



Remediation General Permit
Notice of Intent

1060 Millbury Street
Worcester, Massachusetts

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B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

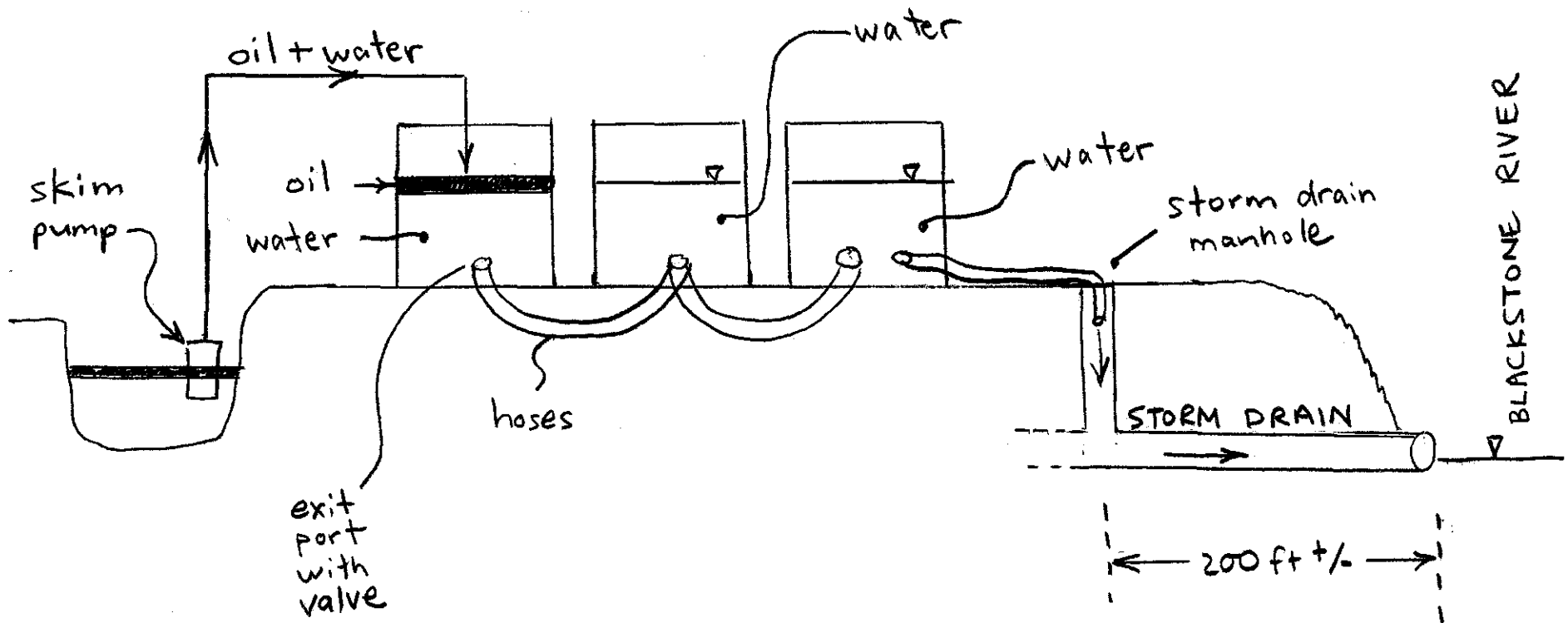
a) Name of facility/site :		Facility/site address:		
Location of facility/site : longitude: _____ latitude: _____ 71d 47'18" 42d 13'26" N		Facility SIC code(s):		Street:
b) Name of facility/site owner :		Town:		
Email address of owner:		State:	Zip:	County:
Telephone no. of facility/site owner :				
Fax no. of facility/site owner :		Owner is (check one): 1. Federal _____ 2. State/Tribal _____ 3. Private _____ 4. other, if so, describe:		
Address of owner (if different from site):				
Street:				
Town:		State:	Zip:	County:
c) Legal name of operator :		Operator telephone no:		
		Operator fax no.:		Operator email:
Operator contact name and title:				

Address of operator (if different from owner):	Street: 201 MAQUAN STREET		
Town: HANSON	State: MA	Zip: 02341	County: PLYMOUTH
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: groundwater discharged from a series of frac tanks separating oil from water		
b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>0.11</u> Average flow <u>30</u> 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. 71d 47'15"W 42d 13'26"N
3) Latitude and longitude of each discharge within 100 feet: pt.1: long. lat. ; 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 04/26/06 end 07/26/06	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	



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

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

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

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids										
2. Total Residual Chlorine										
3. Total Petroleum Hydrocarbons										
4. Cyanide										
5. Benzene										
6. Toluene										
7. Ethylbenzene										
8. (m,p,o) Xylenes										
9. Total BTEX ⁴										

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

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

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										
26. 1,1,2 Trichloroethane										
27. Trichloroethylene										
28. Vinyl Chloride										
29. Acetone										
30. 1,4 Dioxane										
31. Total Phenols										
32. Pentachlorophenol										
33. Total Phthalates ⁵ (Phthalate esthers)										
34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)										
a. Benzo(a) Anthracene										
b. Benzo(a) Pyrene										
c. Benzo(b)Fluoranthene										
d. Benzo(k) Fluoranthene										
e. Chrysene										

⁵The sum of individual phthalate compounds.

