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**: CFI #70118 Cumberland Farms Gas Station		**Facility/site** address:	
Location of **facility/site**: longitude: -70 47' 41.72" latitude: 43 5' 39.66"	Facility SIC code(s): 5541	Street: 97 Gosling Road	
b) Name of **facility/site owner:** Cumberland Farms, Inc.		Town: Newington	
Email address of owner: MHilfinger@cumberlandgulf.com		State: NH	Zip: 03801 / County: Rockingham
Telephone no.of facility/site **owner**: (508) 270-4495			
Fax no. of facility/site **owner**: (781) 459-0454		**Owner** is (check one): 1. Federal____ 2. State/Tribal____ 3. Private__✔___ 4. other, if so, describe:	
Address of **owner** (if different from site):			
Street: 100 Crossing Boulevard			
Town: Framingham	State: MA	Zip: 01702	County: Middlesex
c) Legal name of **operator**: Environmental Compliance Services, Inc.	**Operator** telephone no: (603) 224-8871		
	Operator fax no.: (603) 224-8688		**Operator** email: slow@ecsconsult.com
Operator contact name and title: Steve Low, Senior Project Manager			
Address of **operator** (if different from owner):	Street: 722 Route 3A		
Town: Bow	State: NH	Zip: 03304	County: Merrimack

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: Dewatering to be conducted during station upgrade activities: excavation and replacement of existing USTs		
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 0.067 ft3/s 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. -70 47' 42" lat. 43 5' 40"; 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 09/13/10 end 12/30/11		
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 min-imum)**	**Type of Sample (e.g., grab)**	**Analytical Method Used (method #)**	**Minimum Level (ML) of Test Method**	**Maximum daily value**		**Avg. daily value**	
							concentration (ug/l)	**mass (kg)**	**concentration (ug/l)**	**mass (kg)**
1. Total Suspended Solids		✔	1	grab	SM 2540 D	5,000	200,000		200,000	
2. Total Residual Chlorine		✔	1	grab	SM 4500-CIC	20	110		110	
3. Total Petroleum Hydrocarbons	✔		1	grab	EPA 8015B	0.2000	<0.2000		<0.2000	
4. Cyanide		✔	1	grab	EPA 9012B	10	10		10	
5. Benzene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
6. Toluene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
7. Ethylbenzene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
8. (m,p,o) Xylenes	✔		1	grab	EPA 8260B	1.0	<1.0		<1.0	
9. Total BTEX[4]	✔		1	grab	EPA 8260B	2.5	<2.5		<2.5	

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide [5] (1,2- Dibromo-methane)	✔		1	grab	EPA 504.1	0.02	<0.02		<0.02	
11. Methyl-tert-Butyl Ether (MtBE)	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
12. tert-Butyl Alcohol (TBA)	✔		1	grab	EPA 8260B	20	<20		<20	
13. tert-Amyl Methyl Ether (TAME)	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
14. Naphthalene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
15. Carbon Tetra-chloride	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
16. 1,4 Dichlorobenzene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
17. 1,2 Dichlorobenzene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
18. 1,3 Dichlorobenzene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
19. 1,1 Dichloroethane	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
20. 1,2 Dichloroethane	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
21. 1,1 Dichloroethylene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
22. cis-1,2 Dichloro-ethylene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
23. Dichloromethane (Methylene Chloride)	✔		1	grab	EPA 8260B	3	<3		<3	
24. Tetrachloroethylene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
26. 1,1,2 Trichloroethane	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
27. Trichloroethylene	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
28. Vinyl Chloride	✔		1	grab	EPA 8260B	0.5	<0.5		<0.5	
29. Acetone	✔		1	grab	EPA 8260B	10	<10		<10	
30. 1,4 Dioxane	✔		1	grab	EPA 8260B	500	<500		<500	
31. Total Phenols	✔		1	grab	EPA 8270C	5	<5		<5	
32. Pentachlorophenol	✔		1	grab	EPA 8270C	1.1	<1.1		<1.1	
33. Total Phthalates [6] (Phthalate esthers)	✔		1	grab	EPA 8270C	5	<5		<5	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✔		1	grab	EPA 8270C	5	<5		<5	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✔		1	grab	EPA 8270C	0.1	<0.1		<0.1	
a. Benzo(a) Anthracene	✔		1	grab	EPA 8270C	0.1	<0.1		<0.1	
b. Benzo(a) Pyrene	✔		1	grab	EPA 8270C	0.1	<0.1		<0.1	
c. Benzo(b)Fluoranthene	✔		1	grab	EPA 8270C	0.1	<0.1		<0.1	
d. Benzo(k) Fluoranthene	✔		1	grab	EPA 8270C	0.1	<0.1		<0.1	
e. Chrysene	✔		1	grab	EPA 8270C	0.1	<0.1		<0.1	

[6] The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✔		1	grab	EPA 8270 C	0.1	<0.1		<0.1	
g. Indeno(1,2,3-cd) Pyrene	✔		1	grab	EPA 8270 C	0.1	<0.1		<0.1	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
h. Acenaphthene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
i. Acenaphthylene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
j. Anthracene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
k. Benzo(ghi) Perylene	✔		1	grab	EPA 8270 C	0.1	<0.1		<0.1	
l. Fluoranthene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
m. Fluorene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
n. Naphthalene-	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
o. Phenanthrene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
p. Pyrene	✔		1	grab	EPA 8270 C	0.2	<0.2		<0.2	
37. Total Polychlorinated Biphenyls (PCBs)	✔		1	grab	EPA 608	0.2	<0.2		<0.2	
38. Antimony	✔		1	grab	EPA 6020A1	6.0	<6.0		<6.0	
39. Arsenic	✔		1	grab	EPA6020A1	5.0	<5.0		<5.0	
40. Cadmium	✔		1	grab	EPA6010B2	4.0	<4.0		<4.0	
41. Chromium III	✔		1	grab	EPA6010B2	10	<10.0		<10.0	
42. Chromium VI	✔		1	grab	EPA6010B2	10	<10.0		<10.0	

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper	✔		1	grab	EPA6010B2	25.0	<25.0		<25.0	
44. Lead	✔		1	grab	EPA6020A1	5.0	<5.0		<5.0	
45. Mercury	✔		1	grab	EPA 7470A3	0.2	<0.2		<0.2	
46. Nickel	✔		1	grab	EPA 6010B2	40.0	<40.0		<40.0	
47. Selenium	✔		1	grab	EPA 6020A1	5.0	<5.0		<5.0	
48. Silver	✔		1	grab	EPA 6010B2	7.0	<7.0		<7.0	
49. Zinc	✔		1	grab	EPA 6010B2	50.0	<50.0		<50.0	
50. Iron		✔	1	grab	EPA 6010B2	100	1,600		1,600	
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? 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: Iron DF: 404	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:

DF= [(0.67+30.1)/0.67)] x 0.9
= 403.8

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:						
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 30 gpm Maximum flow rate of treatment system 50 Design flow rate of treatment system 50						
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: Discharge via storm drain to drainage swale, wetland, and ultimately the Piscataqua River						
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.						
d) Provide the state water quality classification of the receiving water Class B,						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 30.1 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 ___ If yes, for which pollutant(s)? Mercury, PCBs, dioxin Is there a TMDL? Yes ___ No ✔ 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: CFI Station No. 70118

Operator signature: [signature]

Title: Senior Project Manager

Date: 8/23/10

ATTACHMENTS

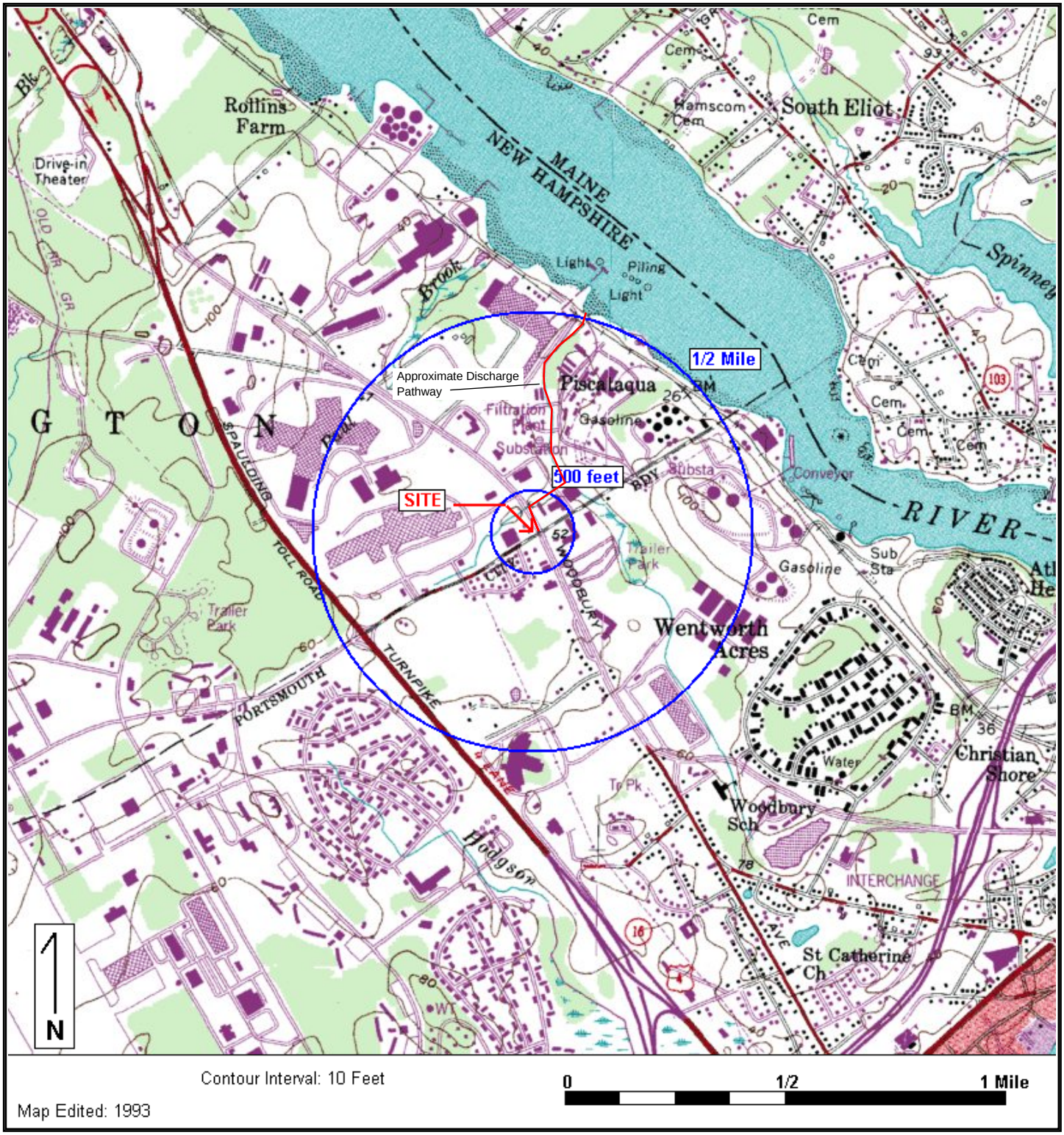
APPENDIX A

FIGURES

Environmental Compliance Services, Inc.
722 Route 3A, Suite 3
Bow, NH 03304
Phone 603.224.8871 Fax 603.224.8688
www.ecsconsult.com

CFI-NH-70118-Newington-97 Gosling Rd
97 Gosling Road
Newington, NH 03801

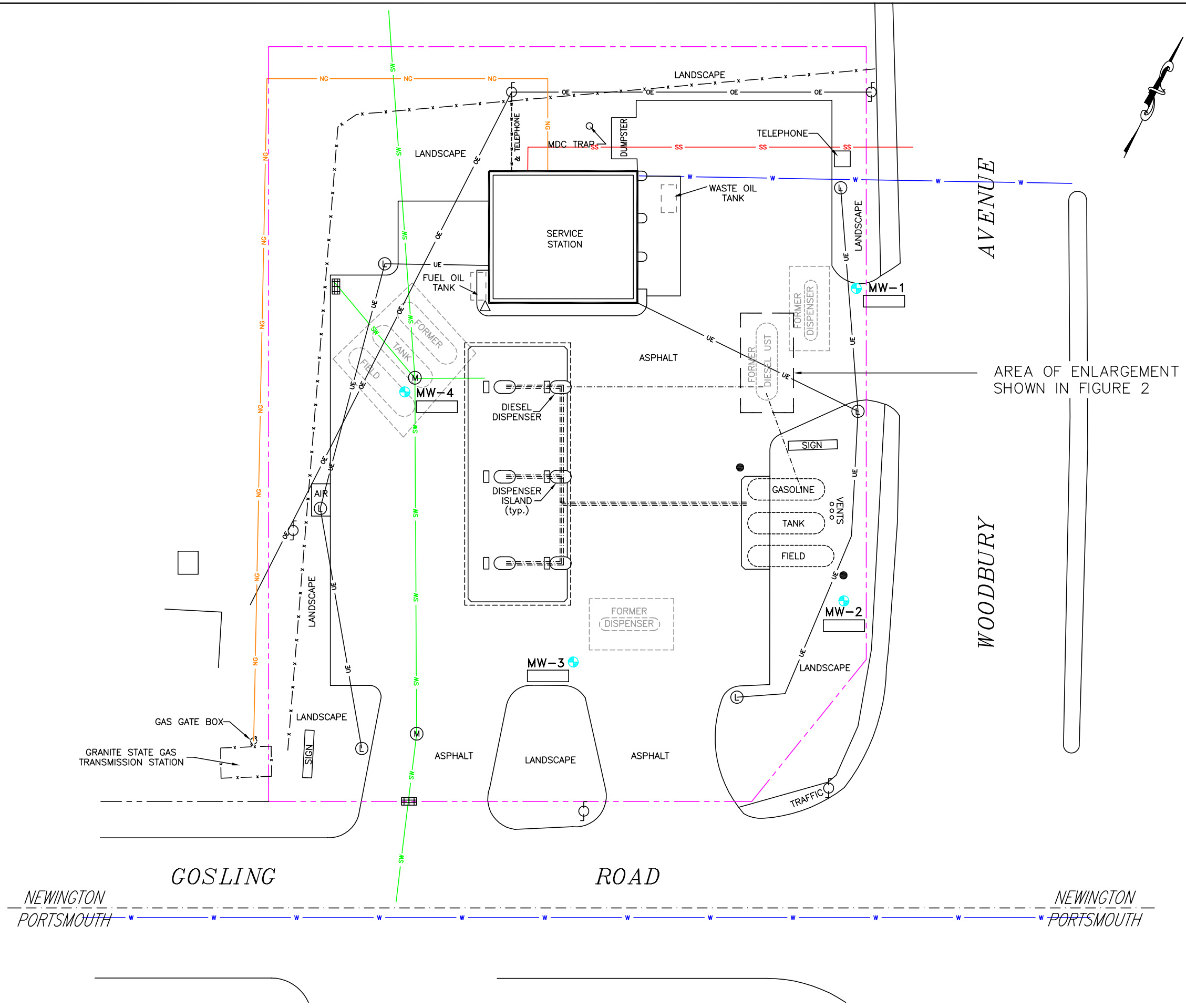
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Portsmouth, NH

Lat/Lon: 43º 5' 39" NORTH, 70º 47' 40" WEST - UTM Coordinates: 19 353955 EAST / 4772850 NORTH

Generated By: Christine DiMaio



Legend

- Approximate Property Line
- SS — Sanitary Sewer Line
- SW — Storm Sewer Line
- W — Water Line
- NG — Natural Gas Line
- OE — Overhead Electric Line
- MH — Manhole
- Catchbasin
- Water Gate
- Fire Hydrant
- Utility Pole
- Soil Boring
- Monitoring Well
- ECS-1 — Well I.D.

