ecs WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

997 Millbury Street, Unit G, Worcester, MA 01607 tel 508.756.0151 fax 508.757.7063 www.ecsconsult.com

MAG910356

April 10, 2008
Project No. 93-201065.01

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 of Intent
Exxon Division of Cumberland Farms, Inc.
Cumberland Farms Store # 70045
344 Turnpike Road
Southborough, MA

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) 756-0151.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Aaron Kaczowka

Aaron Kaczowka
Environmental Scientist

cc: Chris Johnson, Cumberland Farms, Inc., 777 Dedham Street, Canton, MA 02021
Robert Kubit, MADEP, Division of Watershed Management, 627 Main Street, Worcester, MA 01608
ECS Reimbursement File
ECS General File

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:** Gulf-CFI Gas Station		**Facility/site address:**	
Location of **facility/site:** longitude: 71°33'4" W latitude: 42°17'24" N	Facility SIC code(s): 5541	Street: 344 Turnpike Road	
b) Name of **facility/site owner:** Cumberland Farms Inc.		Town: Southborough	
Email address of owner: CJohnson@cumberlandfarms.com		State: MA	Zip: 01772 / County: Worcester
Telephone no. of facility/site **owner:** (781) 828-4900 x 3415			
Fax no. of facility/site **owner:** (781) 575-9536		**Owner** is (check one): 1. Federal____ 2. State/Tribal____ 3. Private ✓ 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) 756-0151		
	Operator fax no.: (508) 757-7063	**Operator** email: akaczowka@ecsconsult.com	
Operator contact name and title: Aaron Kaczowka, Environmental Scientist			
Address of **operator** (if different from owner):	Street: 997 Millbury Street, Unit 6		
Town: Worcester	State: MA	Zip: 01607	County: Worcester

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

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

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes___ No ✓ If "yes," please list: 1. site identification # assigned by the state of NH or MA: 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number:	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y___ N ✓, if Y, number: 2. phase I or II construction storm water general permit? Y___ N ✓, if Y, number: 3. individual NPDES permit? Y___ N ✓, if Y, number: 4. any other water quality related permit? Y___ N ✓, if Y, number:

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:
Gas Station upgrading USTs, discharge associated with dewatering during UST excavation/replacement

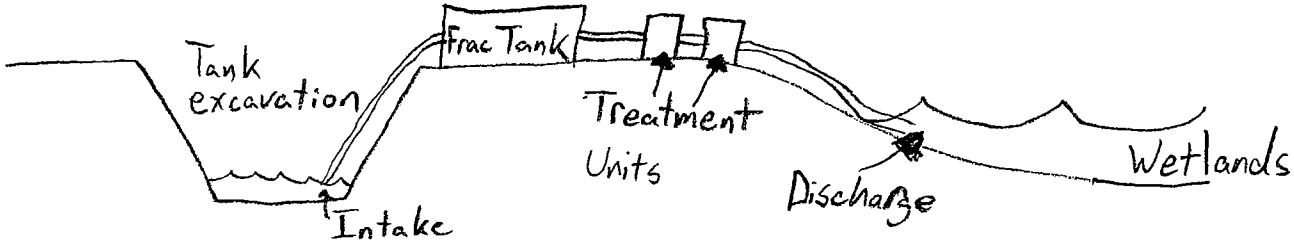
b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft3/s)? Max. flow 0.1115 Average flow 0.08 Is maximum flow a **design value**? Y___ N ✓ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.

3) Latitude and longitude of each discharge within 100 feet: pt.1:long. 71°33'4"W lat. 42°17'24"N; 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):	5) Is the discharge intermittent ✓ or seasonal_____? Is discharge ongoing Yes ____ No_____?__

c) Expected dates of discharge (mm/dd/yy): start 5/5/08 end 6/5/08

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



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

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

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

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		X	1	Grab	SM 2540D	20,000	550,000	154.8	550,000	154.8
2. Total Residual Chlorine	X		1	Grab	SM 4500CLG	200	<200	0	<200	0
3. Total Petroleum Hydrocarbons	X		1	Grab	EPA 1664	5,000	<5,000	0	<5,000	0
4. Cyanide	X		1	Grab	EPA 9012A	10	<10	0	<10	0
5. Benzene		X	1	Grab	EPA 8260B	0.5	47	0.013	47	0.013
6. Toluene		X	1	Grab	EPA 8260B	0.5	47	0.013	47	0.013
7. Ethylbenzene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
8. (m,p,o) Xylenes		X	1	Grab	EPA 8260B	1.0	<1.3	0.002	<1.3	0.002
9. Total BTEX[4]		X	1	Grab	EPA 8260B	2.5	<95.8	0.028	<95.8	0.028

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/L)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide [5] (1,2- Dibromo-methane)	X		1	Grab	EPA 8011	0.02	<0.02	0	<0.02	0
11. Methyl-tert-Butyl Ether (MtBE)		X	1	Grab	EPA 8260B	0.5	2	0.0005	2	0.0005
12. tert-Butyl Alcohol (TBA)	X		1	Grab	EPA 8260B	20	<20	0	<20	0
13. tert-Amyl Methyl Ether (TAME)		X	1	Grab	EPA 8260B	0.5	0.6	0.0001	0.6	0.0001
14. Naphthalene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
15. Carbon Tetra-chloride	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
16. 1,4 Dichlorobenzene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
17. 1,2 Dichlorobenzene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
18. 1,3 Dichlorobenzene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
19. 1,1 Dichloroethane	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
20. 1,2 Dichloroethane	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
21. 1,1 Dichloroethylene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
22. cis-1,2 Dichloro-ethylene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0
23. Dichloromethane (Methylene Chloride)	X		1	Grab	EPA 8260B	3	<3	0	<3	0
24. Tetrachloroethylene	X		1	Grab	EPA 8260B	0.5	<0.5	0	<0.5	0

[5] EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	X		1	Grab	EPA8260B	0.5	<0.5	0	<0.5	0
26. 1,1,2 Trichloroethane	X		1	Grab	EPA8260B	0.5	<0.5	0	<0.5	0
27. Trichloroethylene	X		1	Grab	EPA8260B	0.5	<0.5	0	<0.5	0
28. Vinyl Chloride	X		1	Grab	EPA8260B	0.5	<0.5	0	<0.5	0
29. Acetone	X		1	Grab	EPA8260B	10	<10	0	<10	0
30. 1,4 Dioxane	X		1	Grab	EPA8260B	500	<500	0	<500	0
31. Total Phenols	X		1	Grab	EPA 625	10	<10	0	<10	0
32. Pentachlorophenol	X		1	Grab	EPA625	10	<10	0	<10	0
33. Total Phthalates [6] (Phthalate esthers)	X		1	Grab	EPA625	10	<10	0	<10	0
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	X		1	Grab	EPA625	10	<10	0	<10	0
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	X		1	Grab	EPA625	10	<10	0	<10	0
a. Benzo(a) Anthracene	X		1	Grab	EPA625	10	<10	0	<10	0
b. Benzo(a) Pyrene	X		1	Grab	EPA625	10	<10	0	<10	0
c. Benzo(b)Fluoranthene	X		1	Grab	EPA625	10	<10	0	<10	0
d. Benzo(k) Fluoranthene	X		1	Grab	EPA625	10	<10	0	<10	0
e. Chrysene	X		1	Grab	EPA625	10	<10	0	<10	0

[6] The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	X		1	Grab	EPA 625	10	<10	0	<10	0
g. Indeno(1,2,3-cd) Pyrene	X		1	Grab	EPA 625	10	<10	0	<10	0
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	X		1	Grab	EPA625	10	<10	0	<10	0
h. Acenaphthene	X		1	Grab	EPA 625	10	<10	0	<10	0
i. Acenaphthylene	X		1	Grab	EPA 625	10	<10	0	<10	0
j. Anthracene	X		1	Grab	EPA625	10	<10	0	<10	0
k. Benzo(ghi) Perylene	X		1	Grab	EPA625	10	<10	0	<10	0
l. Fluoranthene	X		1	Grab	EPA 625	10	<10	0	<10	0
m. Fluorene	X		1	Grab	EPA 625	10	<10	0	<10	0
n. Naphthalene-	X		1	Grab	EPA 625	10	<10	0	<10	0
o. Phenanthrene	X		1	Grab	EPA 625	10	<10	0	<10	0
p. Pyrene	X		1	Grab	EPA 625	10	<10	0	<10	0
37. Total Polychlorinated Biphenyls (PCBs)	X		1	Grab	EPA 608	0.2	<0.2	0	<0.2	0
38. Antimony	X		1	Grab	EPA6020A	60	<60	0	<60	0
39. Arsenic	X		1	Grab	EPA6020A	30	<30	0	<30	0
40. Cadmium	X		1	Grab	EPA6010B	4	<4	0	<4	0
41. Chromium III	X		1	Grab	EPA 6010B	10	<10	0	<10	0
42. Chromium VI	X		1	Grab	EPA7196A	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	EPA 6010B	25	<25	0	<25	0
44. Lead		X	1	Grab	EPA 6010B	5	6	0.0014	6	0.0014
45. Mercury	X		1	Grab	EPA 7470A	0.2	<0.2	0	<0.2	0
46. Nickel	X		1	Grab	EPA 6010B	40	<40	0	<40	0
47. Selenium	X		1	Grab	EPA 6020A	50	<50	0	<50	0
48. Silver	X		1	Grab	EPA 6010B	7	<7	0	<7	0
49. Zinc	X		1	Grab	EPA 6010B	200	<200	0	<200	0
50. Iron		X	1	Grab	EPA 6010B	100	1,500	0.35	1,500	0.35
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 [✓] N [ ]	If yes, which metals? Lead, Iron
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: Lead, Iron DF: 1.81 $DF = \frac{0.1115 + 0.0905}{0.1115} = 1.81$	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: Lead, Iron

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system: H_2O will be pumped to a frac tank, from the excavation, then through two GAC units and bag filters.						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank ✓	Air stripper	Oil/water separator	Equalization tanks	Bag filter ✓	GAC filter ✓
	Chlorination	Dechlorination	Other (please describe):			
c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system: Average flow rate of discharge 40 Maximum flow rate of treatment system 50 Design flow rate of treatment system _____						
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____	River/brook____	Wetlands ✓	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: Treated groundwater will be directly discharged to a 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. No sanitary sewer in Southborough						
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 ✓
Has any consultation with the federal services been completed ? Yes___ No ✓ or is consultation underway? Yes ____ No ✓
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):
a "no jeopardy" opinion? _____or written concurrence____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

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

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.

