 %**	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

q Recovery outside recommended limits.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: EPA Method 625
QC Batch ID: SV-1758-F
Matrix: Aqueous

Instrument ID: MS-3 HP 5890
Extracted: 10-13-05 23:50
Analyzed: 10-14-05 18:58
Analyst: JJT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
108-95-2	Phenol	BRL		ug/L	10
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	10
95-57-8	2-Chlorophenol	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-95-3	Nitrobenzene	BRL		ug/L	10
78-59-1	Isophorone	BRL		ug/L	10
88-75-5	2-Nitrophenol	BRL		ug/L	10
105-67-9	2,4-Dimethylphenol	BRL		ug/L	10
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	10
120-83-2	2,4-Dichlorophenol	BRL		ug/L	10
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	10
91-20-3	Naphthalene	BRL		ug/L	10
87-68-3	Hexachlorobutadiene	BRL		ug/L	10
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	10
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	10
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	10
91-58-7	2-Chloronaphthalene	BRL		ug/L	10
131-11-3	Dimethyl phthalate	BRL		ug/L	10
208-96-8	Acenaphthylene	BRL		ug/L	10
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	10
83-32-9	Acenaphthene	BRL		ug/L	10
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	10
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	10
84-66-2	Diethyl phthalate	BRL		ug/L	10
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	10
86-73-7	Fluorene	BRL		ug/L	10
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	10
86-30-6	N-Nitrosodiphenylamine†	BRL		ug/L	10
122-66-7	1,2-Diphenylhydrazine ◊	BRL		ug/L	10
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	10
118-74-1	Hexachlorobenzene	BRL		ug/L	10
87-86-5	Pentachlorophenol	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	10
206-44-0	Fluoranthene	BRL		ug/L	10
92-87-5	Benzidine	BRL		ug/L	10
129-00-0	Pyrene	BRL		ug/L	10
85-68-7	Butyl benzyl phthalate	BRL		ug/L	10
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	10
56-55-3	Benzo[a]anthracene	BRL		ug/L	10
218-01-9	Chrysene	BRL		ug/L	10

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 625	Instrument ID:	MS-3 HP 5890
QC Batch ID:	SV-1758-F	Extracted:	10-13-05 23:50
Matrix:	Aqueous	Analyzed:	10-14-05 18:58
		Analyst:	JJT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	10
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	10
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	10
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	10
50-32-8	Benzo[a]pyrene	BRL		ug/L	10
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	10
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	10
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	94	47 %	15 - 110 %
Phenol-d5	200	73	37 %	15 - 110 %
Nitrobenzene-d5	100	56	56 %	30 - 130 %
2-Fluorobiphenyl	100	62	62 %	30 - 130 %
2,4,6-Tribromophenol	200	140	68 %	15 - 110 %
Terphenyl-d14	100	75	75 %	30 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, US EPA, 40 C.F.R. 136, Appendix A, (1986).