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.

ecs

722 Route 3A, Suite 3 * Bow, NH 03304
Phone: 1-800-636-6030 Fax: 603-224-8688

PROJECT:
Exxon Division of CFI #70118
97 Gosling Road
Newington, New Hampshire

TITLE:
Site Plan

CLIENT:
Cumberland Farms, Inc.

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : 02-200038-00_20040528.dwg

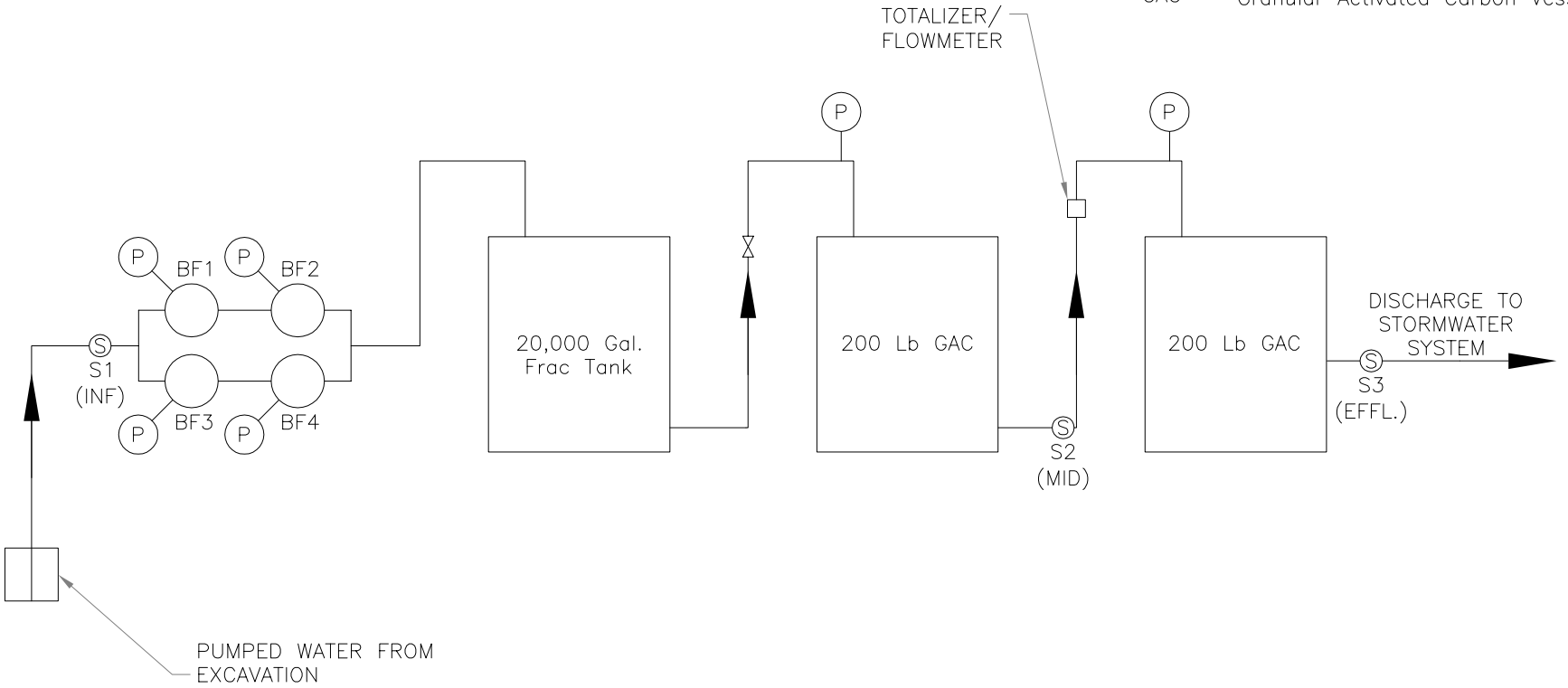
DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
KB	RJH	CC	SL
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=30'	Sept 2008	02-200038.55	1

General Notes:

1) Details of Treatment System May Vary From System Indicated Below.

Legend

(S)	SAMPLE PORT
(P)	PRESSURE GAUGE
⋈	BALL VALVE
○	Bag Filter
GAC	Granular Activated Carbon Vessel



ecs
722 Route 3A Suite 3 * Bow, NH 03304
Phone: 603-224-8871 Fax: 603-224-8688

CLIENT: Cumberland Farms, Inc.

GRAPHIC SCALE: 0

PROJECT: CFI # 70118
97 Gosling Road.
Newington, NH

TITLE: PROPOSED TREATMENT SYSTEM

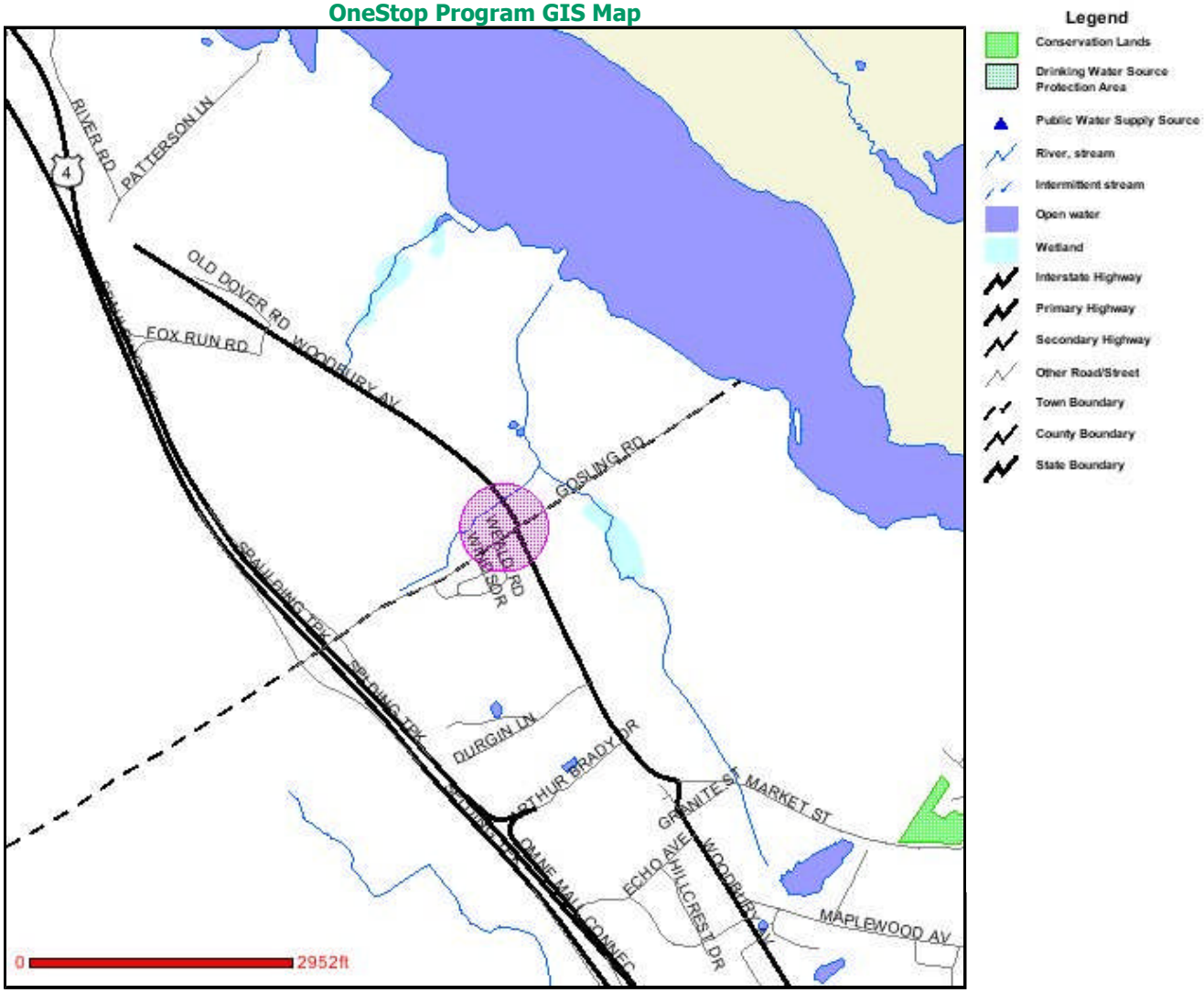
COMPUTER CADFILE :

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
DC	-	SL	SL
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
N.T.S.	AUG 2010	02-200038.55	3

New Hampshire Department of Environmental Services

OneStop Program GIS

OneStop Program GIS Map



Map Scale = 1 : 24597 (1" = 2050 feet or 0.4 miles)

The information contained in the OneStop Program GIS is the best available according to the procedures and standards of each of the contributing programs and of the GIS. The different programs are regularly maintaining the information in their databases. As a result, the GIS may not always provide access to all existing information, and it may occasionally contain unintentional inaccuracies. The Department can not be responsible for the misuse or misinterpretation of the information presented by this system.

Map prepared 8/19/2010 5:17:05 PM

GRANIT Complex Systems Research Center

Developed in cooperation with NH GRANIT

ATTACHMENT B

LABORATORY ANALYTICAL DATA

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

August 13, 2010

Mr. Steve Low
Environmental Compliance Services, Inc.
722 Rt. 3A
Suite 3
Bow, NH 03304

LABORATORY REPORT

Project: **CFI #70118/02-200038.55**
Lab ID: **135390**
Received: **08-10-10**

Dear Steve:

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/elm
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project:	**CFI #70118/02-200038.55**	Delivery:	**Hand**	Temperature:	**3.2ºC**
Client:	**Environmental Compliance Services, Inc.**	Airbill:	**n/a**	Chain of Custody:	**Present**
Lab ID:	**135390**	Lab Receipt:	**08-10-10**	Custody Seal(s):	**n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-1	MW-2		Aqueous	8/9/10 13:35	EPA 8260B Volatile Organics with Oxygenates				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1282155	40 mL VOA Vial	Scientific Specialist	BX37087	HCL	R-5915D	07-21-10	n/a		
C1282179	40 mL VOA Vial	Scientific Specialist	BX37087	HCL	R-5915D	07-21-10	n/a		
C1282167	40 mL VOA Vial	Scientific Specialist	BX37087	HCL	R-5915D	07-21-10	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-2	Trip Blank		Aqueous	8/9/10 13:35	EPA 8260B Volatile Organics with Oxygenates				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1230886	40 mL VOA Vial	Scientific Specialist	BX36328	HCL	R-5915D	05-05-10	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-3	MW-2		Aqueous	8/9/10 13:35	EPA 504.1 EDB and DBCP				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1180897	40 mL VOA Vial	Proline	BX33816	Na2S2O3	R-5971A	08-14-09	n/a		
C1180876	40 mL VOA Vial	Proline	BX33816	Na2S2O3	R-5971A	08-14-09	n/a		
C1180866	40 mL VOA Vial	Proline	BX33816	Na2S2O3	R-5971A	08-14-09	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-4	MW-2		Aqueous	8/9/10 13:35	EPA 8270C Semivolatile Organics (Low Level)				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1262672	1 L Amber Glass	Scientific Specialist	BX36491	None	n/a	n/a	n/a		
C1262671	1 L Amber Glass	Scientific Specialist	BX36491	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-5	MW-2		Aqueous	8/9/10 13:35	EPA 608 PCBs				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1262471	1 L Amber Glass	Scientific Specialist	BX36525	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-6	MW-2		Aqueous	8/9/10 13:35	SM 4500-Cl G Total Residual Chlorine				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1262675	1 L Amber Glass	Scientific Specialist	BX36491	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-7	MW-2		Aqueous	8/9/10 13:35	TPH by GC EPA 8015B Mod				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1277290	1 L Amber Glass	Scientific Specialist	BX37165	H2SO4	R-6054E	08-05-10	n/a		
C1277286	1 L Amber Glass	Scientific Specialist	BX37165	H2SO4	R-6054E	08-05-10	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-8	MW-2		Aqueous	8/9/10 13:35	EPA 7196A Hexavalent Chromium EPA 9050A Specific Conductance SM 2540 D Total Suspended Solids SM 4500-H+B pH				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1288655	250 mL Plastic	Scientific Specialist	BX37212	None	n/a	n/a	n/a		
C1288647	250 mL Plastic	Scientific Specialist	BX37212	None	n/a	n/a	n/a		
C1282805	1 L Plastic	Scientific Specialist	BX37211	None	n/a	n/a	n/a		
C1282797	1 L Plastic	Scientific Specialist	BX37211	None	n/a	n/a	n/a		