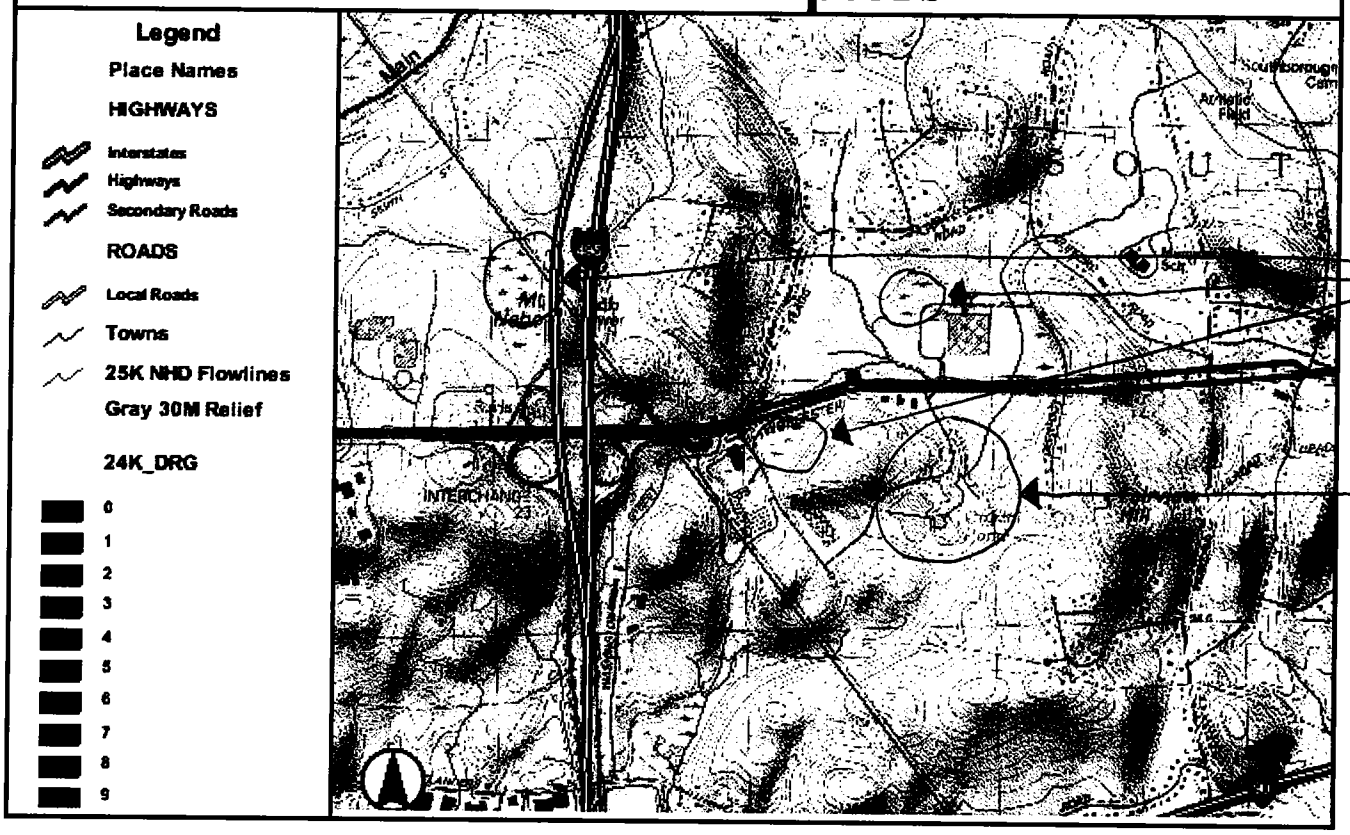
Facility/Site Name: Gulf - CFI Gas Station