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.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WL	Analyzed:	10-12-05 21:03	Analyzed:	10-12-05 21:32
Matrix:	Aqueous	Analyst:	CCT	Analyst:	CCT
Units:	ug/L				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	9.9	99 %	10	11	106 %	6 %	70 - 130 %	25%
74-87-3	Chloromethane	10	9.1	91 %	10	9.3	93 %	2 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	9.3	93 %	10	9.7	97 %	5 %	70 - 130 %	25%
74-83-9	Bromomethane	10	8.7	87 %	10	8.8	88 %	2 %	70 - 130 %	25%
75-00-3	Chloroethane	10	9.5	95 %	10	9.7	97 %	2 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	8.3	83 %	10	9.5	95 %	13 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	20	102 %	20	20	102 %	1 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	9.2	92 %	10	9.7	97 %	6 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	20	102 %	20	21	105 %	3 %	70 - 130 %	25%
67-64-1	Acetone	20	21	104 %	20	21	104 %	0 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	19	96 %	20	20	98 %	2 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	9.5	95 %	10	9.1	91 %	4 %	70 - 130 %	25%
156-60-5	*trans*-1,2-Dichloroethene	10	9.5	95 %	10	9.5	95 %	0 %	70 - 130 %	25%
1634-04-4	Methyl *tert*-butyl Ether (MTBE)	10	9.8	98 %	10	9.7	97 %	1 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	9.3	93 %	10	9.7	97 %	4 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	8.7	87 %	10	9.3	93 %	7 %	70 - 130 %	25%
156-59-2	*cis*-1,2-Dichloroethene	10	9.6	96 %	10	10	100 %	4 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	23	115 %	20	22	109 %	5 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	10	103 %	10	10	102 %	1 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	23	116 %	20	20	101 %	14 %	70 - 130 %	25%
67-66-3	Chloroform	10	9.4	94 %	10	10	100 %	5 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	8.9	89 %	10	9.7	97 %	8 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	8.6	86 %	10	9.6	96 %	11 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	10	101 %	10	10	105 %	3 %	70 - 130 %	25%
71-43-2	Benzene	10	9.8	98 %	10	10	102 %	4 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	9.9	99 %	10	10	101 %	2 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	9.6	96 %	10	10	103 %	8 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	9.9	99 %	10	10	102 %	3 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	10	101 %	10	10	102 %	1 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	10	104 %	10	11	109 %	4 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	160	82 %	200	160	78 %	6 %	70 - 130 %	25%
10061-01-5	*cis*-1,3-Dichloropropene	10	9.8	98 %	10	10	101 %	3 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	21	106 %	20	21	103 %	3 %	70 - 130 %	25%
108-88-3	Toluene	10	10	101 %	10	11	108 %	7 %	70 - 130 %	25%
10061-02-6	*trans*-1,3-Dichloropropene	10	11	110 %	10	11	109 %	1 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	106 %	10	10	103 %	3 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	10	104 %	10	11	110 %	6 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	11	109 %	10	11	106 %	3 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	23	116 %	20	23	113 %	3 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	11	110 %	10	11	107 %	3 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	11	107 %	10	11	110 %	2 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	9.8	98 %	10	10	101 %	3 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	9.9	99 %	10	10	100 %	2 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	11	108 %	10	11	113 %	4 %	70 - 130 %	25%
108-38-3/106-42-3	*meta*-Xylene and *para*-Xylene	20	21	106 %	20	22	110 %	3 %	70 - 130 %	25%
95-47-6	*ortho*-Xylene	10	10	101 %	10	10	104 %	4 %	70 - 130 %	25%
100-42-5	Styrene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
75-25-2	Bromoform	10	12	116 %	10	11	110 %	6 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	11	106 %	10	11	110 %	4 %	70 - 130 %	25%

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-4 HP 6890	Instrument ID:	MS-4 HP 6890
QC Batch ID:	VM4-3311-WL	Analyzed:	10-12-05 21:03	Analyzed:	10-12-05 21:32
Matrix:	Aqueous	Analyst:	CCT	Analyst:	CCT
Units:	ug/L				

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
108-86-1	Bromobenzene	10	11	111 %	10	11	112 %	2 %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	11	111 %	10	11	108 %	3 %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	12	117 %	10	11	107 %	9 %	70 - 130 %	25%
103-65-1	*n*-Propylbenzene	10	11	111 %	10	12	116 %	5 %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	11	112 %	10	11	113 %	1 %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	108 %	10	11	112 %	3 %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	11	108 %	10	11	110 %	2 %	70 - 130 %	25%
98-06-6	*tert*-Butylbenzene	10	11	105 %	10	11	110 %	4 %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	108 %	10	11	111 %	2 %	70 - 130 %	25%
135-98-8	*sec*-Butylbenzene	10	11	111 %	10	12	116 %	5 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	104 %	10	11	108 %	4 %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	11	112 %	10	12	116 %	4 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	11	105 %	10	11	108 %	2 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
104-51-8	*n*-Butylbenzene	10	11	107 %	10	11	112 %	5 %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	12	116 %	10	11	106 %	8 %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	8.7	87 %	10	8.9	89 %	2 %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	11	107 %	10	11	111 %	4 %	70 - 130 %	25%
91-20-3	Naphthalene	10	8.4	84 %	10	8.5	85 %	1 %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	8.5	85 %	10	8.7	87 %	2 %	70 - 130 %	25%
75-65-0	*tert*-Butyl Alcohol (TBA)	200	280	140 % q	200	220	110 %	24 %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	9.7	97 %	10	10	100 %	3 %	70 - 130 %	25%
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	10	9.5	95 %	10	9.4	94 %	1 %	70 - 130 %	25%
994-05-8	*tert*-Amyl Methyl Ether (TAME)	10	9.2	92 %	10	9	90 %	2 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	8.5	85 %	10	8.1	81 %		70 - 130 %
1,2-Dichloroethane-d_4	10	9.4	94 %	10	9.5	95 %		70 - 130 %
Toluene-d_8	10	9.2	92 %	10	9.3	93 %		70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	10	9.2	92 %		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: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **EPA Method 8260B**
QC Batch ID: **VM4-3311-WB**
Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
Analyzed: **10-12-05 22:01**
Analyst: **CCT**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	BRL		ug/L	0.5
95-47-6	*ortho*- Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5