GROUNDWATER ANALYTICAL

Sample Receipt Report (Continued)

Project:	**CFI #70118/02-200038.55**	Delivery:	**Hand**	Temperature:	**3.2ºC**
Client:	**Environmental Compliance Services, Inc.**	Airbill:	**n/a**	Chain of Custody:	**Present**
Lab ID:	**135390**	Lab Receipt:	**08-10-10**	Custody Seal(s):	**n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-9	MW-2		Aqueous	8/9/10 13:35	EPA 9012A Total Cyanide				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1283604	500 mL Plastic	Scientific Specialist	BX37066	NaOH	R-6027B	06-30-10	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-10	MW-2		Aqueous	8/9/10 13:35	EPA 6010B Ag Cd Cr Cu Fe Ni Zn Total EPA 6020A As Pb 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**		
C1273813	250 mL Plastic	Scientific Specialist	BX37196	HNO3	R-6113E	07-20-10	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
135390-11	MW-2		Aqueous	8/9/10 13:35	EPA 6010B Ag Cd Cr Cu Fe Ni Zn Dissolved EPA 6020A As Pb Sb Se Dissolved EPA 7470A Mercury by CVAA Dissolved				
Con ID	**Container**	**Vendor**	**QC Lot**	**Preserv**	**QC Lot**	**Prep**	**Ship**		
C1260598	250 mL Plastic	Scientific Specialist	BX36854	HNO3	R-6113E	06-25-10	n/a		

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HCl/ Cool**
Laboratory ID:	**135390-1**	QC Batch ID:	**VM5-4247-W**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-5 HP 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**25 mL**
Analyzed:	**08-12-10 11:27**	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
107-13-1	Acrylonitrile	BRL		ug/L	0.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.4
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

GROUNDWATER ANALYTICAL

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

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HCl/ Cool**
Laboratory ID:	**135390-1**	QC Batch ID:	**VM5-4247-W**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-5 HP 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**25 mL**
Analyzed:	**08-12-10 11:27**	Dilution Factor:	**1**
Analyst:	**LMG**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
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
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
110-57-6	*trans*-1,4-Dichloro-2-butene	BRL		ug/L	25
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
108-70-3	1,3,5-Trichlorobenzene	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*- butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	9	**93** %	70 - 130 %
1,2-Dichloroethane-d_4	10	8	**83** %	70 - 130 %
Toluene-d_8	10	9	**93** %	70 - 130 %
4-Bromofluorobenzene	10	9	**92** %	70 - 130 %

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

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

GROUNDWATER ANALYTICAL

EPA Method 8260B
Volatile Organics by GC/MS

Field ID:	**Trip Blank**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HCl/ Cool**
Laboratory ID:	**135390-2**	QC Batch ID:	**VM5-4247-W**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-5 HP 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**25 mL**
Analyzed:	**08-12-10 12:49**	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
107-13-1	Acrylonitrile	BRL		ug/L	0.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.4
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

GROUNDWATER ANALYTICAL

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

Field ID:	**Trip Blank**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HCl/ Cool**
Laboratory ID:	**135390-2**	QC Batch ID:	**VM5-4247-W**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-5 HP 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**25 mL**
Analyzed:	**08-12-10 12:49**	Dilution Factor:	**1**
Analyst:	**LMG**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
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
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
110-57-6	*trans*-1,4-Dichloro-2-butene	BRL		ug/L	25
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
108-70-3	1,3,5-Trichlorobenzene	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*- butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	**95** %	70 - 130 %
1,2-Dichloroethane-d_4	10	9	**92** %	70 - 130 %
Toluene-d_8	10	9	**94** %	70 - 130 %
4-Bromofluorobenzene	10	10	**96** %	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 504.1
EDB and DBCP by GC/ECD

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**40 mL VOA Vial**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**135390-03**	QC Batch ID:	**PV-0997-E**
Sampled:	**08-09-10 13:35**	Instrument ID:	**GC-5 HP 5890**
Received:	**08-10-10 16:21**	Sample Volume:	**35 mL**
Extracted:	**08-11-10 22:30**	Final Volume:	**1 mL**
Analyzed:	**08-11-10 23:18**	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: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

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 8270C
Semivolatile Organics by GC/MS (Part 1)

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**1 L Amber Glass**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**135390-04**	QC Batch ID:	**SV-2537-F**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-12 Agilent 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**950 mL**
Extracted:	**08-10-10 23:00**	Final Volume:	**1 mL**
Analyzed:	**08-12-10 12:52**	Dilution Factor:	**1**
Analyst:	**MJB**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	5
110-86-1	Pyridine	BRL		ug/L	5
108-95-2	Phenol	BRL		ug/L	5
62-53-3	Aniline	BRL		ug/L	5
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	5
95-57-8	2-Chlorophenol	BRL		ug/L	5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	5
100-51-6	Benzyl Alcohol	BRL		ug/L	5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	5
95-48-7	2-Methylphenol	BRL		ug/L	5
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	5
108-39-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	5
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	5
98-86-2	Acetophenone	BRL		ug/L	5
67-72-1	Hexachloroethane	BRL		ug/L	5
98-95-3	Nitrobenzene	BRL		ug/L	5
78-59-1	Isophorone	BRL		ug/L	5
88-75-5	2-Nitrophenol	BRL		ug/L	5
105-67-9	2,4-Dimethylphenol	BRL		ug/L	5
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	5
120-83-2	2,4-Dichlorophenol	BRL		ug/L	5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	5
106-47-8	4-Chloroaniline	BRL		ug/L	5
87-68-3	Hexachlorobutadiene	BRL		ug/L	5
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	5
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	5
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	5
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	5
91-58-7	2-Chloronaphthalene	BRL		ug/L	5
88-74-4	2-Nitroaniline	BRL		ug/L	5
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	5
131-11-3	Dimethyl phthalate	BRL		ug/L	5
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	5
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	5
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	5
99-09-2	3-Nitroaniline	BRL		ug/L	5
51-28-5	2,4-Dinitrophenol	BRL		ug/L	11
100-02-7	4-Nitrophenol	BRL		ug/L	5
132-64-9	Dibenzofuran	BRL		ug/L	5
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	5
84-66-2	Diethyl phthalate	BRL		ug/L	5
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	5
100-01-6	4-Nitroaniline	BRL		ug/L	5
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	5

GROUNDWATER ANALYTICAL

EPA Method 8270C (Continued)
Semivolatile Organics by GC/MS (Part 1)

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**1 L Amber Glass**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**135390-04**	QC Batch ID:	**SV-2537-F**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-12 Agilent 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**950 mL**
Extracted:	**08-10-10 23:00**	Final Volume:	**1 mL**
Analyzed:	**08-12-10 12:52**	Dilution Factor:	**1**
Analyst:	**MJB**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
86-30-6	N-Nitrosodiphenylamine †	BRL		ug/L	5
122-66-7	1,2-Diphenylhydrazine ◊	BRL		ug/L	5
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	5
86-74-8	Carbazole	BRL		ug/L	5
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	5
85-68-7	Butyl benzyl phthalate	BRL		ug/L	5
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	5
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	5
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	21	10	**46** %	15 - 110 %
Phenol-d5	21	9	**43** %	15 - 110 %
Nitrobenzene-d5	11	10	**93** %	30 - 130 %
2-Fluorobiphenyl	11	10	**96** %	30 - 130 %
2,4,6-Tribromophenol	21	13	**61** %	15 - 110 %
Terphenyl-d14	11	10	**94** %	30 - 130 %

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

Report Notations:

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

* Analyzed as 4-Methylphenol.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

EPA Method 8270C
Semivolatile Organics by GC/MS-SIM (Part 2)

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**1 L Amber Glass**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**135390-04**	QC Batch ID:	**SV-2537-F**
Sampled:	**08-09-10 13:35**	Instrument ID:	**MS-6 HP 6890**
Received:	**08-10-10 16:21**	Sample Volume:	**950 mL**
Extracted:	**08-10-10 23:00**	Final Volume:	**1 mL**
Analyzed:	**08-12-10 11:03**	Dilution Factor:	**1**
Analyst:	**MJB**		

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	0.2
91-57-6	2-Methylnaphthalene	BRL		ug/L	0.2
208-96-8	Acenaphthylene	BRL		ug/L	0.2
83-32-9	Acenaphthene	BRL		ug/L	0.2
86-73-7	Fluorene	BRL		ug/L	0.2
85-01-8	Phenanthrene	BRL		ug/L	0.2
120-12-7	Anthracene	BRL		ug/L	0.2
206-44-0	Fluoranthene	BRL		ug/L	0.2
129-00-0	Pyrene	BRL		ug/L	0.2
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.1
218-01-9	Chrysene	BRL		ug/L	0.1
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	0.1
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.1
50-32-8	Benzo[a]pyrene	BRL		ug/L	0.1
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	0.1
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	0.1
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	0.1
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
118-74-1	Hexachlorobenzene	BRL		ug/L	0.5
87-86-5	Pentachlorophenol	BRL		ug/L	1.1

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	21	9.9	**47** %	15 - 110 %
Phenol-d5	21	9.1	**43** %	15 - 110 %
Nitrobenzene-d5	11	8.5	**80** %	30 - 130 %
2-Fluorobiphenyl	11	7.8	**75** %	30 - 130 %
2,4,6-Tribromophenol	21	16	**75** %	15 - 110 %
Terphenyl-d14	11	7.8	**75** %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
Sample extraction performed by EPA Method 3510C.

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

GROUNDWATER ANALYTICAL

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

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**1 L Amber Glass**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**Cool**
Laboratory ID:	**135390-05**	QC Batch ID:	**PB-2615-F**
Sampled:	**08-09-10 13:35**	Instrument ID:	**GC-13 Agilent 6890**
Received:	**08-10-10 16:21**	Sample Weight:	**900 mL**
Extracted:	**08-11-10 08:00**	Final Volume:	**1 mL**
Cleaned Up:	**08-11-10 15:30**	Dilution Factor:	**1**
Analyzed:	**08-11-10 21:29**		
Analyst:	**CRL**		

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

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro-*m*-xylene	0.22	0.15	**66** %	30 - 150 %
Column	Decachlorobiphenyl	0.22	0.21	**93** %	30 - 150 %
Second	Tetrachloro-*m*-xylene	0.22	0.15	**66** %	30 - 150 %
Column	Decachlorobiphenyl	0.22	0.20	**90** %	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: **MW-2** Matrix: **Aqueous**
Project: **CFI #70118/02-200038.55** Received: **08-10-10 16:21**
Client: **Environmental Compliance Services, Inc.**

Lab ID: **135390-06** Sampled: **08-09-10 13:35** Container: **1 L Amber Glass** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	**0.11**	mg/L	0.02	1	5 mL	08-11-10 12:00	TRC-0874-W	SM 4500-Cl G	2	JR

Lab ID: **135390-08** Sampled: **08-09-10 00:00** Container: **1 L Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	**200**	mg/L	5	3	200 mL	08-12-10 12:44	TSS-1804-W	SM 2540 D	4	JR
pH	**6.6**	pH	NA	1	50 mL	08-10-10 20:39	PH-3013-W	SM 4500-H+B	3	LJD
Specific Conductance	**1,300**	umhos/cm at 25 °C	2	1	50 mL	08-10-10 22:09	SC-1647-W	EPA 9050A	3	LJD
Chromium, Hexavalent	BRL	mg/L	0.01	1	5 mL	08-10-10 18:00	HC-0200-W	EPA 7196A	2	JK

Lab ID: **135390-09** Sampled: **08-09-10 00:00** Container: **500 mL Plastic** Preservation: **NaOH/Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Cyanide, Total	**0.01**	mg/L	0.01	1	50 mL	08-13-10 11:18	TCN-1588-W	EPA 9012B	1	JR

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: Accumet AR50

4 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

EPA Method 8015B (Modified)
Total Petroleum Hydrocarbons by GC/FID

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**1 L Amber Glass**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**H2SO4/ Cool**
Laboratory ID:	**135390-7**	QC Batch ID:	**HF-2240-F**
Sampled:	**08-09-10 13:35**	Instrument ID:	**GC4 HP 5890**
Received:	**08-10-10 16:21**	Sample Volume:	**980 mL**
Extracted:	**08-11-10 15:30**	Final Volume:	**1 mL**
Analyzed:	**08-12-10 14:39**	Dilution Factor:	**1**
Analyst:	**MB**		

Analyte	Concentration	Notes	Units	Reporting Limit
Total Petroleum Hydrocarbons	BRL		mg/L	0.2

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
ortho-Terphenyl	0.041	0.030	**74** %	60 - 140 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Method modified to quantify total petroleum hydrocarbons in the range n-C 9 through n-C 36. Results are quantified on the basis of a series of aromatic and aliphatic hydrocarbons, using 5-alpha-androstane as an internal standard.
Sample extraction performed by EPA Method 3510C.