Operator signature: Aaron Kagaoka

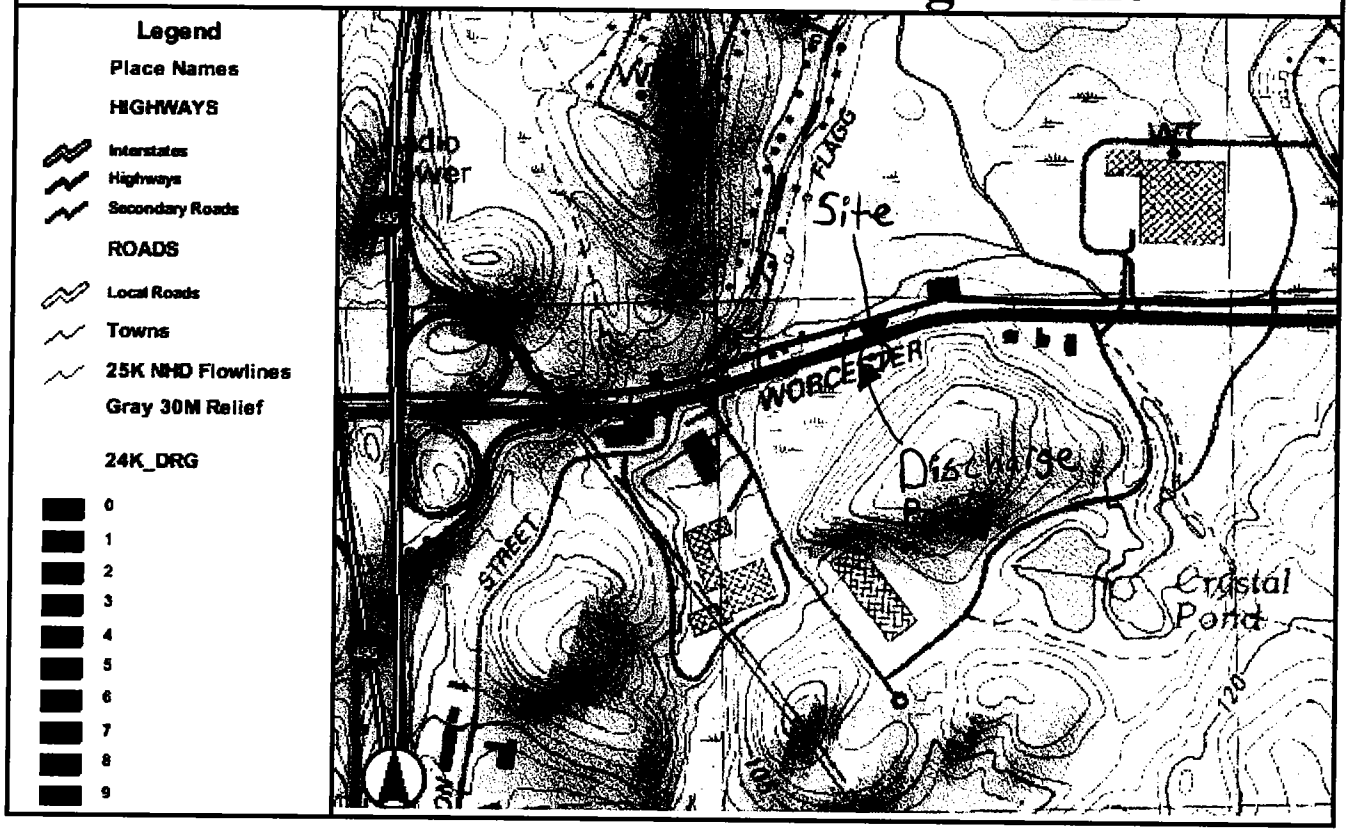
Title: Environmental Scientist

Date: 4-10-08

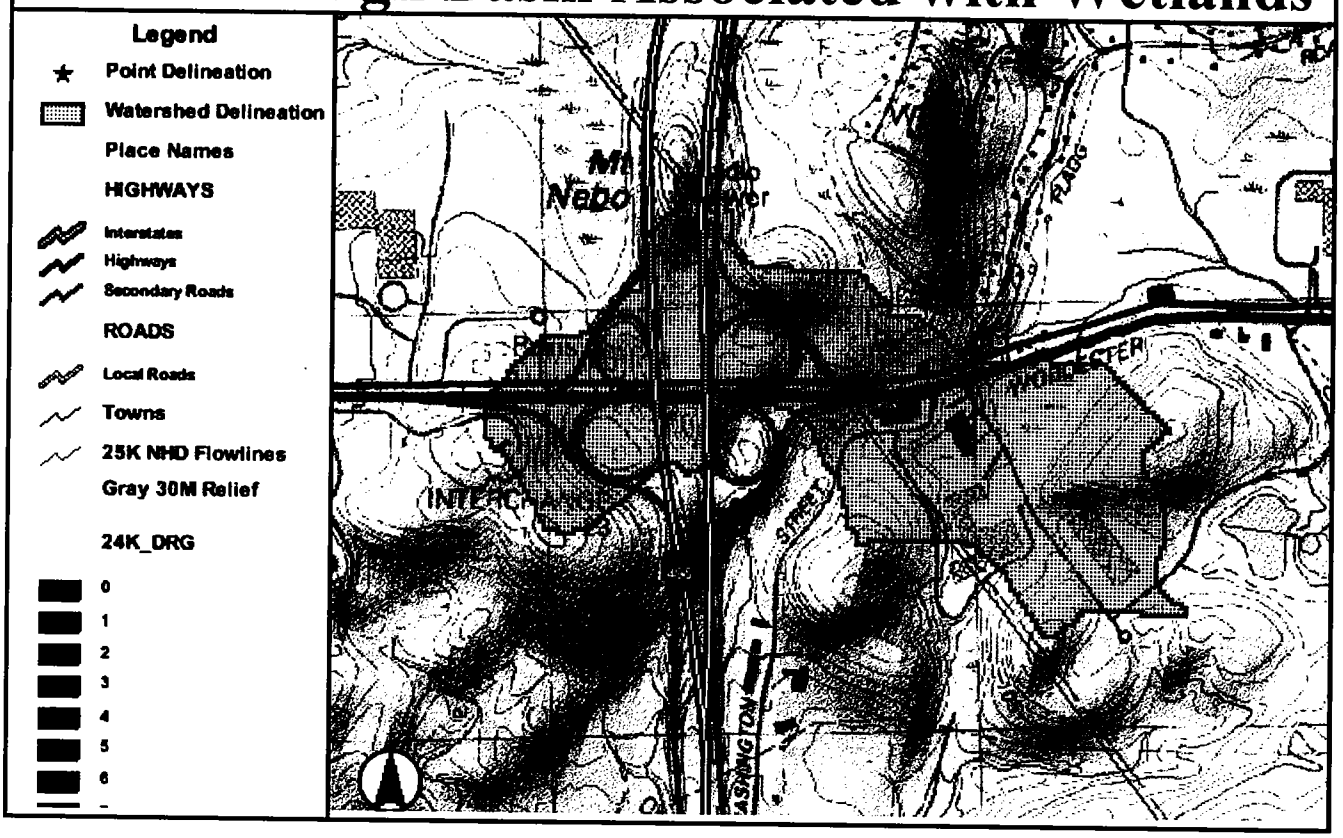
Sensitive Receptors



Site Location and Discharge Point



Southborough Basin Associated with Wetlands



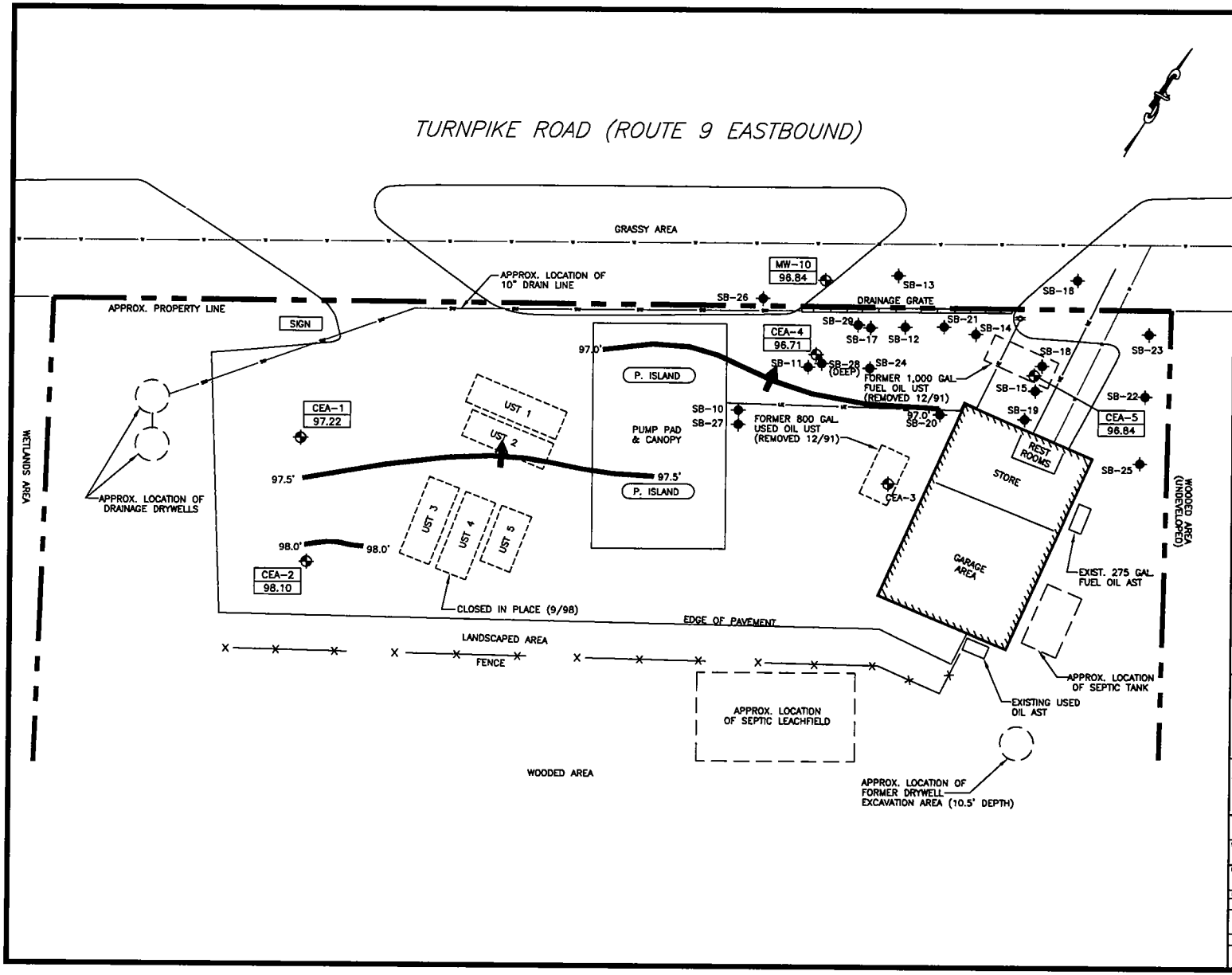
Streamflow Statistics Report

Date: Wed Apr 9 2008 14:08:03
Site Location: Massachusetts
Drainage Area: 0.29 mi2
Latitude (NAD83): 42.2895 (42 17 22)
Longitude (NAD83): -71.5557 (-71 33 20)

Low Flow Basin Characteristics			
100% Statewide Low Flow (0.29 mi2)			
Parameter	**Value**	**Min**	**Max**
Drainage Area (square miles)	0.29 (below min value 1.61)	1.61	149
Mean Basin Slope from 250K DEM (percent)	3.12	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	2.21 (above max value 1.29)	0	1.29
Massachusetts Region (dimensionless)	0	0	1

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

Streamflow Statistics					
Statistic	**Flow (ft^3/s)**	**Prediction Error (percent)**	**Equivalent years of record**	**90-Percent Prediction Interval**	
				Minimum	**Maximum**
D50	0.27				
D60	0.23				
D70	0.22				
D75	0.19				
D80	0.3				
D85	0.24				
D90	0.31				
D95	0.17				
D98	0.11				
D99	0.0763				
Low-Flow Statistics					
M7D2Y	0.12				
AUGD50	0.25				
M7D10Y	0.0905				



Legend

- Approximate Property Line
- Storm Sewer Line
- Water Line
- Underground Electric Line
- Natural Gas Line
- Light Pole
- Groundwater Monitoring Well
- Soil Boring
- MW-10 / 96.84 — Monitoring Well ID / Water Table Elevation
- 98.0' — Water Table Contour (Dashed where inferred)
- Flow Direction Indicator

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.

Base map compiled from Corporate Environmental Advisors, Site Plan (7/22/03) and the Town of Southborough Assessor's records.

Horizontal, and vertical locations of wells, and selected site features determined through measurements made by representatives of CEA.

Water table elevation are based on an assumed benchmark of 100 feet.

Water table elevations are based on measurements made on 9/30/04.

Water table contours, and flow directions assume homogenous, isotropic aquifer conditions, and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points, and inferred in other areas.

ecs
27A Midstate Drive, Suite 216 • Auburn, MA 01501
Phone: 508-832-8022 Fax: 508-832-8023

PROJECT:
EXXON DIV. of CFI FACILITY #70045
344 TURNPIKE ROAD
SOUTHBOROUGH, MASSACHUSETTS

TITLE:
GROUNDWATER CONTOUR PLAN (9/30/2004)

CLIENT:
CUMBERLAND FARMS, INC.

GRAPHIC SCALE: 20 10 0 10 20

COMPUTER CADFILE: "sitemap.dgn"

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JH	JH/ML	SS	ML
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=20'	NOV. 2004	93-201065.00	3

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

March 19, 2008

Mr. Matt Lyne
Environmental Compliance Services, Inc.
997 Milbury St
Worcester, MA 01607

LABORATORY REPORT

Project: **344 Turnpike Road, Southborough/93-201065.00**
Lab ID: **115634**
Received: **03-14-08**

Dear Matt:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 3 Business Day 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 or NVLAP standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. 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/ker
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project: **344 Turnpike Road, Southborough/93-201065.(**
Client: **Environmental Compliance Services, Inc.**
Lab ID: **115634**

Delivery: **GWA Courier**
Airbill: **n/a**
Lab Receipt: **03-14-08**

Temperature: **3.7°C**
Chain of Custody: **Present**
Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-1	CEA-2		Aqueous	3/13/08 17:20	EPA 8260B Volatile Organics with Oxygenates				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1012591	40 mL VOA Vial	Proline	BX28393	HCL	R-5235A	10-18-07	10-24-07		
C1012590	40 mL VOA Vial	Proline	BX28393	HCL	R-5235A	10-18-07	10-24-07		
C1012582	40 mL VOA Vial	Proline	BX28393	HCL	R-5235A	10-18-07	10-24-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-2	CEA-2		Aqueous	3/13/08 17:20	EPA 8011 EDB and DBCP by GC/ECD				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C996409	40 mL VOA Vial	Proline	BX28261	None	n/a	n/a	09-07-07		
C996408	40 mL VOA Vial	Proline	BX28261	None	n/a	n/a	09-07-07		
C996407	40 mL VOA Vial	Proline	BX28261	None	n/a	n/a	09-07-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-3	CEA-2		Aqueous	3/13/08 17:20	EPA 625 Semivolatile Organics				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1018093	1 L Amber Glass	Proline	BX28751	None	n/a	n/a	10-23-07		
C1018088	1 L Amber Glass	Proline	BX28751	None	n/a	n/a	10-23-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-4	CEA-2		Aqueous	3/13/08 17:20	EPA 608 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1018090	1 L Amber Glass	Proline	BX28751	None	n/a	n/a	10-23-07		
C1018087	1 L Amber Glass	Proline	BX28751	None	n/a	n/a	10-23-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-5	CEA-2		Aqueous	3/13/08 17:20	EPA 1664 Hexane Extractable Material				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C997582	1 L Amber Glass	Proline	BX28241	H2SO4	R-5405A	09-05-07	09-07-07		
C997581	1 L Amber Glass	Proline	BX28241	H2SO4	R-5405A	09-05-07	09-07-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-6	CEA-2		Aqueous	3/13/08 17:20	EPA 6010B Ag Cd Cr Cu Fe Ni Pb Zn Total EPA 6020A As Sb Se Total EPA 7470A Mercury by CVAA Total EPA 7196/EPA 6010 Trivalent Chromium				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1050181	250 mL Plastic	Proline	BX28946	HNO3	R-5458D	11-06-07	12-05-07		
C1050075	250 mL Plastic	Proline	BX28946	HNO3	R-5458D	11-06-07	12-05-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-7	CEA-2		Aqueous	3/13/08 17:20	EPA 7196A Hexavalent Chromium				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C931611	500 mL Plastic	Proline	BX28279	None	n/a	n/a	09-07-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-8	CEA-2		Aqueous	3/13/08 17:20	SM 4500-Cl G Total Residual Chlorine				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C931666	500 mL Plastic	Proline	BX28279	None	n/a	n/a	09-07-07		

GROUNDWATER ANALYTICAL

Sample Receipt Report (Continued)

Project: **344 Turnpike Road, Southborough/93-201065.(**
Client: **Environmental Compliance Services, Inc.**
Lab ID: **115634**

Delivery: **GWA Courier**
Airbill: **n/a**
Lab Receipt: **03-14-08**

Temperature: **3.7°C**
Chain of Custody: **Present**
Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-9	CEA-2		Aqueous	3/13/08 17:20	SM 2540 D Total Suspended Solids				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C931647	500 mL Plastic	Proline	BX28279	None	n/a	n/a	09-07-07		
C1041802	500 mL Plastic	Proline	BX29068	None	n/a	n/a	12-05-07		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
115634-10	CEA-2		Aqueous	3/13/08 17:20	EPA 9012A Total Cyanide				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C1088178	500 mL Plastic	n/a	n/a	NaOH	n/a	n/a	n/a		

GROUNDWATER ANALYTICAL

Data Certification

Project:	**344 Turnpike Road, Southborough/93-201065.00**	Lab ID:	**115634**
Client:	**Environmental Compliance Services, Inc.**	Received:	**03-14-08 19:00**

MA DEP Compendium of Analytical Methods

Project Location: **n/a** MA DEP RTN: **n/a**

This Form provides certifications for the following data set:

EPA 8260B:	115634-1
EPA 6010B:	115634-6
EPA 6020A:	115634-6
EPA 9012A:	115634-10
EPA 7196A:	115634-7

Sample Matrices:	Groundwater (X)	Soil/Sediment ( )	Drinking Water ( )	Other ( )		
MCP SW-846 Methods Used	8260B (X)	8151A ( )	8330 ( )	6010B (X)	7470A/1A ( )	
	8270C ( )	8081A ( )	VPH ( )	6020A (X)	9012A[2] (X)	
As specified in MA DEP Compendium of Analytical Methods. (check all that apply)	8082 ( )	8021B ( )	EPH ( )	7000 S[3] (X)	Other ( )	

1. List Release Tracking Number (RTN), if known.
2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method
3. S - SW-846 Methods 7000 Series. List individual method and analyte.