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GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: EPA Method 8260B
QC Batch ID: VM4-3311-WB
Matrix: Aqueous

Instrument ID: MS-4 HP 6890
Analyzed: 10-12-05 22:01
Analyst: CCT

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	*n*-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	*tert*-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	*sec*-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	*n*-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	8.3	83 %	70 - 130 %
1,2-Dichloroethane-d_4	10	8.8	88 %	70 - 130 %
Toluene-d_8	10	8.8	88 %	70 - 130 %
4-Bromofluorobenzene	10	9.3	93 %	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.

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

Category: **Inorganics**
Matrix: **Aqueous**
Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 9012A	TCN-1113-W	EPA 9012A	10/11/2005 11:00	10/12/2005 9:03	Lachat 8000 Autoanalyzer	AVB
LCSD	EPA 9012A	TCN-1113-W	EPA 9012A	10/11/2005 11:00	10/12/2005 9:04	Lachat 8000 Autoanalyzer	AVB

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Cyanide, Total	0.45	0.46	102%	0.45	0.47	104%	1 %	80-120%	20 %	EPA 9012A

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	mg/L	80	80	**100 %**	80 - 120 %	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	MW
Chlorine, Total Residual	mg/L	1	1	**97 %**	80 - 120 %	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	mg/L	0.1	0.1	**98 %**	80 - 120 %	10-07-05 00:00	HC-0230-W	EPA 7196A	1	JK
Oil and Grease, Total	mg/L	40	41	**103 %**	78 - 114 %	10-12-05 00:00	HO-0194-W	EPA 1664	3	JK

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: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

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GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category: **Inorganic Chemistry**
Matrix: **Aqueous**

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	BRL	mg/L	10	10-07-05 11:51	TSS-1143-W	SM 2540 D	3	MW
Chlorine, Total Residual	BRL	mg/L	0.2	10-07-05 20:30	TRC-0362-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	BRI	mg/L	0.01	10-07-05 00:00	HC-0230-W	EPA 7196A	1	JK
Oil and Grease, Total	BRL	mg/L	5	10-12-05 00:00	HO-0194-W	EPA 1664	3	JK
Cyanide, Total	BRL	mg/L	0.01	10-12-05 09:03	TCN-1113-W	EPA 9012A	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.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 8011	Instrument ID:	GC-5 HP 5890
QC Batch ID:	PV-0796-E	Extracted:	10-11-05 09:00
Matrix:	Aqueous	Analyzed:	10-11-05 16:29
Units:	ug/L	Analyst:	CRL

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.21	**102 %**	**106 %**	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.20	0.21	0.22	**106 %**	**108 %**	70 - 130 %

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

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 8011	Instrument ID:	GC-5 HP 5890
QC Batch ID:	PV-0796-E	Extracted:	10-11-05 09:00
Matrix:	Aqueous	Analyzed:	10-11-05 18:41
		Analyst:	CRL

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

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.

GROUNDWATER ANALYTICAL

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states. Copies of our current certificates may be obtained from our website:

http://www.groundwateranalytical.com/qualifications.htm

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
http://www.floridadep.org/labs/qa/dohforms.htm

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
http://www.state.me.us/dhs/eng/water/Compliance.htm

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
http://www.des.state.nh.us/asp/NHELAP/labsview.asp

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
http://www.wadsworth.org/labcert/elap/comm.html

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
http://www.dep.state.pa.us/Labs/Registered/

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
http://www.vermontdrinkingwater.org/wsops/labtable.PDF

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