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

GROUNDWATER ANALYTICAL

Trace Metals

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**250 mL Plastic**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HNO3 / Cool**
Laboratory ID:	**135390-10**	Preserved:	**08-09-10 00:00**
Sampled:	**08-09-10 13:35**		
Received:	**08-10-10 16:21**		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6020A[1]	MB-4157-W	EPA 3010A	08-12-10 00:00	50 mL	ICPMS-1 ELAN 9000	LS
EPA 6010B[2]	MB-4157-W	EPA 3010A	08-12-10 00:00	50 mL	ICP-1 PE 3000	LS
EPA 7470A[3]	MP-2312-W	EPA 7470A	08-13-10 00:00	25 mL	CVAA-1 PE FIMS	LS

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Total	BRL		mg/L	0.006	1	08-13-10 11:48	EPA 6020A[1]
7440-38-2	Arsenic, Total	BRL		mg/L	0.005	1	08-13-10 11:48	EPA 6020A[1]
7440-43-9	Cadmium, Total	BRL		mg/L	0.004	1	08-12-10 18:53	EPA 6010B[2]
7440-47-3	Chromium, Total	BRL		mg/L	0.01	1	08-12-10 18:53	EPA 6010B[2]
7440-50-8	Copper, Total	BRL		mg/L	0.025	1	08-12-10 18:53	EPA 6010B[2]
7439-89-6	Iron, Total	**1.6**		mg/L	0.1	1	08-12-10 18:53	EPA 6010B[2]
7439-92-1	Lead, Total	BRL		mg/L	0.005	1	08-13-10 11:48	EPA 6020A[1]
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	08-13-10 15:43	EPA 7470A[3]
7440-02-0	Nickel, Total	BRL		mg/L	0.04	1	08-12-10 18:53	EPA 6010B[2]
7782-49-2	Selenium, Total	BRL		mg/L	0.005	1	08-13-10 11:48	EPA 6020A[1]
7440-22-4	Silver, Total	BRL		mg/L	0.007	1	08-12-10 18:53	EPA 6010B[2]
7440-66-6	Zinc, Total	BRL		mg/L	0.05	1	08-12-10 18:53	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

Trace Metals

Field ID:	**MW-2**	Matrix:	**Aqueous**
Project:	**CFI #70118/02-200038.55**	Container:	**250 mL Plastic**
Client:	**Environmental Compliance Services, Inc.**	Preservation:	**HNO3 / Cool**
Laboratory ID:	**135390-11**	Preserved:	**08-09-10 00:00**
Sampled:	**08-09-10 13:35**	Filtered:	**08-09-10 00:00**
Received:	**08-10-10 16:21**		

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6020A[1]	MB-4157-W	EPA 3010A	08-12-10 00:00	50 mL	ICPMS-1 ELAN 9000	LS
EPA 6010B[2]	MB-4157-W	EPA 3010A	08-12-10 00:00	50 mL	ICP-1 PE 3000	LS
EPA 7470A[3]	MP-2312-W	EPA 7470A	08-13-10 00:00	25 mL	CVAA-1 PE FIMS	LS

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Dissolved	BRL		mg/L	0.006	1	08-13-10 11:54	EPA 6020A[1]
7440-38-2	Arsenic, Dissolved	BRL		mg/L	0.005	1	08-13-10 11:54	EPA 6020A[1]
7440-43-9	Cadmium, Dissolved	BRL		mg/L	0.004	1	08-12-10 19:51	EPA 6010B[2]
7440-47-3	Chromium, Dissolved	BRL		mg/L	0.01	1	08-12-10 19:50	EPA 6010B[2]
7440-50-8	Copper, Dissolved	BRL		mg/L	0.025	1	08-12-10 19:50	EPA 6010B[2]
7439-89-6	Iron, Dissolved	BRL		mg/L	0.1	1	08-12-10 19:51	EPA 6010B[2]
7439-92-1	Lead, Dissolved	BRL		mg/L	0.005	1	08-13-10 11:54	EPA 6020A[1]
7439-97-6	Mercury, Dissolved	BRL		mg/L	0.0002	1	08-13-10 15:46	EPA 7470A[3]
7440-02-0	Nickel, Dissolved	BRL		mg/L	0.04	1	08-12-10 19:51	EPA 6010B[2]
7782-49-2	Selenium, Dissolved	BRL		mg/L	0.005	1	08-13-10 11:54	EPA 6020A[1]
7440-22-4	Silver, Dissolved	BRL		mg/L	0.007	1	08-12-10 19:50	EPA 6010B[2]
7440-66-6	Zinc, Dissolved	BRL		mg/L	0.05	1	08-12-10 19:50	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:	**CFI #70118/02-200038.55**	Lab ID:	**135390**
Client:	**Environmental Compliance Services, Inc.**	Received:	**08-10-10 16:21**

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 8270C PAH Non-conformance: Laboratory control sample (LCS) analyte Pentachlorophenol was above recommended recovery limits for QC batch SV-2537-F.

2 . EPA 8270C PAH Non-conformance: Laboratory control sample (LCS) had all analytes with RPD recoveries outside recommended recovery limits for QC batch SV-2537-F.

3 . pH Non-conformance: Sample 135390-8. pH analysis was not performed within 15 minutes of sample collection. Sample was analyzed shortly after receipt by the laboratory.

4 . EPA 8260B Non-conformance: Laboratory control sample (LCS) analytes Dichlorodifluoromethane, 1,1,2-Trichlorotrifluoroethane and 2,2-Dichloropropane were above recommended recovery limits for QC batch VM5-4247-W.

GROUNDWATER ANALYTICAL

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CHAIN-OF-CUSTODY RECORD AND WORK ORDER

Project Name: CAL # 70118	Firm: ECS
Project Number: 02-20003855	Address: 722 Rt 3A Suite 3
Sampler Name: Owen Castor	City / State / Zip:: Bow, NH 03304
Project Manager: Steve Low	Telephone: 603-224-8871

TURNAROUND

- ☐ 10 Business Days
- ☐ 5 Business Days
- ☑ RUSH (RAN- 807) (Rush requires Rush Authorization Number)
- ☑ Please Email to: slow@ecsconsult.com
- ☐ Please FAX to:

BILLING

- ☑ Purchase Order No.: 26338
- ☐ Third Party Billing:
- ☐ GWA Quote:

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

ANALYSIS REQUEST

OPTIONS / SDWA / NPDES / RCRA/21E

Volatiles: ☐ TIC Search; ☐ 524.2; ☐ 624; ☐ 8260B TCL-MTBE; ☑ 8260B; ☐ 8260B Aromatics; ☐ 8260B Halocarbons; ☐ 8021B Vermont; ☐ 602-MTBE

Semivolatiles: ☐ Acid Only; ☐ B/N Only; ☐ TIC Search; ☐ 525.2; ☐ 625; ☐ 625 PAHs only; ☐ 8270C; ☐ 8270C PAHs only

Pest/Herb/PCBs Extractable: ☐ 505 ☐ 508; ☐ 608 Pesticides; ☐ 608 PCBs; ☑ 8082 PCBs; ☐ 8081A Pesticides

Pest/Herb/PCBs Vol.: ☐ 531.1; ☐ 515.3; ☐ 515; ☐ 8151A Herbicides; ☐ 8011 EDB/DBCP

Metals: Specify For Water Samples ☐ Total ☐ Dissolved; ☐ 13 Priority Pollutant; ☐ 8 RCRA; ☐ 5 RCRA; ☐ 14 MA DEP Metals; ☐ 23 TAL; ☐ Specify:

Petroleum Hydrocarbon Ext. TPH: ☐ Diesel Range Organics (DRO) ☐ ME DRO; ☐ CT ETPH; ☐ MA DEP EPH w/all targets ☐ EPH C arbon Ranges only ☐ EPH w/4 PAHs; ☐ Hydrocarbon Fingerprint (GC/FID by ASTM D3328-00-Mod.)

Petroleum Hydrocarbon Vol. TPH: ☑ TPH by GC/FID (6015B Mod) Quantitative Only; ☐ Gasoline Range Organics (GRO) ☐ ME GRO; ☐ MA DEP VPH w/all targets ☐ VPH Carbon ranges only

Haz. Waste: ☐ Corrosivity (as pH) ☐ Reactivity ☐ Ignitability ☐ Conductivity ☐ Paint Filter; ☐ TCLP ☐ SPLP ☐ 8 Metals ☐ Pb only ☐ VOA ☐ Semi VOA ☐ Pesticides ☐ Herbicides; ☐ MA Basic Disposal: 8260B/TCL TPH, PCBs, 5 Metals, Corrosivity, Ignitability, Reactivity; ☐ MA Extended Disposal 8260B, 8270C, TPH, PCBs, 5 Metals, Corrosivity, Ignitability, Reactivity

General Chemistry: ☐ Nitrate ☐ Nitrite ☐ Chlorine ☐ Fluoride ☐ Sulfate; ☐ Dissolved Phosphorus; ☐ Ammonia ☐ TKN ☐ Total Phosphorus ☐ Total N (as N02/N03/TKN); ☐ ~~CN Cyanide~~ pH, TDS (and Sulfate); ☐ CCO ☐ TOC; ☐ BOD ☐ CBOD ☐ TDS ☐ TSS ☐ TS ☐ Alkalinity; ☐ Total Cyanide ☐ Physiologically Available Cyanide ☐ Available Cyanide

Other: ☐ pH ☐ Dissolved Oxygen ☐ Turbidity; ☐ Total Coliform ☐ Fecal Coliform ☐ HPC; ☐ MA DEP Asbestos in Soil ☐ Asbestos (PLM); TSS; TRC

Sampling DATE	Sampling TIME	SAMPLE IDENTIFICATION	Matrix: GROUNDWATER	DRINKING WATER	WASTEWATER	SOIL	OTHER SOLID	OIL/ORGANIC LIQUID	Type: COMPOSITE	GRAB	Container(s): NUMBER	40mL VOA Vial	60mL/2 oz Glass	120mL/4 oz Amber Glass	250mL/8 oz Glass	500mL/16 oz Glass	1L/32 oz Amber Glass	250mL/8 oz Plastic	500mL/16 oz Plastic	1L/32 oz Plastic	120mL Sterile	Preservation: HCl	HNO3	H2SO4	NaOH	Methanol	Sodium Bisulfate (NaHSO4)	ICE	Filtered: YES	NO	LABORATORY NUMBER (Lab Use Only)
8/10	1335	MW-2	✓							✓	3	✓										✓								✓	
		MW-2	✓							✓	3	✓															✓			✓	
		MW-2	✓							✓	3							✓										✓		✓	
		MW-2	✓							✓	2							✓										✓		✓	
		MW-2	✓							✓	2							✓						✓						✓	
		MW-2	✓							✓	1								✓				✓							✓	
		MW-2	✓							✓	1								✓				✓					✓		✓	
		MW-2	✓							✓	1									✓								✓		✓	
		MW-2	✓							✓	1								✓									✓		✓	
		MW-2	✓							✓	1									✓								✓		✓	
		MW-2	✓							✓	1									✓					✓			✓		✓	
		MW-2	✓							✓	1									✓								✓		✓	
		Trip Blank	✓								1											✓						✓		✓	

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:

take TRC from Lambers
please hold pH, hardness, TDS, Sulfate, and silica analysis

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: Owen Castor	Date 8/9/10	Time 1713	Received by: Joe Clary	Date 8/10/10	Time 1139	Receipt Temperature: 3.2 ☑ Ice ☐ Refrigerated 2-8°C Recommended
Relinquished by: Joe Clary	Date 8/10/10	Time 1621	Received by: [illegible]	Date 8/10/10	Time 1621	Container Count: 20
Relinquished by:	Date	Time	Received by Laboratory:			Shipping/Airbill Number:

Method of Shipment: ☑ GWA Courier ☐ Express Mail ☐ Federal Express ☐ UPS ☐ Hand ☐

Custody Seal Number:

☆ metals analysis includes antimony, arsenic, cadmium, trivalent Chromium, Hexavalent Chromium, Copper, lead, mercury, nickel, selenium, silver, zinc

☆ please reference Appendix III Effluent Limitations for Derived RDL's

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:	**EPA 8015B Mod TPH**	Instrument ID:	**GC4 HP 5890**
QC Batch ID:	**HF-2240-F**	Extracted:	**08-11-10 15:30**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 12:49**
Units:	**mg/L**	Analyst:	**MB**

Analyte	Spiked	Measured	Recovery	QC Limits
Fuel Oil No. 2	2.0	1.4	**70** %	60 - 140 %

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
ortho -Terphenyl	0.040	0.033	**81** %	60 - 140 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Method modified to quantify total petroleum hydrocarbons in the range n-C 9 through n-C 36. Results are quantified on the basis of a series of aromatic and aliphatic hydrocarbons, using 5-alpha-androstane as an internal standard.
Sample extraction performed by EPA Method 3510C.

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 8015B Mod TPH**	Instrument ID:	**GC4 HP 5890**
QC Batch ID:	**HF-2240-F**	Extracted:	**08-11-10 15:30**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 11:59**
		Analyst:	**MB**

Analyte	Concentration	Notes	Units	Reporting Limit
Total Petroleum Hydrocarbons	BRL		mg/L	0.2

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
ortho -Terphenyl	0.040	0.037	**93** %	60 - 140 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Method modified to quantify total petroleum hydrocarbons in the range n-C 9 through n-C 36. Results are quantified on the basis of a series of aromatic and aliphatic hydrocarbons, using 5-alpha-androstane as an internal standard.
Sample extraction performed by EPA Method 3510C.