An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.

A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?	Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data* ?	Yes
D.	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	Yes

A response to questions E and F below is required for "Presumptive Certainty" status.

E.	Were all QC performance standards and recommendations for the specified methods achieved?	No
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?	No

All No answers are addressed in the attached Project Narrative.

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

Signature:		Position:	Operations Manager
Printed Name:	Eric H. Jensen	Date:	03-19-08

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	CEA-2	Matrix:	Aqueous
Project:	344 Turnpike Road, Southborough/93-201065.00	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	HCl/ Cool
Laboratory ID:	115634-1	QC Batch ID:	VM7-2830-W
Sampled:	03-13-08 17:20	Instrument ID:	MS-7 HP 6890
Received:	03-14-08 19:00	Sample Volume:	25 mL
Analyzed:	03-18-08 09:11	Dilution Factor:	1
Analyst:	LMG		

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	3
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	**2**		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	**47**		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	0.4
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	**47**		ug/L	0.5
10061-02-6	*trans*- 1,3-Dichloropropene	BRL		ug/L	0.4
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	**0.8**		ug/L	0.5
95-47-6	*ortho*- Xylene	BRL		ug/L	0.5

GROUNDWATER ANALYTICAL

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

Field ID:	CEA-2	Matrix:	Aqueous
Project:	344 Turnpike Road, Southborough/93-201065.00	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	HCl/ Cool
Laboratory ID:	115634-1	QC Batch ID:	VM7-2830-W
Sampled:	03-13-08 17:20	Instrument ID:	MS-7 HP 6890
Received:	03-14-08 19:00	Sample Volume:	25 mL
Analyzed:	03-18-08 09:11	Dilution Factor:	1
Analyst:	LMG		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
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
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)	**0.6**		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	12	**120 %**	70 - 130 %
1,2-Dichloroethane-d_4	10	11	**112 %**	70 - 130 %
Toluene-d_8	10	12	**118 %**	70 - 130 %
4-Bromofluorobenzene	10	10	**103 %**	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 8011
EDB and DBCP by GC/ECD

Field ID:	CEA-2	Matrix:	Aqueous
Project:	344 Turnpike Road, Southborough/93-201065.00	Container:	40 mL VOA Vial
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	115634-02	QC Batch ID:	PV-0904-E
Sampled:	03-13-08 17:20	Instrument ID:	GC-5 HP 5890
Received:	03-14-08 19:00	Sample Volume:	34 mL
Extracted:	03-16-08 16:00	Final Volume:	1 mL
Analyzed:	03-16-08 19:24	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

EPA Method 625
Semivolatile Organics by GC/MS

Field ID:	CEA-2	Matrix:	Aqueous
Project:	344 Turnpike Road, Southborough/93-201065.00	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	115634-03	QC Batch ID:	SV-2214-F
Sampled:	03-13-08 17:20	Instrument ID:	MS-12 Agilent 6890
Received:	03-14-08 19:00	Sample Volume:	1,000 mL
Extracted:	03-17-08 17:30	Final Volume:	1 mL
Analyzed:	03-18-08 21:00	Dilution Factor:	1
Analyst:	MJB		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
110-86-1	Pyridine	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
62-53-3	Aniline	BRL		ug/L	10
124-18-5	n-Decane (C10)	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
95-48-7	2-Methylphenol	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
108-39-4/106-44-5	3 and 4-Methylphenol	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-86-2	Acetophenone	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
65-85-0	Benzoic Acid	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
98-55-5	alpha-Terpineol	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
608-27-5	2,3-Dichloroaniline	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

GROUNDWATER ANALYTICAL

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

Field ID:	**CEA-2**	Matrix:	**Aqueous**
Project:	**344 Turnpike Road, Southborough/93-201065.00**	Container:	**1 L Amber Glass**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**115634-03**	QC Batch ID:	**SV-2214-F**
Sampled:	**03-13-08 17:20**	Instrument ID:	**MS-12 Agilent 6890**
Received:	**03-14-08 19:00**	Sample Volume:	**1,000 mL**
Extracted:	**03-17-08 17:30**	Final Volume:	**1 mL**
Analyzed:	**03-18-08 21:00**	Dilution Factor:	**1**
Analyst:	**MJB**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
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
593-45-3	n-Octadecane (C18)	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
86-74-8	Carbazole	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
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	75	**37 %**	15 - 110 %
Phenol-d5	200	65	**32 %**	15 - 110 %
Nitrobenzene-d5	100	57	**57 %**	30 - 130 %
2-Fluorobiphenyl	100	57	**57 %**	30 - 130 %
2,4,6-Tribromophenol	200	130	**63 %**	15 - 110 %
Terphenyl-d14	100	56	**56 %**	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:	CEA-2	Matrix:	Aqueous
Project:	344 Turnpike Road, Southborough/93-201065.00	Container:	1 L Amber Glass
Client:	Environmental Compliance Services, Inc.	Preservation:	Cool
Laboratory ID:	115634-04	QC Batch ID:	PB-2419-F
Sampled:	03-13-08 17:20	Instrument ID:	GC-13 Agilent 6890
Received:	03-14-08 19:00	Sample Weight:	1000 mL
Extracted:	03-17-08 09:00	Final Volume:	1 mL
Cleaned Up:	03-17-08 14:00	Dilution Factor:	1
Analyzed:	03-18-08 13:55		
Analyst:	JXS		

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	0.18	92 %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.19	94 %	30 - 150 %
	Decachlorobiphenyl	0.20	0.14	68 %	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

Inorganic Chemistry

Field ID: **CEA-2** Matrix: **Aqueous**
Project: **344 Turnpike Road, Southborough/93-201065.00** Received: **03-14-08 19:00**
Client: **Environmental Compliance Services, Inc.**

Lab ID: **115634-05** Sampled: **03-13-08 17:20** 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	1000 mL	03-17-08 11:30	HO-0365-W	EPA 1664	3	MR

Lab ID: **115634-07** Sampled: **03-13-08 17:20** Container: **500 mL Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	BRL	mg/L	0.01	1	5 mL	03-17-08 14:00	HC-0125-W	EPA 7196A	2	JK

Lab ID: **115634-08** Sampled: **03-13-08 17:20** Container: **500 mL Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	BRL	mg/L	0.2	1	5 mL	03-15-08 13:00	TRC-0647-W	SM 4500-Cl G	2	LD

Lab ID: **115634-09** Sampled: **03-13-08 17:20** Container: **500 mL Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	**550**	mg/L	20	11	47 mL	03-18-08 14:11	TSS-1464-W	SM 2540 D	3	KG

Lab ID: **115634-10** Sampled: **03-13-08 17:20** 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	03-17-08 10:56	TCN-1403-W	EPA 9012A	1	LD

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: Thermo Electron Genesys 20

3 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

Trace Metals

Field ID:	**CEA-2**	Matrix:	**Aqueous**
Project:	**344 Turnpike Road, Southborough/93-201065.00**	Container:	**250 mL Plastic**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HNO3 / Cool**
Laboratory ID:	**115634-6**	Preserved:	**03-13-08 17:20**
Sampled:	**03-13-08 17:20**		
Received:	**03-14-08 19:00**		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6020A[1]	MB-3170-W	EPA 3010A	03-17-08 08:06	50 mL		MWR
EPA 6010B[2]	MB-3170-W	EPA 3010A	03-17-08 08:06	50 mL	ICP-1 PE 3000	MWR
EPA 7470A[3]	MP-2075-W	EPA 7470A	03-17-08 09:15	25 mL	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Total	BRL		mg/L	0.06	1	03-18-08 16:22	EPA 6020A[1]
7440-38-2	Arsenic, Total	BRL		mg/L	0.03	1	03-18-08 16:22	EPA 6020A[1]
7440-43-9	Cadmium, Total	BRL		mg/L	0.004	1	03-18-08 16:22	EPA 6010B[2]
7440-47-3	Chromium, Total	**0.04**		mg/L	0.01	1	03-18-08 16:22	EPA 6010B[2]
7440-50-8	Copper, Total	**0.057**		mg/L	0.025	1	03-18-08 16:22	EPA 6010B[2]
7439-89-6	Iron, Total	**48**		mg/L	0.1	1	03-18-08 16:22	EPA 6010B[2]
7439-92-1	Lead, Total	**0.35**		mg/L	0.005	1	03-18-08 16:22	EPA 6010B[2]
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	03-17-08 13:21	EPA 7470A[3]
7440-02-0	Nickel, Total	BRL		mg/L	0.04	1	03-18-08 16:22	EPA 6010B[2]
7782-49-2	Selenium, Total	BRL		mg/L	0.05	1	03-18-08 16:22	EPA 6020A[1]
7440-22-4	Silver, Total	BRL		mg/L	0.007	1	03-18-08 16:22	EPA 6010B[2]
7440-66-6	Zinc, Total	BRL		mg/L	0.2	1	03-18-08 16:22	EPA 6010B[2]

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

Report Notations:

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

DF Dilution Factor.

GROUNDWATER ANALYTICAL

Project Narrative

Project:	**344 Turnpike Road, Southborough/93-201065.00**	Lab ID:	**115634**
Client:	**Environmental Compliance Services, Inc.**	Received:	**03-14-08 19:00**

A. Documentation and Client Communication

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

1. No documentation discrepancies, changes, or amendments were noted.

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 6010B Note: Samples 115634-6. Samples were analyzed for selected target analytes, as requested by client.

2. EPA 625 Non-conformance: Sample 115634-03. Laboratory control sample (LCS) analyte Benzoic Acid was below recommended recovery limits for QC batch SV-2214-F.

GROUNDWATER ANALYTICAL

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Buzzards Bay, MA 02532
Telephone (508) 759-4441 • FAX (508) 759-4475
www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

Project Name: 344 Turnpike Road Southborough
Firm: ECS
Project Number: 93-20106500
Address: 997 Millbury St. Unit G
Sampler Name: A. Kaczowka
City / State / Zip: Worcester, MA, 01607
Project Manager: Matt Lyne
Telephone: (508) 756-0151

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

TURNAROUND

- ☐ STANDARD (10 Business Days)
- ☐ PRIORITY (5 Business Days)
- ☒ RUSH (RAN- 25) (Rush requires Rush Authorization Number)
- ☒ Please Email to: mlyne@ecsconsult.com
- ☐ Please FAX to:

BILLING

- ☐ Purchase Order No.:
- ☒ Third Party Billing:
- ☐ GWA Quote:

ANALYSIS REQUEST

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	Matrix: GROUNDWATER	DRINKING WATER	WASTEWATER	SOIL	OTHER SOLID	OILS/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)
3-13-08	15:20	CEA-2	X							X	19						6	2	5			X	X	X	X			X		X	

ANALYZE:

- OPTIONS: Volatiles ☐ TIC Search
- SDWA: ☐ 524.2
- NPDES: ☐ 624
- RCRA/CE: ☐ 8260 TCL+MTBE; ☐ 8260B; ☐ 8260 Aromatics; ☐ 8260B Halocarbons; ☐ 8260B Volatiles
- Semivolatiles: ☐ Acid Only; ☐ Base Only; ☐ TIC Search
- ☐ 625.2
- ☐ 625.1 PAHs only
- ☐ 8270D
- Pest/Herb/PCBs Extractable: ☐ 508; ☐ 508 Pesticides
- ☐ 525.1
- ☐ 608 PCBs
- ☐ 8081A Pesticides
- ☐ 8082 PCBs
- Pest/Herb/PCBs Vol.: ☐ 505
- ☐ 515.1
- ☐ 8151A Herbicides
- ☐ 8015 GRO/DRO
- ☐ 8260B/8260C
- Metals: Specify For Water Samples; ☐ Total; ☐ Dissolved
- ☐ 13 Priority Pollutant
- ☐ 8 RCRA
- ☐ 5 FICHA
- ☐ 14 MA DEP Metals
- ☐ 3 TAL
- ☐ Lead and Copper
- Petroleum Hydrocarbons Est. TPH: ☐ Diesel Range Organics (DRO) ☐ ME DRO
- ☐ CT ETPH
- ☐ MA DEP EPH w/all targets ☐ EPH Carbon Ranges only ☐ EPH w/ PAHs
- ☐ Hydrocarbon Fingerprint (GC/FID by ASTM D3328-96 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 ☐ VOA ☐ Semi VOA ☐ Pesticides ☐ Herbicides
- ☐ Corrosivity (as pH) ☐ Flash Temp ☐ Ignitability (as Flashpoint) ☐ Paint Filter
- ☐ MA Semi-Disperse Metals (TL, TPH, PCBs, 8 Metals, Corrosivity, Ignitability, Reactivity
- ☐ MA Extended Disposal (8260, 8270D, TPH, PCBs, 8 Metals, Corrosivity, Ignitability, Reactivity
- General Chemistry: ☐ Metals ☐ Metals ☐ Chloride ☐ Fluoride ☐ Sulfate
- ☐ Dissolved Phosphorus
- ☐ Ammonia ☐ TKN ☐ Total Phosphorus ☐ Total N (as NO3/NO2/TKN)
- ☐ 9014 Cyanide
- ☐ COD ☐ TOC
- ☐ BOD ☐ TOC ☐ TSS ☐ TS ☐ µ Alkalinity
- ☒ Total Cyanide ☐ Physiologically Available Cyanide ☐ Available Cyanide
- Other: ☐ pH ☐ Dissolved Oxygen ☐ Turbidity
- ☐ Total Coliform ☐ Fecal Coliform ☐ HPC
- ☐ MA DEP Adjusted (-54F) ☐ Adjusted (PLM)
- ☐ TPH by Gravimetric
- ☐ Hex Chrome
- ☐ Residual Chlorine

Preservation Method(s): Acid Cu, CEN, Cu, Hg, Ni, Se, Ag, Zinc, Pb

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	RCRA/CE	Semivolatiles	Pest/Herb/PCBs Extractable	Pest/Herb/PCBs Vol.	Metals	Petroleum Hydrocarbons	Haz. Waste	General Chemistry	Other	LABORATORY NUMBER
3-13-08	15:20	CEA-2		X	X	X	X			X	X	

REMARKS / SPECIAL INSTRUCTIONS

- ☒ YES ☐ NO MCP Data Certification required.
- ☐ YES ☒ NO MCP Drinking Water Sample Included. (Volatile analyses require duplicate collection and Trip Blanks).
- ☐ Analyze Duplicates and Trips Blanks only if positive results.
- ☐ YES ☒ NO CT RCP Data Certification required.

Signature: Aaron Kaczowka

DATA QUALITY OBJECTIVES

Regulatory Program

State	Standard	Deliverables
☐ CT	☐ MCP GW-1/S-1	☐ PWS Form
☐ ME	☐ MCP GW-2/S-2	☐ MWRA
☒ 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
Aaron Kaczowka			3-14-08 1514	3.7
Relinquished by:	**Date:**	**Time:**	**Received by:**	**Container Count:**
	3/14/08	1900		19
Relinquished by:	**Date:**	**Time:**	**Received by Laboratory:**	**Shipping/Airbill Number:**

Method of Shipment: ☒ GWA Courier ☐ Express Mail ☐ Federal Express ☐ UPS ☐ Hand D.

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

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	92	96	**105 %**	80 - 120 %	03-18-08 14:11	TSS-1464-W	SM 2540 D	3	KLG
Chlorine, Total Residual	mg/L	1	1	**100 %**	80 - 120 %	03-15-08 13:00	TRC-0647-W	SM 4500-Cl G	2	LD
Chromium, Hexavalent	mg/L	0.10	0.09	**94 %**	80 - 120 %	09-24-99 00:00	HC-0125-W	EPA 7196A	2	CS
Oil and Grease, Total	mg/L	40	36	**91 %**	78 - 114 %	03-17-08 11:30	HO-0365-W	EPA 1664	3	MR
Cyanide, Total	mg/L	0.45	0.42	**93 %**	80 - 120 %	03-17-08 22:56	TCN-1403-W	EPA 9012A	1	KLG

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: Thermo Electron Genesys 20

3 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

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-1403-W	EPA 9012A	3/17/2008 8:55	3/17/2008 23:26	Lachat 8000 Autoanalyzer	LD
LCSD	EPA 9012A	TCN-1403-W	EPA 9012A	3/17/2008 8:55	3/17/2008 23:28	Lachat 8000 Autoanalyzer	LD

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Cyanide, Total	0.45	0.42	93%	0.45	0.43	95%	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

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	2	03-18-08 14:11	TSS-1464-W	SM 2540 D	3	KLG
Chlorine, Total Residual	BRL	mg/L	0.2	03-15-08 13:00	TRC-0647-W	SM 4500-Cl G	2	LD
Chromium, Hexavalent	BRL	mg/L	0.01	09-24-99 00:00	HC-0125-W	EPA 7196A	2	CS
Oil and Grease, Total	BRL	mg/L	5	03-17-08 11:30	HO-0365-W	EPA 1664	3	MR
Cyanide, Total	BRL	mg/L	0.01	03-17-08 22:56	TCN-1403-W	EPA 9012A	1	KLG

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: Thermo Electron Genesys 20

3 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 608 PCBs	Instrument ID:	GC-13 Agilent 6890
QC Batch ID:	PB-2419-F	Extracted:	03-17-08 09:00
Matrix:	Aqueous	Cleaned Up:	03-17-08 14:00
Units:	ug/L	Analyzed:	03-18-08 13:31
		Analyst:	JXS

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
12674-11-2	Aroclor 1016	5.0	5.5	4.9	**110 %**	**98 %**	40 - 140 %
11096-85-5	Aroclor 1260	5.0	5.3	4.7	**107 %**	**94 %**	40 - 140 %

QC Surrogate Compound	Spiked	Measured		Recovery		QC Limits
Tetrachloro-*m*-xylene	0.20	0.19	0.18	**94 %**	**91 %**	30 - 150 %
Decachlorobiphenyl	0.20	0.21	0.15	**104 %**	**77 %**	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 separatory funnel. Cleanup performed by sulfuric acid treatment and activated copper powder.

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 608 PCBs**	Instrument ID:	**GC-13 Agilent 6890**
QC Batch ID:	**PB-2419-F**	Extracted:	**03-17-08 09:00**
Matrix:	**Aqueous**	Cleaned Up:	**03-17-08 14:00**
		Analyzed:	**03-18-08 12:44**
		Analyst:	**JXS**

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	0.19	**93 %**	30 - 150 %
	Decachlorobiphenyl	0.20	0.20	**99 %**	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.20	**99 %**	30 - 150 %
	Decachlorobiphenyl	0.20	0.15	**76 %**	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

Quality Control Report
Laboratory Control Sample

Category:	**EPA Method 8011**	Instrument ID:	**GC-5 HP 5890**
QC Batch ID:	**PV-0904-E**	Extracted:	**03-16-08 09:00**
Matrix:	**Aqueous**	Analyzed:	**03-16-08 14:16**
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	0.18	0.19	**91 %**	**96 %**	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	0.20	0.19	0.19	**96 %**	**97 %**	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

Quality Control Report
Method Blank

Category:	**EPA Method 8011**	Instrument ID:	**GC-5 HP 5890**
QC Batch ID:	**PV-0904-E**	Extracted:	**03-16-08 09:00**
Matrix:	**Aqueous**	Analyzed:	**03-16-08 15:54**
		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

Quality Control Report
Laboratory Control Samples

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

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-3170-WL	EPA 3010A	03-17-08 08:06	03-18-08 16:17	ICP-1 PE 3000	MWR
LCS	EPA 7470A	MP-2075-WL	EPA 7470A	03-17-08 09:15	03-17-08 12:58	CVAA-1 PE FIMS	MFP
LCSD	EPA 6010B	MB-3170-WL	EPA 3010A	03-17-08 08:06	03-18-08 16:19	ICP-1 PE 3000	MWR
LCSD	EPA 7470A	MP-2075-WL	EPA 7470A	03-17-08 09:15	03-17-08 13:01	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-36-0	Antimony	5.0	5.2	**103%**	5.0	5.3	**105%**	**1 %**	80-120 %	20 %	EPA 6010B
7440-38-2	Arsenic	5.0	5.2	**104%**	5.0	5.4	**107%**	**1 %**	80-120 %	20 %	EPA 6010B
7440-43-9	Cadmium	1.0	1.0	**98%**	1.0	1.0	**103%**	**2 %**	80-120 %	20 %	EPA 6010B
7440-47-3	Chromium	1.0	1.0	**97%**	1.0	1.0	**101%**	**2 %**	80-120 %	20 %	EPA 6010B
7440-50-8	Copper	1.0	1.0	**97%**	1.0	1.0	**102%**	**3 %**	80-120 %	20 %	EPA 6010B
7439-89-6	Iron	5.0	5.1	**103%**	5.0	5.4	**108%**	**2 %**	80-120 %	20 %	EPA 6010B
7439-92-1	Lead	5.0	5.0	**99%**	5.0	5.1	**101%**	**1 %**	80-120 %	20 %	EPA 6010B
7439-97-6	Mercury	0.0010	0.0010	**104%**	0.0010	0.0011	**105%**	**0 %**	80-120 %	20 %	EPA 7470A
7440-02-0	Nickel	1.0	1.0	**95%**	1.0	1.0	**97%**	**1 %**	80-120 %	20 %	EPA 6010B
7782-49-2	Selenium	5.0	5.1	**102%**	5.0	5.3	**106%**	**2 %**	80-120 %	20 %	EPA 6010B
7440-22-4	Silver	1.0	1.0	**100%**	1.0	1.0	**104%**	**2 %**	80-120 %	20 %	EPA 6010B
7440-66-6	Zinc	1.0	1.0	**96%**	1.0	1.0	**101%**	**3 %**	80-120 %	20 %	EPA 6010B