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

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 9012B	TCN-1588-W	EPA 9012B	8/13/2010 9:00	8/13/2010 11:06	Lachat 8000 Autoanalyzer	JR
LCSD	EPA 9012B	TCN-1588-W	EPA 9012B	8/13/2010 9:00	8/13/2010 11:08	Lachat 8000 Autoanalyzer	JR

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Cyanide, Total	0.45	0.46	**103%**	0.45	0.47	**105%**	**2 %**	90-110%	20 %	EPA 9012B

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
Laboratory Control Sample

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

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Specific Conductance	umhos/cm at 25 °C	1400	1400	**100 %**	80 - 120 %	08-10-10 22:06	SC-1647-W	EPA 9050A	3	JR
Solids, Total Suspended	mg/L	81	86	**106 %**	80 - 120 %	08-12-10 12:44	TSS-1804-W	SM 2540 D	4	JR
Chlorine, Total Residual	mg/L	0.05	0.05	**108 %**	80 - 120 %	08-11-10 12:00	TRC-0874-W	SM 4500-Cl G	2	JR
pH	pH	7.0	7.0	**101 %**	80 - 120 %	08-10-10 20:25	PH-3013-W	SM 4500-H+ B	3	LD
Chromium, Hexavalent	mg/L	0.1	0.1	**99 %**	80 - 120 %	08-10-10 00:00	HC-0200-W	EPA 7196A	2	JK
Cyanide, Total	mg/L	0.45	0.46	**103 %**	80 - 120 %	08-13-10 11:05	TCN-1588-W	Lachat 10-204-00-1-A (EPA 335.4)	1	JR

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: Accumet AR50

4 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

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

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Specific Conductance	BRL	umhos/ cm at 25 oC	2	08-10-10 22:06	SC-1647-W	EPA 9050A	3	JR
Solids, Total Suspended	BRL	mg/L	2	08-12-10 12:44	TSS-1804-W	SM 2540 D	4	JR
Chlorine, Total Residual	BRL	mg/L	0.02	08-11-10 12:00	TRC-0874-W	SM 4500-Cl G	2	JR
Chromium, Hexavalent	BRL	mg/L	0.01	08-10-10 00:00	HC-0200-W	EPA 7196A	2	JK
Cyanide, Total	BRL	mg/L	0.01	08-13-10 11:05	TCN-1588-W	Lachat 10-204-00-1-A (EPA 335.4)	1	JR

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: Accumet AR50

4 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-2615-F**	Extracted:	**08-11-10 08:00**
Matrix:	**Aqueous**	Cleaned Up:	**08-11-10 15:30**
Units:	**ug/L**	Analyzed:	**08-11-10 21:05**
		Analyst:	**CRL**

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
12674-11-2	Aroclor 1016	5.0	4.2	4.3	**84** %	**85** %	40 - 140 %
11096-82-5	Aroclor 1260	5.0	4.3	4.9	**86** %	**97** %	40 - 140 %

QC Surrogate Compound	Spiked	Measured		Recovery		QC Limits
Tetrachloro-*m*-xylene	0.20	0.16	0.16	**78** %	**78** %	30 - 150 %
Decachlorobiphenyl	0.20	0.17	0.15	**84** %	**74** %	30 - 150 %

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

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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 608 PCBs**	Instrument ID:	**GC-13 Agilent 6890**
QC Batch ID:	**PB-2615-F**	Extracted:	**08-11-10 08:00**
Matrix:	**Aqueous**	Cleaned Up:	**08-11-10 15:30**
		Analyzed:	**08-11-10 20:18**
		Analyst:	**CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.20
11104-28-2	Aroclor 1221	BRL		ug/L	0.20
11141-16-5	Aroclor 1232	BRL		ug/L	0.20
53469-21-9	Aroclor 1242	BRL		ug/L	0.20
12672-29-6	Aroclor 1248	BRL		ug/L	0.20
11097-69-1	Aroclor 1254	BRL		ug/L	0.20
11096-82-5	Aroclor 1260	BRL		ug/L	0.20

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-*m*-xylene	0.20	0.15	**74** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.20	**102** %	30 - 150 %
Second Column	Tetrachloro-*m*-xylene	0.20	0.16	**78** %	30 - 150 %
	Decachlorobiphenyl	0.20	0.18	**92** %	30 - 150 %

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

Report Notations: 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 504.1**	Instrument ID:	**GC-5 HP 5890**
QC Batch ID:	**PV-0997-E**	Extracted:	**08-11-10 16:30**
Matrix:	**Aqueous**	Analyzed:	**08-11-10 21:04**
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	0.19	0.20	**94** %	**101** %	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBC	0.20	0.18	0.21	**92** %	**104** %	70 - 130 %

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

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 504.1**	Instrument ID:	**GC-5 HP 5890**
QC Batch ID:	**PV-0997-E**	Extracted:	**08-11-10 16:30**
Matrix:	**Aqueous**	Analyzed:	**08-11-10 22:44**
		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: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

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 6020A	MB-4157-WL	EPA 3010A	08-12-10 00:00	08-13-10 00:00	ICPMS-1 ELAN 9000	
LCS	EPA 6010B	MB-4157-WL	EPA 3010A	08-12-10 00:00	08-13-10 11:27	ICP-1 PE 3000	
LCS	EPA 7470A	MP-2312-WL	EPA 7470A	08-13-10 00:00	08-13-10 15:20	CVAA-1 PE FIMS	LS
LCSD	EPA 6020A	MB-4157-WL	EPA 3010A	08-12-10 00:00	08-13-10 15:23	ICPMS-1 ELAN 9000	
LCSD	EPA 6010B	MB-4157-WL	EPA 3010A	08-12-10 00:00	08-13-10 11:33	ICP-1 PE 3000	
LCSD	EPA 7470A	MP-2312-WL	EPA 7470A	08-13-10 00:00	08-13-10 15:23	CVAA-1 PE FIMS	LS

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-36-0	Antimony	0.050	0.045	**90%**	0.050	0.046	**92%**	**1 %**	80-120 %	20 %	EPA 6020A
7440-38-2	Arsenic	0.050	0.046	**92%**	0.050	0.045	**90%**	**1 %**	80-120 %	20 %	EPA 6020A
7440-43-9	Cadmium	1.0	0.9	**91%**	1.0	0.9	**87%**	**2 %**	80-120 %	20 %	EPA 6010B
7440-47-3	Chromium	1.0	0.90	**90%**	1.0	0.86	**86%**	**2 %**	80-120 %	20 %	EPA 6010B
7440-50-8	Copper	1.0	0.90	**90%**	1.0	0.85	**85%**	**3 %**	80-120 %	20 %	EPA 6010B
7439-89-6	Iron	5.0	4.9	**98%**	5.0	4.7	**94%**	**2 %**	80-120 %	20 %	EPA 6010B
7439-92-1	Lead	0.050	0.044	**88%**	0.050	0.042	**84%**	**2 %**	80-120 %	20 %	EPA 6020A
7439-97-6	Mercury	0.0010	0.0009	**88%**	0.0010	0.0010	**96%**	**4 %**	80-120 %	20 %	EPA 7470A
7440-02-0	Nickel	1.0	0.93	**93%**	1.0	0.89	**89%**	**2 %**	80-120 %	20 %	EPA 6010B
7782-49-2	Selenium	0.050	0.052	**104%**	0.050	0.051	**102%**	**1 %**	80-120 %	20 %	EPA 6020A
7440-22-4	Silver	0.5	0.91	**91%**	0.5	0.91	**91%**	**0 %**	80-120 %	20 %	EPA 6010B
7440-66-6	Zinc	1.0	0.91	**91%**	1.0	1.0	**100%**	**5 %**	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 6020A	MB-4157-WB	EPA 3010A	08-12-10 00:00	50 mL	ICPMS-1 ELAN 9000	
EPA 6010B	MB-4157-WB	EPA 3010A	08-12-10 00:00	50 mL	ICP-1 PE 3000	
EPA 7470A	MP-2312-WB	EPA 7470A	08-13-10 00:00	25 mL	CVAA-1 PE FIMS	LS

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.006	1	08-13-10 00:00	EPA 6020A
7440-38-2	Arsenic	BRL		mg/L	0.005	1	08-13-10 00:00	EPA 6020A
7440-43-9	Cadmium	BRL		mg/L	0.004	1	08-12-10 18:38	EPA 6010B
7440-47-3	Chromium	BRL		mg/L	0.01	1	08-12-10 18:38	EPA 6010B
7440-50-8	Copper	BRL		mg/L	0.025	1	08-12-10 18:38	EPA 6010B
7439-89-6	Iron	BRL		mg/L	0.1	1	08-12-10 18:38	EPA 6010B
7439-92-1	Lead	BRL		mg/L	0.005	1	08-13-10 00:00	EPA 6020A
7439-97-6	Mercury	BRL		mg/L	0.0002	1	08-13-10 15:20	EPA 7470A
7440-02-0	Nickel	BRL		mg/L	0.04	1	08-12-10 18:38	EPA 6010B
7782-49-2	Selenium	BRL		mg/L	0.005	1	08-13-10 00:00	EPA 6020A
7440-22-4	Silver	BRL		mg/L	0.007	1	08-12-10 18:38	EPA 6010B
7440-66-6	Zinc	BRL		mg/L	0.05	1	08-12-10 18:38	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-5 HP 6890**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-4247-W**	Analyzed:	**08-12-10 09:13**	Analyzed:	**08-12-10 09:54**
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	13	**134** % q	10	13	**130** %	**3** %	70 - 130 %	20%
74-87-3	Chloromethane	10	10	**102** %	10	11	**107** %	**5** %	70 - 130 %	20%
75-01-4	Vinyl Chloride	10	10	**101** %	10	11	**105** %	**4** %	70 - 130 %	20%
74-83-9	Bromomethane	10	11	**106** %	10	11	**111** %	**4** %	70 - 130 %	20%
75-00-3	Chloroethane	10	10	**101** %	10	11	**115** %	**13** %	70 - 130 %	20%
75-69-4	Trichlorofluoromethane	10	12	**122** %	10	13	**127** %	**4** %	70 - 130 %	20%
60-29-7	Diethyl Ether	20	21	**103** %	20	23	**113** %	**10** %	70 - 130 %	20%
75-35-4	1,1-Dichloroethene	10	11	**106** %	10	11	**109** %	**3** %	70 - 130 %	20%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	26	**131** % q	20	27	**137** % q	**4** %	70 - 130 %	20%
67-64-1	Acetone	20	16	**81** %	20	15	**74** %	**8** %	70 - 130 %	20%
75-15-0	Carbon Disulfide	20	18	**91** %	20	20	**99** %	**9** %	70 - 130 %	20%
75-09-2	Methylene Chloride	10	11	**107** %	10	11	**105** %	**2** %	70 - 130 %	20%
107-13-1	Acrylonitrile	10	12	**118** %	10	10	**104** %	**12** %	70 - 130 %	20%
156-60-5	*trans*- 1,2-Dichloroethene	10	9.4	**94** %	10	10	**103** %	**9** %	70 - 130 %	20%
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	10	11	**113** %	10	13	**125** %	**11** %	70 - 130 %	20%
75-34-3	1,1-Dichloroethane	10	9.9	**99** %	10	10	**104** %	**5** %	70 - 130 %	20%
594-20-7	2,2-Dichloropropane	10	13	**133** % q	10	14	**142** % q	**6** %	70 - 130 %	20%
156-59-2	*cis*- 1,2-Dichloroethene	10	10	**100** %	10	11	**107** %	**7** %	70 - 130 %	20%
78-93-3	2-Butanone (MEK)	20	18	**90** %	20	17	**83** %	**9** %	70 - 130 %	20%
74-97-5	Bromochloromethane	10	10	**103** %	10	10	**105** %	**2** %	70 - 130 %	20%
109-99-9	Tetrahydrofuran (THF)	20	18	**90** %	20	18	**89** %	**1** %	70 - 130 %	20%
67-66-3	Chloroform	10	11	**105** %	10	11	**114** %	**8** %	70 - 130 %	20%
71-55-6	1,1,1-Trichloroethane	10	11	**111** %	10	12	**120** %	**8** %	70 - 130 %	20%
56-23-5	Carbon Tetrachloride	10	11	**113** %	10	12	**124** %	**9** %	70 - 130 %	20%
563-58-6	1,1-Dichloropropene	10	9.4	**94** %	10	9.9	**99** %	**5** %	70 - 130 %	20%
71-43-2	Benzene	10	9.6	**96** %	10	10	**103** %	**6** %	70 - 130 %	20%
107-06-2	1,2-Dichloroethane	10	12	**118** %	10	13	**129** %	**9** %	70 - 130 %	20%
79-01-6	Trichloroethene	10	9.6	**96** %	10	10	**104** %	**8** %	70 - 130 %	20%
78-87-5	1,2-Dichloropropane	10	8.5	**85** %	10	9.3	**93** %	**10** %	70 - 130 %	20%
74-95-3	Dibromomethane	10	10	**105** %	10	11	**112** %	**7** %	70 - 130 %	20%
75-27-4	Bromodichloromethane	10	11	**109** %	10	11	**114** %	**4** %	70 - 130 %	20%
123-91-1	1,4-Dioxane	200	190	**94** %	200	190	**96** %	**2** %	70 - 130 %	20%
10061-01-5	*cis*- 1,3-Dichloropropene	10	8.8	**88** %	10	9.8	**98** %	**11** %	70 - 130 %	20%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	18	**89** %	20	20	**98** %	**9** %	70 - 130 %	20%
108-88-3	Toluene	10	9.6	**96** %	10	10	**102** %	**6** %	70 - 130 %	20%
10061-02-6	*trans*- 1,3-Dichloropropene	10	9.1	**91** %	10	8.9	**89** %	**3** %	70 - 130 %	20%
79-00-5	1,1,2-Trichloroethane	10	9.9	**99** %	10	9.7	**97** %	**1** %	70 - 130 %	20%
127-18-4	Tetrachloroethene	10	11	**105** %	10	10	**105** %	**1** %	70 - 130 %	20%
142-28-9	1,3-Dichloropropane	10	10	**102** %	10	10	**100** %	**2** %	70 - 130 %	20%
591-78-6	2-Hexanone	20	20	**99** %	20	19	**96** %	**3** %	70 - 130 %	20%
124-48-1	Dibromochloromethane	10	11	**109** %	10	11	**106** %	**3** %	70 - 130 %	20%
106-93-4	1,2-Dibromoethane (EDB)	10	9.7	**97** %	10	9.2	**92** %	**6** %	70 - 130 %	20%
108-90-7	Chlorobenzene	10	9.9	**99** %	10	9.9	**99** %	**0** %	70 - 130 %	20%
630-20-6	1,1,1,2-Tetrachloroethane	10	11	**111** %	10	11	**111** %	**0** %	70 - 130 %	20%
100-41-4	Ethylbenzene	10	11	**107** %	10	11	**106** %	**0** %	70 - 130 %	20%
108-38-3/106-42-3	*meta*- Xylene and *para*- Xylene	20	21	**105** %	20	21	**106** %	**1** %	70 - 130 %	20%
95-47-6	*ortho*- Xylene	10	11	**106** %	10	10	**103** %	**3** %	70 - 130 %	20%
100-42-5	Styrene	10	10	**105** %	10	11	**106** %	**1** %	70 - 130 %	20%
75-25-2	Bromoform	10	11	**108** %	10	11	**109** %	**1** %	70 - 130 %	20%