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

Quality Control Report
Method Blank

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

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B	MB-3170-WB	EPA 3010A	03-17-08 08:06	50 mL	ICP-1 PE 3000	MWR
EPA 7470A	MP-2075-WB	EPA 7470A	03-17-08 09:15	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	03-18-08 16:14	EPA 6010B
7440-38-2	Arsenic		BRL	mg/L	0.03	1	03-18-08 16:14	EPA 6010B
7440-43-9	Cadmium		BRL	mg/L	0.005	1	03-18-08 16:14	EPA 6010B
7440-47-3	Chromium		BRL	mg/L	0.01	1	03-18-08 16:14	EPA 6010B
7440-50-8	Copper		BRL	mg/L	0.025	1	03-18-08 16:14	EPA 6010B
7439-89-6	Iron		BRL	mg/L	0.1	1	03-18-08 16:14	EPA 6010B
7439-92-1	Lead		BRL	mg/L	0.005	1	03-18-08 16:14	EPA 6010B
7439-97-6	Mercury		BRL	mg/L	0.0002	1	03-17-08 12:58	EPA 7470A
7440-02-0	Nickel		BRL	mg/L	0.04	1	03-18-08 16:14	EPA 6010B
7782-49-2	Selenium		BRL	mg/L	0.05	1	03-18-08 16:14	EPA 6010B
7440-22-4	Silver		BRL	mg/L	0.007	1	03-18-08 16:14	EPA 6010B
7440-66-6	Zinc		BRL	mg/L	0.2	1	03-18-08 16:14	EPA 6010B

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

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-7 HP 6890	Instrument ID:	MS-7 HP 6890
QC Batch ID:	VM7-2830-W	Analyzed:	03-18-08 07:07	Analyzed:	03-18-08 08:11
Matrix:	Aqueous	Analyst:	LMG	Analyst:	LMG
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	8.3	83 %	10	8.6	86 %	3 %	70 - 130 %	25%
74-87-3	Chloromethane	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	10	100 %	10	9.8	98 %	2 %	70 - 130 %	25%
74-83-9	Bromomethane	10	10	103 %	10	10	103 %	0 %	70 - 130 %	25%
75-00-3	Chloroethane	10	11	108 %	10	10	104 %	3 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	9.5	95 %	10	9.6	96 %	0 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	20	100 %	20	20	102 %	2 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	10	100 %	10	9.8	98 %	2 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	21	105 %	20	20	102 %	3 %	70 - 130 %	25%
67-64-1	Acetone	20	24	122 %	20	22	110 %	11 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	17	85 %	20	17	83 %	3 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	11	110 %	10	12	115 %	4 %	70 - 130 %	25%
156-60-5	*trans*- 1,2-Dichloroethene	10	10	104 %	10	10	105 %	1 %	70 - 130 %	25%
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	10	10	101 %	10	10	101 %	0 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	11	107 %	10	11	105 %	2 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	11	113 %	10	11	107 %	6 %	70 - 130 %	25%
156-59-2	*cis*- 1,2-Dichloroethene	10	11	107 %	10	11	109 %	1 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	22	109 %	20	23	116 %	6 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	11	110 %	10	11	110 %	0 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	21	106 %	20	21	106 %	0 %	70 - 130 %	25%
67-66-3	Chloroform	10	11	107 %	10	10	105 %	2 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	11	108 %	10	10	103 %	4 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	11	105 %	10	10	102 %	3 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	10	100 %	10	9.8	98 %	3 %	70 - 130 %	25%
71-43-2	Benzene	10	11	106 %	10	9.8	98 %	7 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	11	112 %	10	10	102 %	9 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	10	100 %	10	9.8	98 %	2 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	10	104 %	10	10	101 %	3 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	10	102 %	10	10	101 %	1 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	11	109 %	10	11	107 %	2 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	200	100 %	200	210	103 %	3 %	70 - 130 %	25%
10061-01-5	*cis*- 1,3-Dichloropropene	10	10	100 %	10	10	100 %	0 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	21	104 %	20	20	101 %	3 %	70 - 130 %	25%
108-88-3	Toluene	10	11	109 %	10	11	106 %	3 %	70 - 130 %	25%
10061-02-6	*trans*- 1,3-Dichloropropene	10	9.8	98 %	10	9.7	97 %	2 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	109 %	10	11	107 %	2 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	11	107 %	10	11	106 %	1 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	11	108 %	10	11	109 %	0 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	23	113 %	20	22	112 %	1 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	11	111 %	10	11	111 %	0 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	11	108 %	10	11	107 %	1 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	11	109 %	10	11	107 %	2 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	11	106 %	10	10	105 %	1 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	11	111 %	10	11	111 %	0 %	70 - 130 %	25%
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	20	23	113 %	20	22	111 %	2 %	70 - 130 %	25%
95-47-6	*ortho*- Xylene	10	11	111 %	10	11	109 %	1 %	70 - 130 %	25%
100-42-5	Styrene	10	11	112 %	10	11	113 %	1 %	70 - 130 %	25%
75-25-2	Bromoform	10	11	114 %	10	11	112 %	1 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	11	113 %	10	11	111 %	2 %	70 - 130 %	25%

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	EPA Method 8260B	Instrument ID:	MS-7 HP 6890	Instrument ID:	MS-7 HP 6890
QC Batch ID:	VM7-2830-W	Analyzed:	03-18-08 07:07	Analyzed:	03-18-08 08:11
Matrix:	Aqueous	Analyst:	LMG	Analyst:	LMG
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	106 %	10	11	106 %	0 %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	11	106 %	10	10	105 %	1 %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	12	117 %	10	12	118 %	1 %	70 - 130 %	25%
103-65-1	*n*-Propylbenzene	10	11	107 %	10	10	103 %	5 %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	10	103 %	10	10	103 %	0 %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	107 %	10	10	104 %	2 %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	11	106 %	10	10	103 %	2 %	70 - 130 %	25%
98-06-6	*tert*-Butylbenzene	10	11	107 %	10	10	104 %	3 %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	109 %	10	11	107 %	2 %	70 - 130 %	25%
135-98-8	*sec*-Butylbenzene	10	10	104 %	10	10	102 %	2 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	104 %	10	10	103 %	1 %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	11	106 %	10	10	103 %	3 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	10	103 %	10	10	102 %	0 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	11	105 %	10	10	104 %	2 %	70 - 130 %	25%
104-51-8	*n*-Butylbenzene	10	11	107 %	10	10	103 %	4 %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	10	103 %	10	10	103 %	0 %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	11	111 %	10	11	109 %	2 %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	10	104 %	10	10	100 %	4 %	70 - 130 %	25%
91-20-3	Naphthalene	10	9.8	98 %	10	9.6	96 %	2 %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	11	109 %	10	11	107 %	1 %	70 - 130 %	25%
75-65-0	*tert*-Butyl Alcohol (TBA)	200	200	101 %	200	190	94 %	8 %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	11	107 %	10	11	107 %	1 %	70 - 130 %	25%
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	10	10	104 %	10	10	103 %	1 %	70 - 130 %	25%
994-05-8	*tert*-Amyl Methyl Ether (TAME)	10	10	102 %	10	10	101 %	1 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	11	105 %	10	11	107 %		70 - 130 %
1,2-Dichloroethane-d_4	10	10	103 %	10	10	101 %		70 - 130 %
Toluene-d_8	10	11	111 %	10	11	111 %		70 - 130 %
4-Bromofluorobenzene	10	10	103 %	10	10	103 %		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-7 HP 6890**
QC Batch ID:	**VM7-2830-W**	Analyzed:	**03-18-08 08:42**
Matrix:	**Aqueous**	Analyst:	**LMG**

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	3
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	0.4
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	0.4
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

Quality Control Report
Method Blank

Category:	**EPA Method 8260B**	Instrument ID:	**MS-7 HP 6890**
QC Batch ID:	**VM7-2830-W**	Analyzed:	**03-18-08 08:42**
Matrix:	**Aqueous**	Analyst:	**LMG**

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	0.5
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	20
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	11	**106 %**	70 - 130 %
1,2-Dichloroethane-d_4	10	10	**98 %**	70 - 130 %
Toluene-d_8	10	11	**109 %**	70 - 130 %
4-Bromofluorobenzene	10	11	**105 %**	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 Sample

Category:	EPA Method 625	Instrument ID:	MS-12 Agilent 6890
QC Batch ID:	SV-2214-F	Extracted:	03-17-08 17:30
Matrix:	Aqueous	Analyzed:	03-18-08 18:47
Units:	ug/L	Analyst:	MJB

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
62-75-9	N-Nitrosodimethylamine	50	26	53 %	40 - 140 %
110-86-1	Pyridine	50	27	54 %	40 - 140 %
108-95-2	Phenol	50	20	41 %	30 - 130 %
111-44-4	Bis(2-chloroethyl) ether	50	36	72 %	40 - 140 %
95-57-8	2-Chlorophenol	50	30	60 %	30 - 130 %
62-53-3	Aniline	50	29	57 %	40 - 140 %
124-18-5	n-Decane (C10)	50	33	66 %	40 - 140 %
541-73-1	1,3-Dichlorobenzene	50	33	65 %	40 - 140 %
106-46-7	1,4-Dichlorobenzene	50	32	65 %	40 - 140 %
95-50-1	1,2-Dichlorobenzene	50	33	67 %	40 - 140 %
108-60-1	Bis(2-chloroisopropyl) ether	50	38	75 %	40 - 140 %
95-48-7	2-Methylphenol	50	32	64 %	30 - 130 %
621-64-7	N-Nitrosodi-*n*-propylamine	50	44	87 %	40 - 140 %
108-39-4/106-44-5	3 and 4-Methylphenol	50	32	65 %	30 - 130 %
67-72-1	Hexachloroethane	50	32	64 %	40 - 140 %
98-86-2	Acetophenone	50	40	80 %	40 - 140 %
98-95-3	Nitrobenzene	50	39	78 %	40 - 140 %
78-59-1	Isophorone	50	40	80 %	40 - 140 %
88-75-5	2-Nitrophenol	50	34	68 %	30 - 130 %
105-67-9	2,4-Dimethylphenol	50	30	60 %	30 - 130 %
65-85-0	Benzoic Acid	50	14	27 % q	30 - 130 %
111-91-1	Bis(2-chloroethoxy) methane	50	40	80 %	40 - 140 %
120-83-2	2,4-Dichlorophenol	50	36	72 %	30 - 130 %
120-82-1	1,2,4-Trichlorobenzene	50	37	73 %	40 - 140 %
98-55-5	alpha-Terpineol	50	37	74 %	40 - 140 %
91-20-3	Naphthalene	50	35	71 %	40 - 140 %
87-68-3	Hexachlorobutadiene	50	35	70 %	40 - 140 %
59-50-7	4-Chloro-3-methylphenol	50	39	77 %	30 - 130 %
77-47-4	Hexachlorocyclopentadiene	50	32	63 %	40 - 140 %
608-27-5	2,3-Dichloroaniline	50	41	82 %	40 - 140 %
88-06-2	2,4,6-Trichlorophenol	50	36	73 %	30 - 130 %
91-58-7	2-Chloronaphthalene	50	40	79 %	40 - 140 %
131-11-3	Dimethyl phthalate	50	48	96 %	40 - 140 %
208-96-8	Acenaphthylene	50	39	78 %	40 - 140 %
606-20-2	2,6-Dinitrotoluene	50	46	91 %	40 - 140 %
83-32-9	Acenaphthene	50	40	79 %	40 - 140 %
51-28-5	2,4-Dinitrophenol	50	28	56 %	30 - 130 %
100-02-7	4-Nitrophenol	50	23	46 %	30 - 130 %
121-14-2	2,4-Dinitrotoluene	50	45	90 %	40 - 140 %
84-66-2	Diethyl phthalate	50	48	97 %	40 - 140 %
7005-72-3	4-Chlorophenyl phenyl ether	50	46	91 %	40 - 140 %
86-73-7	Fluorene	50	40	80 %	40 - 140 %
534-52-1	4,6-Dinitro-2-methylphenol	50	36	72 %	30 - 130 %
86-30-6	N-Nitrosodiphenylamine†	50	46	92 %	40 - 140 %
122-66-7	1,2-Diphenylhydrazine ◊	50	43	86 %	40 - 140 %