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-4247-W**	Analyzed:	**08-12-10 09:13**	Analyzed:	**08-12-10 09:54**
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
98-82-8	Isopropylbenzene	10	8.6	**86** %	10	8.6	**86** %	**0** %	70 - 130 %	20%
108-86-1	Bromobenzene	10	9.7	**97** %	10	10	**100** %	**3** %	70 - 130 %	20%
79-34-5	1,1,2,2-Tetrachloroethane	10	8.6	**86** %	10	8.6	**86** %	**0** %	70 - 130 %	20%
96-18-4	1,2,3-Trichloropropane	10	8.9	**89** %	10	9.4	**94** %	**6** %	70 - 130 %	20%
110-57-6	*trans*-1,4-Dichloro-2-butene	200	220	**112** %	200	210	**105** %	**6** %	70 - 130 %	20%
103-65-1	*n*-Propylbenzene	10	9.6	**96** %	10	9.7	**97** %	**1** %	70 - 130 %	20%
95-49-8	2-Chlorotoluene	10	9.4	**94** %	10	9.2	**92** %	**2** %	70 - 130 %	20%
108-67-8	1,3,5-Trimethylbenzene	10	10	**102** %	10	10	**103** %	**1** %	70 - 130 %	20%
106-43-4	4-Chlorotoluene	10	9.3	**93** %	10	9.4	**94** %	**1** %	70 - 130 %	20%
98-06-6	*tert*-Butylbenzene	10	9.7	**97** %	10	9.7	**97** %	**0** %	70 - 130 %	20%
95-63-6	1,2,4-Trimethylbenzene	10	10	**104** %	10	11	**107** %	**3** %	70 - 130 %	20%
135-98-8	*sec*-Butylbenzene	10	9.5	**95** %	10	9.5	**95** %	**0** %	70 - 130 %	20%
541-73-1	1,3-Dichlorobenzene	10	10	**100** %	10	10	**102** %	**2** %	70 - 130 %	20%
99-87-6	4-Isopropyltoluene	10	10	**102** %	10	10	**102** %	**0** %	70 - 130 %	20%
106-46-7	1,4-Dichlorobenzene	10	10	**100** %	10	10	**101** %	**1** %	70 - 130 %	20%
95-50-1	1,2-Dichlorobenzene	10	10	**104** %	10	10	**102** %	**2** %	70 - 130 %	20%
104-51-8	*n*-Butylbenzene	10	10	**101** %	10	10	**100** %	**1** %	70 - 130 %	20%
96-12-8	1,2-Dibromo-3-chloropropane	10	10	**103** %	10	10	**100** %	**3** %	70 - 130 %	20%
108-70-3	1,3,5-Trichlorobenzene	10	12	**115** %	10	11	**113** %	**2** %	70 - 130 %	20%
120-82-1	1,2,4-Trichlorobenzene	10	9.9	**99** %	10	10	**100** %	**1** %	70 - 130 %	20%
87-68-3	Hexachlorobutadiene	10	11	**110** %	10	11	**110** %	**1** %	70 - 130 %	20%
91-20-3	Naphthalene	10	8.7	**87** %	10	8.5	**85** %	**3** %	70 - 130 %	20%
87-61-6	1,2,3-Trichlorobenzene	10	8.9	**89** %	10	9.4	**94** %	**5** %	70 - 130 %	20%
75-65-0	*tert*-Butyl Alcohol (TBA)	200	230	**113** %	200	210	**107** %	**6** %	70 - 130 %	20%
108-20-3	Di-isopropyl Ether (DIPE)	10	8.6	**86** %	10	9.3	**93** %	**8** %	70 - 130 %	20%
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	10	9.5	**95** %	10	10	**101** %	**7** %	70 - 130 %	20%
994-05-8	*tert*-Amyl Methyl Ether (TAME)	10	8.8	**88** %	10	9.5	**95** %	**8** %	70 - 130 %	20%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
Dibromofluoromethane	10	9	**87** %	10	10	**97** %		70 - 130 %
1,2-Dichloroethane-d_4	10	8	**84** %	10	9	**94** %		70 - 130 %
Toluene-d_8	10	9	**87** %	10	10	**97** %		70 - 130 %
4-Bromofluorobenzene	10	10	**97** %	10	10	**100** %		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.

q Recovery outside recommended limits.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-4247-W**	Analyzed:	**08-12-10 10:36**
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
107-13-1	Acrylonitrile	BRL		ug/L	0.5
156-60-5	*trans*- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl *tert*- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	*cis*- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	*cis*- 1,3-Dichloropropene	BRL		ug/L	0.4
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

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8260B**	Instrument ID:	**MS-5 HP 6890**
QC Batch ID:	**VM5-4247-W**	Analyzed:	**08-12-10 10:36**
Matrix:	**Aqueous**	Analyst:	**LMG**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
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
110-57-6	*trans*-1,4-Dichloro-2-butene	BRL		ug/L	25
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
108-70-3	1,3,5-Trichlorobenzene	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	*tert*-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl *tert*-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	*tert*-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	**100** %	70 - 130 %
1,2-Dichloroethane-d_4	10	8	**83** %	70 - 130 %
Toluene-d_8	10	10	**101** %	70 - 130 %
4-Bromofluorobenzene	10	10	**100** %	70 - 130 %

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

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

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA 8270C (Part 1)**	Instrument ID:	**MS-12 Agilent 6890**	Instrument ID:	**MS-12 Agilent 6890**
QC Batch ID:	**SV-2537-F**	Extracted:	**08-10-10 23:00**	Extracted:	**08-10-10 23:00**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 09:11**	Analyzed:	**08-12-10 09:55**
Units:	**ug/L**	Analyst:	**MJB**	Analyst:	**MJB**

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
62-75-9	N-Nitrosodimethylamine	50	35	**69** %	50	36	**72** %	**3** %	40 - 140 %	20%
110-86-1	Pyridine	50	33	**67** %	50	31	**62** %	**8** %	40 - 140 %	20%
108-95-2	Phenol	50	30	**59** %	50	28	**56** %	**6** %	30 - 130 %	20%
62-53-3	Aniline	50	41	**82** %	50	39	**78** %	**5** %	40 - 140 %	20%
111-44-4	Bis(2-chloroethyl) ether	50	43	**85** %	50	39	**79** %	**8** %	40 - 140 %	20%
95-57-8	2-Chlorophenol	50	42	**85** %	50	40	**79** %	**6** %	30 - 130 %	20%
541-73-1	1,3-Dichlorobenzene	50	41	**82** %	50	38	**76** %	**8** %	40 - 140 %	20%
106-46-7	1,4-Dichlorobenzene	50	41	**82** %	50	38	**76** %	**7** %	40 - 140 %	20%
100-51-6	Benzyl Alcohol	50	45	**89** %	50	41	**83** %	**7** %	30 - 130 %	20%
95-50-1	1,2-Dichlorobenzene	50	42	**84** %	50	39	**77** %	**8** %	40 - 140 %	20%
95-48-7	2-Methylphenol	50	43	**86** %	50	40	**80** %	**8** %	30 - 130 %	20%
108-60-1	Bis(2-chloroisopropyl) ether	50	43	**86** %	50	40	**80** %	**7** %	40 - 140 %	20%
106-44-5	4-Methylphenol	50	43	**86** %	50	40	**80** %	**8** %	30 - 130 %	20%
621-64-7	N-Nitrosodi-n-propylamine	50	47	**93** %	50	43	**86** %	**8** %	40 - 140 %	20%
98-86-2	Acetophenone	50	48	**96** %	50	44	**88** %	**8** %	40 - 140 %	20%
67-72-1	Hexachloroethane	50	42	**83** %	50	38	**76** %	**8** %	40 - 140 %	20%
98-95-3	Nitrobenzene	50	41	**83** %	50	39	**77** %	**7** %	40 - 140 %	20%
78-59-1	Isophorone	50	44	**88** %	50	41	**82** %	**7** %	40 - 140 %	20%
88-75-5	2-Nitrophenol	50	44	**89** %	50	42	**84** %	**5** %	30 - 130 %	20%
105-67-9	2,4-Dimethylphenol	50	39	**79** %	50	37	**74** %	**6** %	30 - 130 %	20%
111-91-1	Bis(2-chloroethoxy) methane	50	43	**86** %	50	40	**79** %	**8** %	40 - 140 %	20%
120-83-2	2,4-Dichlorophenol	50	43	**87** %	50	40	**81** %	**7** %	30 - 130 %	20%
120-82-1	1,2,4-Trichlorobenzene	50	41	**81** %	50	38	**75** %	**7** %	40 - 140 %	20%
106-47-8	4-Chloroaniline	50	43	**86** %	50	41	**81** %	**5** %	40 - 140 %	20%
87-68-3	Hexachlorobutadiene	50	40	**81** %	50	38	**75** %	**7** %	40 - 140 %	20%
59-50-7	4-Chloro-3-methylphenol	50	47	**95** %	50	45	**89** %	**6** %	30 - 130 %	20%
77-47-4	Hexachlorocyclopentadiene	50	40	**80** %	50	37	**73** %	**9** %	40 - 140 %	20%
88-06-2	2,4,6-Trichlorophenol	50	51	**103** %	50	47	**95** %	**8** %	30 - 130 %	20%
95-95-4	2,4,5-Trichlorophenol	50	50	**101** %	50	47	**93** %	**8** %	30 - 130 %	20%
91-58-7	2-Chloronaphthalene	50	47	**94** %	50	43	**86** %	**8** %	40 - 140 %	20%
88-74-4	2-Nitroaniline	50	51	**103** %	50	47	**95** %	**8** %	40 - 140 %	20%
100-25-4	1,4-Dinitrobenzene	50	55	**110** %	50	51	**102** %	**7** %	40 - 140 %	20%
131-11-3	Dimethyl phthalate	50	50	**100** %	50	46	**93** %	**8** %	40 - 140 %	20%
99-65-0	1,3-Dinitrobenzene	50	53	**107** %	50	49	**99** %	**8** %	40 - 140 %	20%
606-20-2	2,6-Dinitrotoluene	50	51	**102** %	50	47	**95** %	**7** %	40 - 140 %	20%
528-29-0	1,2-Dinitrobenzene	50	52	**105** %	50	48	**96** %	**8** %	40 - 140 %	20%
99-09-2	3-Nitroaniline	50	53	**106** %	50	50	**100** %	**6** %	40 - 140 %	20%
51-28-5	2,4-Dinitrophenol	50	48	**97** %	50	47	**94** %	**3** %	30 - 130 %	20%
100-02-7	4-Nitrophenol	50	32	**64** %	50	30	**60** %	**6** %	30 - 130 %	20%
132-64-9	Dibenzofuran	50	48	**96** %	50	44	**89** %	**7** %	40 - 140 %	20%
121-14-2	2,4-Dinitrotoluene	50	54	**108** %	50	50	**100** %	**8** %	40 - 140 %	20%
84-66-2	Diethyl phthalate	50	52	**104** %	50	48	**95** %	**9** %	40 - 140 %	20%
7005-72-3	4-Chlorophenyl phenyl ether	50	50	**100** %	50	47	**93** %	**8** %	40 - 140 %	20%
100-01-6	4-Nitroaniline	50	61	**122** %	50	57	**113** %	**7** %	40 - 140 %	20%
534-52-1	4,6-Dinitro-2-methylphenol	50	52	**103** %	50	48	**96** %	**7** %	30 - 130 %	20%
86-30-6	N-Nitrosodiphenylamine †	50	50	**100** %	50	46	**92** %	**9** %	40 - 140 %	20%
122-66-7	1,2-Diphenylhydrazine à	50	49	**98** %	50	45	**90** %	**8** %	40 - 140 %	20%
101-55-3	4-Bromophenyl phenyl ether	50	50	**101** %	50	46	**92** %	**9** %	40 - 140 %	20%

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA 8270C (Part 1)**	Instrument ID:	**MS-12 Agilent 6890**	Instrument ID:	**MS-12 Agilent 6890**
QC Batch ID:	**SV-2537-F**	Extracted:	**08-10-10 23:00**	Extracted:	**08-10-10 23:00**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 09:11**	Analyzed:	**08-12-10 09:55**
Units:	**ug/L**	Analyst:	**MJB**	Analyst:	**MJB**

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
86-74-8	Carbazole	50	59	**118** %	50	55	**109** %	**8** %	40 - 140 %	20%
84-74-2	Di-*n*-butyl phthalate	50	54	**108** %	50	49	**99** %	**9** %	40 - 140 %	20%
85-68-7	Butyl benzyl phthalate	50	55	**111** %	50	51	**103** %	**7** %	40 - 140 %	20%
91-94-1	3,3'-Dichlorobenzidine	50	65	**130** %	50	59	**118** %	**9** %	40 - 140 %	20%
117-81-7	Bis(2-ethylhexyl) phthalate	50	55	**111** %	50	51	**102** %	**8** %	40 - 140 %	20%
117-84-0	Di-*n*-octyl phthalate	50	49	**99** %	50	46	**92** %	**7** %	40 - 140 %	20%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
2-Fluorophenol	20	12	**58** %	20	11	**54** %		15 - 110 %
Phenol-d5	20	10	**51** %	20	9.7	**48** %		15 - 110 %
Nitrobenzene-d5	10	9.4	**94** %	10	8.8	**88** %		30 - 130 %
2-Fluorobiphenyl	10	11	**106** %	10	9.9	**99** %		30 - 130 %
2,4,6-Tribromophenol	20	19	**93** %	20	17	**87** %		15 - 110 %
Terphenyl-d14	10	11	**115** %	10	11	**106** %		30 - 130 %

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

Report Notations: 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.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8270C (Part 1)**	Instrument ID:	**MS-12 Agilent 6890**
QC Batch ID:	**SV-2537-F**	Extracted:	**08-10-10 23:00**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 10:39**
		Analyst:	**MJB**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	5
110-86-1	Pyridine	BRL		ug/L	5
108-95-2	Phenol	BRL		ug/L	5
62-53-3	Aniline	BRL		ug/L	5
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	5
95-57-8	2-Chlorophenol	BRL		ug/L	5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	5
100-51-6	Benzyl Alcohol	BRL		ug/L	5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	5
95-48-7	2-Methylphenol	BRL		ug/L	5
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	5
108-39-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	5
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	5
98-86-2	Acetophenone	BRL		ug/L	5
67-72-1	Hexachloroethane	BRL		ug/L	5
98-95-3	Nitrobenzene	BRL		ug/L	5
78-59-1	Isophorone	BRL		ug/L	5
88-75-5	2-Nitrophenol	BRL		ug/L	5
105-67-9	2,4-Dimethylphenol	BRL		ug/L	5
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	5
120-83-2	2,4-Dichlorophenol	BRL		ug/L	5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	5
106-47-8	4-Chloroaniline	BRL		ug/L	5
87-68-3	Hexachlorobutadiene	BRL		ug/L	5
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	5
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	5
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	5
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	5
91-58-7	2-Chloronaphthalene	BRL		ug/L	5
88-74-4	2-Nitroaniline	BRL		ug/L	5
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	5
131-11-3	Dimethyl phthalate	BRL		ug/L	5
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	5
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	5
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	5
99-09-2	3-Nitroaniline	BRL		ug/L	5
51-28-5	2,4-Dinitrophenol	BRL		ug/L	10
100-02-7	4-Nitrophenol	BRL		ug/L	5
132-64-9	Dibenzofuran	BRL		ug/L	5
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	5
84-66-2	Diethyl phthalate	BRL		ug/L	5
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	5
100-01-6	4-Nitroaniline	BRL		ug/L	5
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	5

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8270C (Part 1)**	Instrument ID:	**MS-12 Agilent 6890**
QC Batch ID:	**SV-2537-F**	Extracted:	**08-10-10 23:00**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 10:39**
		Analyst:	**MJB**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
86-30-6	N-Nitrosodiphenylamine †	BRL		ug/L	5
122-66-7	1,2-Diphenylhydrazine ◊	BRL		ug/L	5
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	5
86-74-8	Carbazole	BRL		ug/L	5
84-74-2	Di-*n*-butyl phthalate	BRL		ug/L	5
85-68-7	Butyl benzyl phthalate	BRL		ug/L	5
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	5
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	5
117-84-0	Di-*n*-octyl phthalate	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	9	**47** %	15 - 110 %
Phenol-d5	20	8	**41** %	15 - 110 %
Nitrobenzene-d5	10	9	**85** %	30 - 130 %
2-Fluorobiphenyl	10	9	**87** %	30 - 130 %
2,4,6-Tribromophenol	20	11	**55** %	15 - 110 %
Terphenyl-d14	10	9	**91** %	30 - 130 %

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

Report Notations:

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

* Analyzed as 4-Methylphenol.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

Quality Control Report
Laboratory Control Samples

		LCS		LCSD	
Category:	**EPA 8270C (Part 2)**	Instrument ID:	**MS-6 HP 6890**	Instrument ID:	**MS-6 HP 6890**
QC Batch ID:	**SV-2537-F**	Extracted:	**08-10-10 23:00**	Extracted:	**08-10-10 23:00**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 09:03**	Analyzed:	**08-12-10 09:43**
Units:	**ug/L**	Analyst:	**MJB**	Analyst:	**MJB**

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
91-20-3	Naphthalene	5.0	2.7	**54** %	5.0	3.7	**73** %	**30** % q	40 - 140 %	20%
91-57-6	2-Methylnaphthalene	5.0	3.1	**61** %	5.0	4.0	**81** %	**27** % q	40 - 140 %	20%
208-96-8	Acenaphthylene	5.0	3.5	**70** %	5.0	4.8	**95** %	**31** % q	40 - 140 %	20%
83-32-9	Acenaphthene	5.0	3.2	**65** %	5.0	4.5	**91** %	**34** % q	40 - 140 %	20%
86-73-7	Fluorene	5.0	3.4	**69** %	5.0	4.6	**93** %	**30** % q	40 - 140 %	20%
85-01-8	Phenanthrene	5.0	3.4	**68** %	5.0	4.5	**91** %	**28** % q	40 - 140 %	20%
120-12-7	Anthracene	5.0	3.7	**75** %	5.0	5.0	**99** %	**28** % q	40 - 140 %	20%
206-44-0	Fluoranthene	5.0	3.6	**72** %	5.0	4.9	**97** %	**30** % q	40 - 140 %	20%
129-00-0	Pyrene	5.0	4.0	**80** %	5.0	5.2	**105** %	**26** % q	40 - 140 %	20%
56-55-3	Benzo[a]anthracene	5.0	3.7	**74** %	5.0	5.0	**99** %	**29** % q	40 - 140 %	20%
218-01-9	Chrysene	5.0	3.5	**70** %	5.0	4.6	**93** %	**27** % q	40 - 140 %	20%
205-99-2	Benzo[b]fluoranthene	5.0	4.0	**79** %	5.0	5.2	**104** %	**27** % q	40 - 140 %	20%
207-08-9	Benzo[k]fluoranthene	5.0	3.8	**76** %	5.0	5.1	**102** %	**29** % q	40 - 140 %	20%
50-32-8	Benzo[a]pyrene	5.0	4.0	**79** %	5.0	5.2	**105** %	**28** % q	40 - 140 %	20%
193-39-5	Indeno[1,2,3-c,d]pyrene	5.0	3.6	**71** %	5.0	5.1	**101** %	**35** % q	40 - 140 %	20%
53-70-3	Dibenzo[a,h]anthracene	5.0	3.5	**69** %	5.0	4.8	**95** %	**31** % q	40 - 140 %	20%
191-24-2	Benzo[g,h,i]perylene	5.0	3.4	**68** %	5.0	4.6	**93** %	**32** % q	40 - 140 %	20%
87-68-3	Hexachlorobutadiene	5.0	2.8	**56** %	5.0	3.9	**78** %	**34** % q	40 - 140 %	20%
118-74-1	Hexachlorobenzene	5.0	3.7	**74** %	5.0	5.0	**100** %	**29** % q	40 - 140 %	20%
87-86-5	Pentachlorophenol	5.0	4.8	**97** %	5.0	6.6	**133** % q	**32** % q	30 - 130 %	20%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limits
2-Fluorophenol	20	8.3	**42** %	20	12	**61** %		15 - 110 %
Phenol-d5	20	7.5	**38** %	20	10	**52** %		15 - 110 %
Nitrobenzene-d5	10	6.0	**60** %	10	8.3	**83** %		30 - 130 %
2-Fluorobiphenyl	10	5.8	**58** %	10	8.0	**80** %		30 - 130 %
2,4,6-Tribromophenol	20	15	**76** %	20	21	**105** %		15 - 110 %
Terphenyl-d14	10	6.8	**69** %	10	9.0	**90** %		30 - 130 %

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

Report Notations: 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.

q Recovery outside recommended limits.

GROUNDWATER ANALYTICAL

Quality Control Report
Method Blank

Category:	**EPA Method 8270C (Part 2)**	Instrument ID:	**MS-6 HP 6890**
QC Batch ID:	**SV-2537-F**	Extracted:	**08-10-10 23:00**
Matrix:	**Aqueous**	Analyzed:	**08-12-10 10:23**
		Analyst:	**MJB**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	0.2
91-57-6	2-Methylnaphthalene	BRL		ug/L	0.2
208-96-8	Acenaphthylene	BRL		ug/L	0.2
83-32-9	Acenaphthene	BRL		ug/L	0.2
86-73-7	Fluorene	BRL		ug/L	0.2
85-01-8	Phenanthrene	BRL		ug/L	0.2
120-12-7	Anthracene	BRL		ug/L	0.2
206-44-0	Fluoranthene	BRL		ug/L	0.2
129-00-0	Pyrene	BRL		ug/L	0.2
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.1
218-01-9	Chrysene	BRL		ug/L	0.1
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	0.1
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.1
50-32-8	Benzo[a]pyrene	BRL		ug/L	0.1
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	0.1
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	0.1
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	0.1
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
118-74-1	Hexachlorobenzene	BRL		ug/L	0.5
87-86-5	Pentachlorophenol	BRL		ug/L	1.0

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	11	**53** %	15 - 110 %
Phenol-d5	20	9.2	**46** %	15 - 110 %
Nitrobenzene-d5	10	7.6	**76** %	30 - 130 %
2-Fluorobiphenyl	10	7.5	**75** %	30 - 130 %
2,4,6-Tribromophenol	20	17	**86** %	15 - 110 %
Terphenyl-d14	10	8.2	**82** %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
Sample extraction performed by EPA Method 3510C.

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

GROUNDWATER ANALYTICAL

Certifications and Approvals

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

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

CONNECTICUT

Department of Health Services, PH-0586 — Potable Water, Wastewater, Solid Waste and Soil
http://www.ct.gov/dph/lib/dph/environmental health/environmental laboratories/pdf/Out State.pdf

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

NEW HAMPSHIRE

Department of Environmental Services, 202708 — Potable Water, Non-Potable Water, Solid and Chemical Materials
http://www4.egov.nh.gov/DES/NHELAP

NEW YORK

Department of Health, 11754 — Potable Water, Non-Potable Water, Solid and Hazardous Waste
http://www.wadsworth.org/labcert/elap/comm.html

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

U.S. DEPARTMENT OF AGRICULTURE

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

VERMONT

Department of Health, VT-87643 — Potable Water
http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert

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 200.8
Arsenic	EPA 200.8
Barium	EPA 200.7
Barium	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G
Chromium	EPA 200.7
Cyanide, Total	Lachat 10-204-00-1-A
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G
Fecal Coliform (Source Water)	MF SM 9222-D
Fluoride	EPA 300.0
Fluoride	SM 4500-F-C
Heterotrophic Plate Count	SM 9215-B
Lead	EPA 200.8
Mercury	EPA 245.1
Nickel	EPA 200.7
Nickel	EPA 200.8
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
pH	SM 4500-H-B
Selenium	EPA 200.8
Silver	EPA 200.7
Silver	EPA 200.8
Sodium	EPA 200.7
Sulfate	EPA 300.0
Thallium	EPA 200.8
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223
Total Coliform (Treatment and Distribution)	MF SM 9222-B
Total Dissolved Solids	SM 2540-C
Trihalomethanes	EPA 524.2
Turbidity	SM 2130-B
Volatile Organic Compounds	EPA 524.2

Non-Potable Water (Wastewater)

Analyte	Method
Aldrin	EPA 608
Alkalinity, Total	SM 2320-B
Alpha-BHC	EPA 608
Aluminum	EPA 200.7
Aluminum	EPA 200.8
Ammonia-N	Lachat 10-107-06-1-B

Non-Potable Water (Wastewater)

Analyte	Method
Antimony	EPA 200.7
Antimony	EPA 200.8
Arsenic	EPA 200.7
Arsenic	EPA 200.8
Beryllium	EPA 200.7
Beryllium	EPA 200.8
Beta-BHC	EPA 608
Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7
Cadmium	EPA 200.8
Calcium	EPA 200.7
Chemical Oxygen Demand	SM 5220-D
Chlordane	EPA 608
Chloride	EPA 300.0
Chlorine, Total Residual	SM 4500-CL-G
Chromium	EPA 200.7
Chromium	EPA 200.8
Cobalt	EPA 200.7
Cobalt	EPA 200.8
Copper	EPA 200.7
Copper	EPA 200.8
Cyanide, Total	Lachat 10-204-00-1-A
DDD	EPA 608
DDE	EPA 608
DDT	EPA 608
Delta-BHC	EPA 608
Dieldrin	EPA 608
Endosulfan I	EPA 608
Endosulfan II	EPA 608
Endosulfan Sulfate	EPA 608
Endrin	EPA 608
Endrin Aldehyde	EPA 608
Fluoride	EPA 300.0
Gamma-BHC	EPA 608
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
Magnesium	EPA 200.7
Manganese	EPA 200.7
Manganese	EPA 200.8
Mercury	EPA 245.1
Molybdenum	EPA 200.7
Molybdenum	EPA 200.8
Nickel	EPA 200.7
Nickel	EPA 200.8
Nitrate-N	EPA 300.0
Nitrate-N	Lachat 10-107-04-1-C
Non-Filterable Residue	SM 2540-D
Oil and Grease	EPA 1664

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.

Non-Potable Water (Wastewater)

Analyte	Method
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-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 200.8
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8

ATTACHMENT C

LOW FLOW REFERENCE

Table 2. River and Plant Flows

River			River Flow				Plant Flow		
			Reported 7Q10 (cfs)	Drainage Basin Area (mi^2)	7Q10/mi^2 (cfs/mi^2)	Calculated 7Q10 (cfs)	Permit (cfs)	Annual Average (cfs)	September Average (cfs)
Salmon Falls River	USGS Gauge	No. 01072100 - SF River @ Milton		108					
	Dam	Rollinsford Dam		238		9.52 (2)			
	Downstream Plant	Rollinsford WWTF	28.7 (1)				0.23	0.15	0.14
	Upstream Plants	South Berwick Maine WWTF							
		Somersworth WWTF	28.7 (1)				3.72	1.72	1.47
		Milton WWTF	25.4 (1)				0.15	0.09	0.09
Cocheco River	USGS Gauge	No. 01072800 Cocheco River		85.7					
	Dam	Central Avenue Dam		107.5		6.07			
	Downstream Plants	None							
	Upstream Plants	Rochester WWTF	4.74 (1)	85.7	0.055		6.08	4.66	3.99
		Farmington WWTF	2.52 (1)	43.8	0.058		0.54	0.33	0.27
Bellamy River	USGS Gauge	None							
	Dam	Sawyer Mill Dam		81.3		3.252 (2)			
	Downstream Plants	None							
	Upstream Plants	None							
Oyster River	USGS Gauge	No. 01073000 Oyster River	0.45	12.1	0.037				
	Dam	Mill Pond Dam		33		1.22			
	Downstream Plant	Durham Creek WWTF					3.87	1.58	1.62
	Upstream Plants	None							
Lamprey River	USGS Gauge	No. 01073500 Lamprey River		183					
	Dam	Macallen Dam		190.6		5.06			
	Downstream Plant	Newmarket WWTF	4.9 (1)	183.0	0.027		1.32	0.98	0.84
	Upstream Plant	Epping WWTF	3.0 (1)	114.0	0.026		0.77	0.29	0.26
Squamscott River	USGS Gauge	None							
	Dam	Exeter River Dam		105		4.20 (2)			
	Downstream Plant	Exeter WWTF					4.64	3.49	3.00
		Newfields WWTF					0.18	0.27	0.25
	Upstream Plants	None							
Winnicut River	USGS Gauge	None							
	Dam	Winnicut River Dam		19.9		0.80 (2)			
	Downstream Plants	None							
	Upstream Plants	None							
Plants discharging directly to Great Bay		Dover WWTF					7.27	4.25	3.46
		Pease & Newington WWTFs (3)					2.31	0.95	0.80
		Portsmouth Pierce Island WWTF					6.96	7.31	5.60
		Portsmouth Schiller WWTF							
Total						30.12	38.05	26.06	21.80

Notes
(1) From NPDES Permit
(2) 7Q10 flow calculated as drainage basin area multiplied by average ratio of 0.040 cfs/mi^2
(3) Pease Development Authority WWTF and the Newington WWTF are entered into the model as a single flow

ATTACHMENT D

ENDANGERED SPECIES REVIEW

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

AUG 20 2010

Steven P. Low
Environmental Compliance Services, Inc.
722 Route 3A, Suite 3
Bow, New Hampshire 03304

Dear Mr. Low,

This is in response to your letter dated August 12, 2010 regarding Cumberland Farms pending application for coverage under the US Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) Remediation General Permit. As part of the process for certifying that the discharge is eligible for coverage under this permit, the applicant must determine whether any species listed under the Endangered Species Act (ESA) of 1973, as amended, occur in the area affected by the discharge.