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Sample

Category:	EPA Method 625	Instrument ID:	MS-12 Agilent 6890
QC Batch ID:	SV-2214-F	Extracted:	03-17-08 17:30
Matrix:	Aqueous	Analyzed:	03-18-08 18:47
Units:	ug/L	Analyst:	MJB

CAS Number	Analyte	Spiked	Measured	Recovery	QC Limits
101-55-3	4-Bromophenyl phenyl ether	50	52	**105 %**	40 - 140 %
118-74-1	Hexachlorobenzene	50	43	**86 %**	40 - 140 %
87-86-5	Pentachlorophenol	50	35	**70 %**	30 - 130 %
593-54-3	n-Octadecane (C18)	50	45	**89 %**	40 - 140 %
85-01-8	Phenanthrene	50	41	**82 %**	40 - 140 %
120-12-7	Anthracene	50	41	**82 %**	40 - 140 %
86-74-8	Carbazole	50	48	**95 %**	40 - 140 %
84-74-2	Di-*n*-butyl phthalate	50	47	**93 %**	40 - 140 %
206-44-0	Fluoranthene	50	42	**83 %**	40 - 140 %
92-87-5	Benzidine	50	30	**60 %**	40 - 140 %
129-00-0	Pyrene	50	43	**86 %**	40 - 140 %
85-68-7	Butyl benzyl phthalate	50	47	**94 %**	40 - 140 %
91-94-1	3,3'-Dichlorobenzidine	50	47	**94 %**	40 - 140 %
56-55-3	Benzo[a]anthracene	50	42	**84 %**	40 - 140 %
218-01-9	Chrysene	50	42	**84 %**	40 - 140 %
117-81-7	Bis(2-ethylhexyl) phthalate	50	48	**95 %**	40 - 140 %
117-84-0	Di-*n*-octyl phthalate	50	49	**98 %**	40 - 140 %
205-99-2	Benzo[b]fluoranthene	50	43	**86 %**	40 - 140 %
207-08-9	Benzo[k]fluoranthene	50	44	**88 %**	40 - 140 %
50-32-8	Benzo[a]pyrene	50	44	**87 %**	40 - 140 %
193-39-5	Indeno[1,2,3-c,d]pyrene	50	43	**86 %**	40 - 140 %
53-70-3	Dibenzo[a,h]anthracene	50	44	**87 %**	40 - 140 %
191-24-2	Benzo[g,h,i]perylene	50	44	**87 %**	40 - 140 %

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	100	**50 %**	15 - 110 %
Phenol-d5	200	82	**41 %**	15 - 110 %
Nitrobenzene-d5	100	74	**74 %**	30 - 130 %
2-Fluorobiphenyl	100	74	**74 %**	30 - 130 %
2,4,6-Tribromophenol	200	170	**83 %**	15 - 110 %
Terphenyl-d14	100	74	**74 %**	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-12 Agilent 6890
QC Batch ID:	SV-2214-F	Extracted:	03-17-08 17:30
Matrix:	Aqueous	Analyzed:	03-18-08 20:16
		Analyst:	MJB

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	10
110-86-1	Pyridine	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
62-53-3	Aniline	BRL		ug/L	10
124-18-5	n-Decane (C10)	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
95-48-7	2-Methylphenol	BRL		ug/L	10
621-64-7	N-Nitrosodi-*n*-propylamine	BRL		ug/L	10
108-39-4/106-44-5	3 and 4-Methylphenol	BRL		ug/L	10
67-72-1	Hexachloroethane	BRL		ug/L	10
98-86-2	Acetophenone	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
65-85-0	Benzoic Acid	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
98-55-5	alpha-Terpineol	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
608-27-5	2,3-Dichloroaniline	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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	EPA Method 625	Instrument ID:	MS-12 Agilent 6890
QC Batch ID:	SV-2214-F	Extracted:	03-17-08 17:30
Matrix:	Aqueous	Analyzed:	03-18-08 20:16
		Analyst:	MJB

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
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
593-45-3	n-Octadecane	BRL		ug/L	10
85-01-8	Phenanthrene	BRL		ug/L	10
120-12-7	Anthracene	BRL		ug/L	10
86-74-8	Carbazole	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
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	84	42 %	15 - 110 %
Phenol-d5	200	66	33 %	15 - 110 %
Nitrobenzene-d5	100	63	63 %	30 - 130 %
2-Fluorobiphenyl	100	63	63 %	30 - 130 %
2,4,6-Tribromophenol	200	130	66 %	15 - 110 %
Terphenyl-d14	100	68	68 %	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

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

MAINE

Department of Environmental Protection, LB-0072 — Asbestos Analytical Laboratory (Bulk)

MASSACHUSETTS

Department of Environmental Protection, M-MA-103 — Potable Water and Non-Potable Water
http://public.dep.state.ma.us/labcert/labcert.aspx

Department of Labor,
Division of Occupational Safety, AA000195 — Asbestos Analytical Services, Class A
http://www.mass.gov/dos/forms/la-rpt list aa.pdf

NIST NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP)

NVLAP Lab Code 200751-1 — Bulk Asbestos Fiber Analysis (PLM)
http://ts.nist.gov/Standards/scopes/plmtm.htm

RHODE ISLAND

Department of Health,
Division of Laboratories, LAO00054 — Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry
http://www.health.ri.gov/labs/outofstatelabs.pdf

Department of Health,
Office of Occupational and Radiological Health, AAL-110B3 — Asbestos Analytical Service, Polarized Light Microscopy (PLM)
http://www.health.ri.gov/environment/occupational/asbestos/licensees/AsbestosAnalyticalLabs.pdf

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921 — Foreign soil import permit

GROUNDWATER ANALYTICAL

Certifications and Approvals

MASSACHUSETTS

Department of Environmental Protection, M-MA-103

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Potable Water (Drinking Water) Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.9
Barium	EPA 200.7
Beryllium	EPA 200.7
Cadmium	EPA 200.7
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli	EC-MUG SM 9221-F
E. Coli	Enz. Sub. SM 9223
E. Coli	NA-MUG SM 9222-G
Fecal Coliform	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Heterotrophic Plate Count	SM 9215-B
Mercury	EPA 245.1
Nickel	EPA 200.7
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
Perchlorate	EPA 314.0
pH	SM 4500-H-B
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.9
Total Coliform	Enz. Sub. SM 9223
Total Coliform	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

Non-Potable Water (Wastewater) Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	Lachat 10-303-31-1-A
Aluminum	EPA 200.7
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.9
Arsenic	EPA 200.7
Arsenic	EPA 200.9
Beryllium	EPA 200.7
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Calcium	EPA 200.7

Non-Potable Water (Wastewater) Analyte	Method
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Cobalt	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.9
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Dieldrin	EPA 608
Fluoride	EPA 300.0
Hardness (CaCO3), Total	EPA 200.7
Hardness (CaCO3), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Lead	EPA 200.9
Magnesium	EPA 200.7
Manganese	EPA 200.7
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Nickel	EPA 200.7
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.9
Sodium	EPA 200.7
Strontium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.7
Thallium	EPA 200.9
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Vanadium	EPA 200.7
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7

GROUNDWATER ANALYTICAL

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

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

April 9, 2008

Mr. Matt Lyne
Environmental Compliance Services, Inc.
997 Milbury St
Worcester, MA 01607

LABORATORY REPORT

Project: **344 Turnpike Road, Southborough/93-201065.00**
Lab ID: **116138**
Received: **04-04-08**

Dear Matt:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 3 Business Day 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 or NVLAP standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. 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,

Karyn E. Raymond

Karyn E. Raymond
Project Manager

KER/elm
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project:	**344 Turnpike Road, Southborough/93-201065.(**	Delivery:	**GWA Courier**	Temperature:	**3.1°C**
Client:	**Environmental Compliance Services, Inc.**	Airbill:	**n/a**	Chain of Custody:	**Present**
Lab ID:	**116138**	Lab Receipt:	**04-04-08**	Custody Seal(s):	**n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
116138-1	CEA-2		Aqueous	4/4/08 13:30	EPA 6010B Ag As Cd Cr Cu Fe Ni Pb Sb Se Zn Dissolved EPA 7470A Mercury by CVAA Dissolved				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1050149	250 mL Plastic	Proline	BX28946	HNO3	R-5458D	11-06-07	12-05-07		

GROUNDWATER ANALYTICAL

Data Certification

Project:	344 Turnpike Road, Southborough/93-201065.00	Lab ID:	116138
Client:	Environmental Compliance Services, Inc.	Received:	04-04-08 19:20

MA DEP Compendium of Analytical Methods						
Project Location:	n/a			MA DEP RTN:	n/a	
This Form provides certifications for the following data set:						
EPA 6010B:	116138-1					
Sample Matrices:	Groundwater (X)	Soil/Sediment ( )	Drinking Water ( )	Other ( )		
MCP SW-846 Methods Used	8260B ( )	8151A ( )	8330 ( )	6010B (X)	7470A/1A ( )	
	8270C ( )	8081A ( )	VPH ( )	6020A ( )	9012A[2] ( )	
As specified in MA DEP Compendium of Analytical Methods. (check all that apply)	8082 ( )	8021B ( )	EPH ( )	7000 S[3] ( )	Other ( )	
	1. List Release Tracking Number (RTN), if known.					
	2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method					
	3. S - SW-846 Methods 7000 Series. List individual method and analyte					

An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.