Cumberland Farms, Inc. is planning to conduct station upgrade activities which include removal and replacement of existing underground storage tanks (USTs), in September 2010. During the replacement of the USTs, dewatering may be required. If so, the water will pumped into a fractionation tank and treated via particulate filters followed by granular activated carbon prior to discharge. The treated water would be discharged to the municipal storm water system which ultimately drains to a wetland and discharges east of the subject property along the west bank of the Piscataqua River approximately one-quarter mile north of the Newington-Portsmouth town line.

Several species of listed whales and sea turtles occur seasonally off the coast of New Hampshire. Additionally, endangered shortnose sturgeon occur over a range from the St. John river in Canada to the St. Johns river in Florida. The Piscataqua River is not known to be used by this species. Based on the best available information currently available, no NMFS listed species are known to occur in the vicinity of the proposed discharge. As such, no further coordination between the applicant, NMFS and the EPA is required. Should project plans change or new information become available that changes the basis for this determination, further coordination with NMFS may be necessary. If you have any questions regarding these comments, please contact Julie Crocker of my staff at (978) 282-8480.

Sincerely,

Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

File Code: Sec 7 – No species 2010

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN NEW HAMPSHIRE

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Belknap	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Meredith, Alton and Laconia
Carroll	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Albany, Eaton, Madison Wolfeboro, Brookfield and Wakefield
Coos	Canada Lynx	Threatened	Regenerating softwood forest, usually with a high density of snowshoe hare.	All Towns
	Dwarf wedgemussel	Endangered	Connecticut River main channel and Johns River	Northumberland, Lancaster and Dalton
Cheshire	Dwarf wedgemussel	Endangered	S. Branch Ashuelot River and Ashuelot River	Swanzey, Keene and Surry
Grafton	Dwarf wedgemussel	Endangered	Connecticut River main channel	Haverhill, Piermont, Orford and Lyme
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Holderness
Hillsborough	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Weare
Merrimack	Karner Blue Butterfly	Endangered	Pine Barrens with wild blue lupine	Concord and Pembroke
	Small whorled Pogonia	Threatened	Forests	Danbury, Epsom, Warner and Allenstown
Rockingham	Piping Plover	Threatened	Coastal Beaches	Hampton and Seabrook
	Roseate Tern	Endangered	Atlantic Ocean and nesting at the Isle of Shoals	
	Small whorled Pogonia	Threatened	Forests	Northwood, Nottingham, and Epping
Strafford	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Middleton, New Durham, Milton, Farmington, Strafford, Barrington, and Madbury
Sullivan	Northeastern bulrush	Endangered	Wetlands	Acworth, Charlestown, Langdon and Walpole
	Dwarf wedgemussel	Endangered	Connecticut River main channel	Plainfield, Cornish, Claremont and Charlestown
	Jesup's milk-vetch	Endangered	Banks of the Connecticut River	Plainfield and Claremont

-Eastern cougar, gray wolf and Puritan tiger beetle are considered extirpated in New Hampshire.

-Endangered gray wolves are not known to be present in New Hampshire, but dispersing individuals from source populations in Canada may occur statewide.

-There is no federally-designated Critical Habitat in New Hampshire.

ATTACHMENT E

HISTORIC PROPERTY REVIEW

NEW HAMPSHIRE PROJECT & HISTORIC DISTRICT AREA FORMS

LISTING BY TOWN

JULY 2010

- UPDATED ~~DECEMBER 2009~~ -

Town	Area Description	DOE Date	Type of Form
Nashua			
	Nashua, Amherst Street Neighborhood	10/8/2003	Other
	Nashua, Amherst Street/ Route 101A Project	2/15/2007	Project Area Form
	Nashua, Baldwin Street/Prescott Street	1/13/2010	Project Area Form
	Nashua, Boire Field Area	8/12/1992	
	Nashua, Broad Street Parkway	10/14/200	Project Area Form
	Nashua, French Hill	10/22/200	Project Area Form
	Nashua, French Hill Neighborhood Stabilization	12/9/2009	Project Area Form
	Nashua, French Village	10/22/200	Project Area Form
	Nashua, Nashua & Lowell Railroad	5/8/2002	Historic District Area Form
	Nashua, Nashua Manufacturing Company	9/4/1987	National Register District
	Nashua, Nashua Mill Canal and Gatehouse	9/4/1987	Other
	Nashua, National Fish Hatchery	8/3/1994	Historic District Area Form
	Nashua, Pennichuck Water Works	7/9/2003	Historic District Area Form
	Nashua, Prescott Street	9/25/2002	Other
	Nashua, Route 101A/Amherst Street Project	6/13/1990	Other
	Nashua, Worcester & Nashua Railroad Area	1/18/1995	Project Area Form
New Boston			
	New Boston, New Boston AFS Operations Area		
	New Boston, Paper Mill Village	4/22/2009	Project Area Form
New Castle			
	New Castle, Fort Constitution Area	5/22/2002	Historic District Area Form
New Ipswich			
	New Ipswich, High Bridge	1/23/2002	Historic District Area Form
Newfields			
	Newfields, Newfields Village	5/19/1999	Historic District Area Form
	Newfields, Route 101 Project	6/1/1990	Project Area Form
Newington			
	Newington, Fox Point	1/13/2010	Historic District Area Form
	Newington, Patterson Lane Area	2/9/2005	Historic District Area Form
	Newington, Pease Air Force Base	1/14/2009	Historic District Area Form
	Newington, Pease Air Force Base Railroad Spur	11/23/200	Historic District Area Form
	Newington, Sprague Energy Area	2/9/2005	Historic District Area Form
Newington-Dover			
	Newington-Dover, Project Area	1/26/2005	Project Area Form

NEW HAMPSHIRE
STATE REGISTER OF HISTORIC PLACES

LISTING BY TOWN

JULY 2010

- UPDATED ~~DECEMBER 2009~~ -

Town Name	Address	Property Name	Property ID	SR Listing Date
Madison				
	Route 113	Madison Corner School/ District Number 1	MDI0012	5/1/2006
Manchester				
	106 Lowell Street	Grace Episcopal Church	MAN0010	10/25/2001
	250 Coolidge Avenue	Eugene & Marie Quirin House	MAN0139	5/1/2006
	344 Second Street	H.E. Netsch & Sons Blacksmithing	MAN0138	10/30/2006
	88 Lowell Street	District #2 Schoolhouse/Old High School	MAN0062	1/27/2003
	East Perimeter Road	The 1937 Terminal	MAN0207	7/26/2004
	Pine and Auburn Streets	Valley Cemetery	MAN0032	4/28/2003
Marlborough				
	9 Gates Road	Maynard-Gates House	MAR0002	10/27/2003
Merrimack				
	6 Manchester Street - barn survey also	Blanchard-Bowers House	MER0005	1/24/2005
	Daniel Webster Highway over Souhegan River	Chamberlain Bridge	MER0004	7/28/2003
	off Al Paul Lane, parcel 2E/4	Simonds Rock	MER0019	7/30/2007
Milford				
	298 North River Road	Maplewood/Abner Hutchinson Farm	MIL0002	04/29/2002
	Elm Street	Centennial High School/Bales Elementary S	MIL0003	4/26/2004
Milton				
	13 Main Street (Milton Mills)	Little Red Schoolhouse	MLT0001	01/28/2002
Moultonborough				
	339 Whittier Highway	Moulton-Greene-Leach House	MOU0002	10/27/09
	76 Old Long Island Road	Long IslandHouse Inn	MOU0019	04/27/10
	951 Whittier Hwy	Moultonborough Town House	MOU0011	10/25/2004
	953 Whittier Highway	Lamprey House	MOU0010	10/25/2004
Nashua				
	1 Nashville Street/1 Abbot Square	Abbot-Spalding House Museum	NAS0003	04/29/2002
New Castle				
	65 Main Street	New Castle Congregational Church	NWC0010	7/30/2007
New Hampton				
	112 Main Street	Daniel Smith Tavern	NWH0002	7/28/2003
New London				
	461 Main Street	Baptist New Meeting House	NWL0002	4/25/2005
	84 Main Street	New London Barn Playhouse	NWL0004	1/30/06
Newport				
	33 Unity Road	Robert Lane Farmhouse/R.P. Claggett Farm	NWP0016	04/27/09

NEW HAMPSHIRE
NATIONAL REGISTER OF HISTORIC PLACES

LISTING BY TOWN

- UPDATED ~~DECEMBER 2009~~ JULY 2010 -

City	Property name	Address	Listed Date	District or Area
New Durham	New Durham Meetinghouse and Pound	Old Bay Rd.	19801208	
New Hampton	Dana Meeting House	Dana Hill Rd.	19841213	
New Hampton	New Hampton Community Church	Main St.	19850307	
New Hampton	Gordon--Nash Library	Main St.	19880915	
New Hampton	Mooney, Washington, House	Jct. of NH 104 and I-93	19970904	
New Hampton	New Hampton Town House	Jct. of Town House Rd. and Dana Hill Rd.	19980323	
New Ipswich	New Ipswich Town Hall	Main St.	19841213	
New Ipswich	New Ipswich Center Village Historic District	Roughly bounded by Turnpike Rd., Porter Hill Rd., Main St., NH 123A, Preston Hill, Manley and King Rds.	19910903	
New London	Whipple, Dr. Solomon M., House	Main St.	19850912	
New London	Baptist New Meeting House	461 Main St.	20051222	
Newbury	Center Meetinghouse	NH 103	19791219	
Newbury	Hay Estate	NH 103A, 2.2 mi. N of jct. of NH 103 and NH 103A	20001102	
Newington	Newington Center Historic District	272--336, 305--353 Nimble Hill Rd.	19871130	
Newington	Margeson, Richman, Estate	Long Point Rd. near Great Bay shore	19900621	
Newington	Newington Center Historic District (Boundary Increase)	Merrimac Dr. N of Short St.	19911209	
Newington	Newington Depot	Bloody Point	20100712	
Newmarket	Stone School	Granite St.	19780712	
Newmarket	Newmarket Industrial and Commercial Historic District	NH 108	19801201	
Newport	Sullivan County Courthouse	Court Sq.	19730625	
Newport	Pier Bridge	3 mi. W of Newport on Chandler Rd. over Sugar River	19750610	
Newport	Wright's Bridge	E of Claremont on Chandler Rd. over Sugar River	19750610	
Newport	Nettleton House	26--30 Central St.	19771116	
Newport	Reed, Isaac, House	30--34 Main St.	19780719	
Newport	Town Hall and Courthouse	20 Main St.	19800229	

RECORD OF NHDHR DETERMINATION OF ELIGIBILITY DECISIONS - by Town

Print Date: August 12, 2016

Town/City	Inventory #	"Property Name", Address	Program	DOE DATE	DOE Evaluation	CRITERIA
Newington	NWN0168	"Newington Depot/Toll House", 0.06 mi. south of the end of River Rd, East side	Federal Highway, NH Dept. of Transportatior	1/25/2006	NR eligible, individually SR eligible, individually	A/C
Newington	NWN0181	"Mary Olivia Laws House", 115 River Road	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0162	1223 Spaulding Turnpike	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0210	138 Old Dover Road	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0159	"Edward J. Hoyt House", 14 Nimble Hill Road	Federal Highway, NH Dept. of Transportatior	2/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0209	140 Old Dover Road	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0208	144 Old Dover Road	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0177	"Kershaw/Johnson House", 147 River Road	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not evaluated for individual eligibili Not evaluated for individual eligibili	

Town/City	Inventory #	"Property Name", Address	Program	DOE DATE	DOE Evaluation	CRITERIA
Newington	NWN0228	"Portsmouth Water Booster Station", off Spaulding Tnpk/ off Arboretum Drive	Federal Highway, NH Dept. of Transportatior	12/14/2005	NR eligible, individually Not evaluated as a district	A/C
Newington	NWN0161	off Spaulding Turnpike	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0163	off Spaulding Turnpike	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0214	"George Wallace Pickering House", Old Dover Road	Federal Highway, NH Dept. of Transportatior	3/23/2005	Not evaluated as a district Not eligible for NR Not evaluated for individual eligibili	
Newington	NWN0015	"Target Intelligence Training Building (Bldg 15)", Pease AFB	NH Army National Guard	11/25/2008	Not eligible for either NR or SR	
Newington	NWN0205	"Isaac Dow House", Woodbury Avenue	Federal Highway, NH Dept. of Transportatior	1/25/2006	NR eligible, individually Not evaluated as a district	C