A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?	Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data* ?	Yes
D.	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	n/a

A response to questions E and F below is required for "Presumptive Certainty" status.

E.	Were all QC performance standards and recommendations for the specified methods achieved?	Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?	No

All No answers are addressed in the attached Project Narrative.

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

Signature:	Karyn E. Raymond	Position:	Project Manager
Printed Name:	Karyn E. Raymond	Date:	04-09-08

GROUNDWATER ANALYTICAL

Trace Metals

Field ID:	CEA-2	Matrix:	Aqueous
Project:	344 Turnpike Road, Southborough/93-201065.00	Container:	250 mL Plastic
Client:	Environmental Compliance Services, Inc.	Preservation:	HNO3 / Cool
Laboratory ID:	116138-1	Preserved:	04-04-08 13:30
Sampled:	04-04-08 13:30	Filtered:	04-04-08 13:30
Received:	04-04-08 19:20		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B[1]	MB-3206-W	EPA 3010A	04-07-08 09:04	50 mL	ICP-2 PE 3300	MWR
EPA 7470A[2]	MP-2082-W	EPA 7470A	04-07-08 10:05	25 mL	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Dissolved	BRL		mg/L	0.06	1	04-07-08 16:39	EPA 6010B[1]
7440-38-2	Arsenic, Dissolved	BRL		mg/L	0.03	1	04-07-08 16:39	EPA 6010B[1]
7440-43-9	Cadmium, Dissolved	BRL		mg/L	0.004	1	04-07-08 16:39	EPA 6010B[1]
7440-47-3	Chromium, Dissolved	BRL		mg/L	0.01	1	04-07-08 16:39	EPA 6010B[1]
7440-50-8	Copper, Dissolved	BRL		mg/L	0.025	1	04-07-08 16:39	EPA 6010B[1]
7439-89-6	Iron, Dissolved	15		mg/L	0.1	1	04-07-08 16:39	EPA 6010B[1]
7439-92-1	Lead, Dissolved	0.006		mg/L	0.005	1	04-07-08 16:39	EPA 6010B[1]
7439-97-6	Mercury, Dissolved	BRL		mg/L	0.0002	1	04-07-08 15:24	EPA 7470A[2]
7440-02-0	Nickel, Dissolved	BRL		mg/L	0.04	1	04-07-08 16:39	EPA 6010B[1]
7782-49-2	Selenium, Dissolved	BRL		mg/L	0.05	1	04-07-08 16:39	EPA 6010B[1]
7440-22-4	Silver, Dissolved	BRL		mg/L	0.007	1	04-07-08 16:39	EPA 6010B[1]
7440-66-6	Zinc, Dissolved	BRL		mg/L	0.2	1	04-07-08 16:39	EPA 6010B[1]

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

Report Notations:

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

DF Dilution Factor.

GROUNDWATER ANALYTICAL

Project Narrative

Project:	**344 Turnpike Road, Southborough/93-201065.00**	Lab ID:	**116138**
Client:	**Environmental Compliance Services, Inc.**	Received:	**04-04-08 19:20**

A. Documentation and Client Communication

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

1. Sample identified as "CEA-2" was received in a 250mL plastic container preserved with HNO3. Analyses for Hexavalent Chromium and Trivalent Chromium were cancelled, as discussed with Matt Lyne, 04-07-08.

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 6010B Note: Sample 116138-1. Sample was analyzed for selected target analytes, as requested by client.

GROUNDWATER ANALYTICAL

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

TURNAROUND

BILLING

ANALYSIS REQUEST

REMARKS / SPECIAL INSTRUCTIONS

DATA QUALITY OBJECTIVES

Regulatory Program

Project Specific QC

CHAIN-OF-CUSTODY RECORD

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

Quality Control Report
Laboratory Control Samples

Category: Metals
Matrix: Aqueous
Units: mg/L

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-3206-WL	EPA 3010A	04-07-08 09:04	04-07-08 15:47	ICP-2 PE 3300	MWR
LCS	EPA 7470A	MP-2082-WL	EPA 7470A	04-07-08 10:05	04-07-08 15:01	CVAA-1 PE FIMS	MFP
LCSD	EPA 6010B	MB-3206-WL	EPA 3010A	04-07-08 09:04	04-07-08 15:51	ICP-2 PE 3300	MWR
LCSD	EPA 7470A	MP-2082-WL	EPA 7470A	04-07-08 10:05	04-07-08 15:05	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-36-0	Antimony	5.0	5.1	**102%**	5.0	5.1	**103%**	**0 %**	80-120 %	20 %	EPA 6010B
7440-38-2	Arsenic	5.0	5.4	**107%**	5.0	5.4	**108%**	**0 %**	80-120 %	20 %	EPA 6010B
7440-43-9	Cadmium	1.0	1.0	**101%**	1.0	1.0	**102%**	**0 %**	80-120 %	20 %	EPA 6010B
7440-47-3	Chromium	1.0	1.0	**98%**	1.0	1.0	**99%**	**1 %**	80-120 %	20 %	EPA 6010B
7440-50-8	Copper	1.0	1.0	**103%**	1.0	1.0	**103%**	**0 %**	80-120 %	20 %	EPA 6010B
7439-89-6	Iron	5.0	4.9	**99%**	5.0	5.1	**102%**	**1 %**	80-120 %	20 %	EPA 6010B
7439-92-1	Lead	5.0	5.0	**100%**	5.0	5.0	**101%**	**0 %**	80-120 %	20 %	EPA 6010B
7439-97-6	Mercury	0.0010	0.0010	**102%**	0.0010	0.0010	**102%**	**0 %**	80-120 %	20 %	EPA 7470A
7440-02-0	Nickel	1.0	1.0	**97%**	1.0	1.0	**97%**	**0 %**	80-120 %	20 %	EPA 6010B
7782-49-2	Selenium	5.0	5.3	**107%**	5.0	5.3	**107%**	**0 %**	80-120 %	20 %	EPA 6010B
7440-22-4	Silver	1.0	1.0	**101%**	1.0	1.0	**104%**	**1 %**	80-120 %	20 %	EPA 6010B
7440-66-6	Zinc	1.0	1.0	**102%**	1.0	1.0	**102%**	**0 %**	80-120 %	20 %	EPA 6010B

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

Quality Control Report
Method Blank

Category: Metals
Matrix: Aqueous

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B	MB-3206-WB	EPA 3010A	04-07-08 09:04	50 mL	ICP-2 PE 3300	MWR
EPA 7470A	MP-2082-WB	EPA 7470A	04-07-08 10:05	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	04-07-08 15:42	EPA 6010B
7440-38-2	Arsenic	BRL		mg/L	0.03	1	04-07-08 15:42	EPA 6010B
7440-43-9	Cadmium	BRL		mg/L	0.005	1	04-07-08 15:42	EPA 6010B
7440-47-3	Chromium	BRL		mg/L	0.01	1	04-07-08 15:42	EPA 6010B
7440-50-8	Copper	BRL		mg/L	0.025	1	04-07-08 15:42	EPA 6010B
7439-89-6	Iron	BRL		mg/L	0.1	1	04-07-08 15:42	EPA 6010B
7439-92-1	Lead	BRL		mg/L	0.005	1	04-07-08 15:42	EPA 6010B
7439-97-6	Mercury	BRL		mg/L	0.0002	1	04-07-08 15:01	EPA 7470A
7440-02-0	Nickel	BRL		mg/L	0.04	1	04-07-08 15:42	EPA 6010B
7782-49-2	Selenium	BRL		mg/L	0.05	1	04-07-08 15:42	EPA 6010B
7440-22-4	Silver	BRL		mg/L	0.007	1	04-07-08 15:42	EPA 6010B
7440-66-6	Zinc	BRL		mg/L	0.2	1	04-07-08 15:42	EPA 6010B

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

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

DF Dilution Factor.

GROUNDWATER ANALYTICAL

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

MAINE

Department of Environmental Protection, LB-0072 — Asbestos Analytical Laboratory (Bulk)

MASSACHUSETTS

Department of Environmental Protection, M-MA-103 — Potable Water and Non-Potable Water
http://public.dep.state.ma.us/labcert/labcert.aspx

Department of Labor,
Division of Occupational Safety, AA000195 — Asbestos Analytical Services, Class A
http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf

NIST NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP)

NVLAP Lab Code 200751-1 — Bulk Asbestos Fiber Analysis (PLM)
http://ts.nist.gov/Standards/scopes/plmtm.htm

RHODE ISLAND

Department of Health,
Division of Laboratories, LAO00054 — Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry
http://www.health.ri.gov/labs/outofstatelabs.pdf

Department of Health,
Office of Occupational and Radiological Health, AAL-110B3 — Asbestos Analytical Service, Polarized Light Microscopy (PLM)
http://www.health.ri.gov/environment/occupational/asbestos/licensees/AsbestosAnalyticalLabs.pdf

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921 — Foreign soil import permit

GROUNDWATER ANALYTICAL

Certifications and Approvals

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

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Potable Water (Drinking Water)

Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Alkalinity, Total	SM 2320-B
Antimony	EPA 200.9
Barium	EPA 200.7
Beryllium	EPA 200.7
Cadmium	EPA 200.7
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Copper	EPA 200.7
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli	EC-MUG SM 9221-F
E. Coli	Enz. Sub. SM 9223
E. Coli	NA-MUG SM 9222-G
Fecal Coliform	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Heterotrophic Plate Count	SM 9215-B
Mercury	EPA 245.1
Nickel	EPA 200.7
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Nitrite-N	EPA 300.0
Nitrite-N	Lachat 10-107-04-1-C
Perchlorate	EPA 314.0
pH	SM 4500-H-B
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.9
Total Coliform	Enz. Sub. SM 9223
Total Coliform	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

Non-Potable Water (Wastewater)

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	Lachat 10-303-31-1-A
Aluminum	EPA 200.7
Ammonia-N	Lachat 10-107-06-1-B
Antimony	EPA 200.7
Antimony	EPA 200.9
Arsenic	EPA 200.7
Arsenic	EPA 200.9
Beryllium	EPA 200.7
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Calcium	EPA 200.7

Non-Potable Water (Wastewater)

Analyte	Method
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Cobalt	EPA 200.7
Copper	EPA 200.7
Copper	EPA 200.9
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Dieldrin	EPA 608
Fluoride	EPA 300.0
Hardness (CaCO3), Total	EPA 200.7
Hardness (CaCO3), Total	SM 2340-B
Heptachlor	EPA 608
Heptachlor Epoxide	EPA 608
Iron	EPA 200.7
Kjeldahl-N	Lachat 10-107-06-02-D
Lead	EPA 200.7
Lead	EPA 200.9
Magnesium	EPA 200.7
Manganese	EPA 200.7
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Nickel	EPA 200.7
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.9
Sodium	EPA 200.7
Strontium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.7
Thallium	EPA 200.9
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Vanadium	EPA 200.7
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7