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper										
44. Lead										
45. Mercury										
46. Nickel										
47. Selenium										
48. Silver										
49. Zinc										
50. Iron										
Other (describe):										

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

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: _____	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y____ N____ If “Yes,” list which metals:

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
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 _____ Maximum flow rate of treatment system _____ Design flow rate of treatment system _____						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets):						

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:						

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 B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 6.6cfs cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

per MA DEP
Worcester

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

unknown toxicity, priority organics, metals, ammonia, chlorine, nutrients, low DO, pathogens, suspended solids, turbidity, flow alterations, other habitat alterations, objectionable deposits

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

TMDL is in progress per Ma DEP

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? 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 ☒

per
Massachusetts
National
Heritage Atlas
2005
PRIORITY HABITAT
ESTIMATED HABITAT

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: 1060 MILLBURY STREET

Operator signature:

A handwritten signature in blue ink, appearing to read "Dennis D.", is written over the "Operator signature:" label.

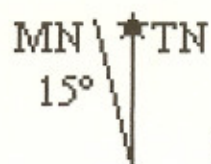
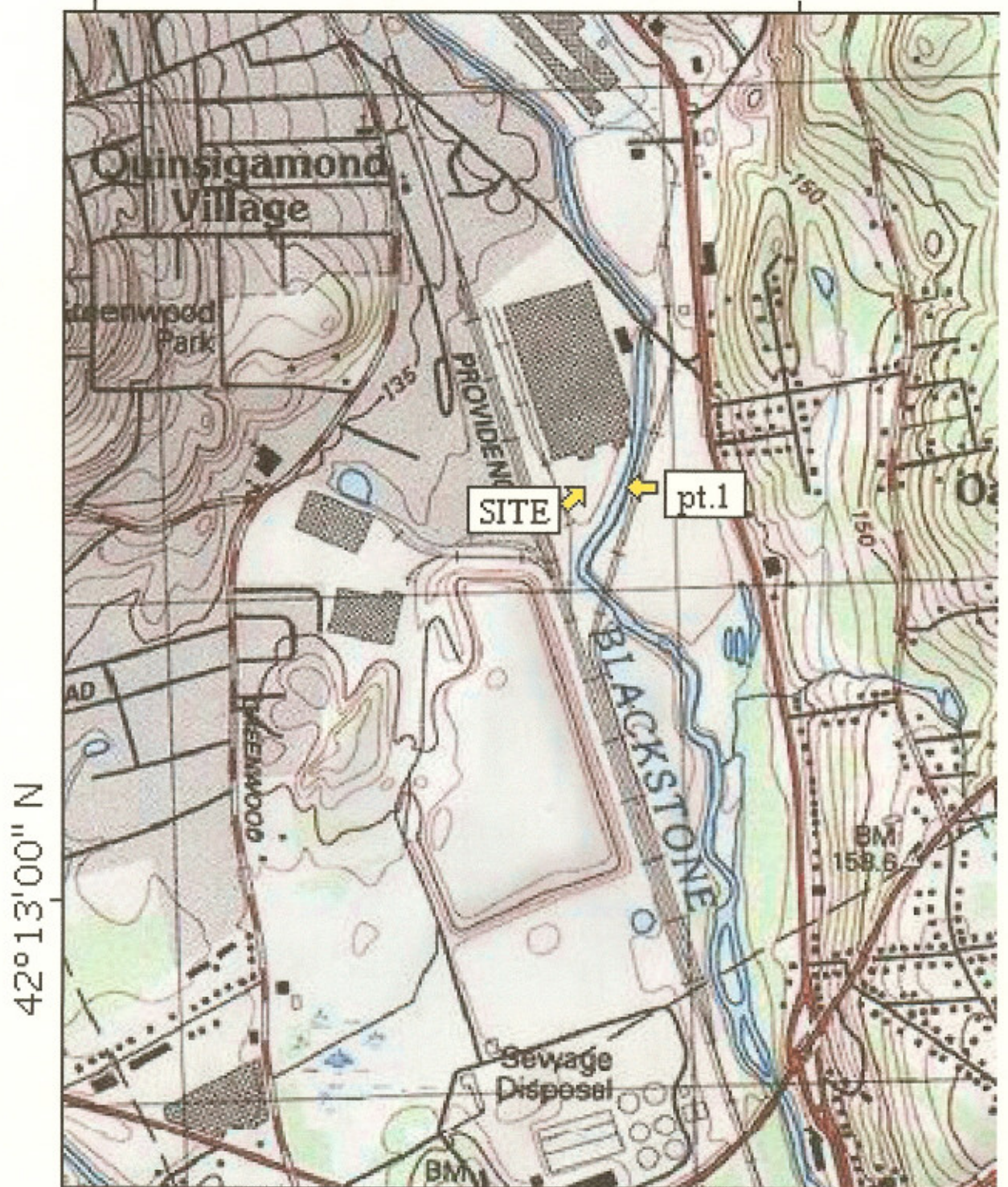
Title: PRESIDENT

Date: 04/14/06

FIGURE 1: LOCUS PLAN

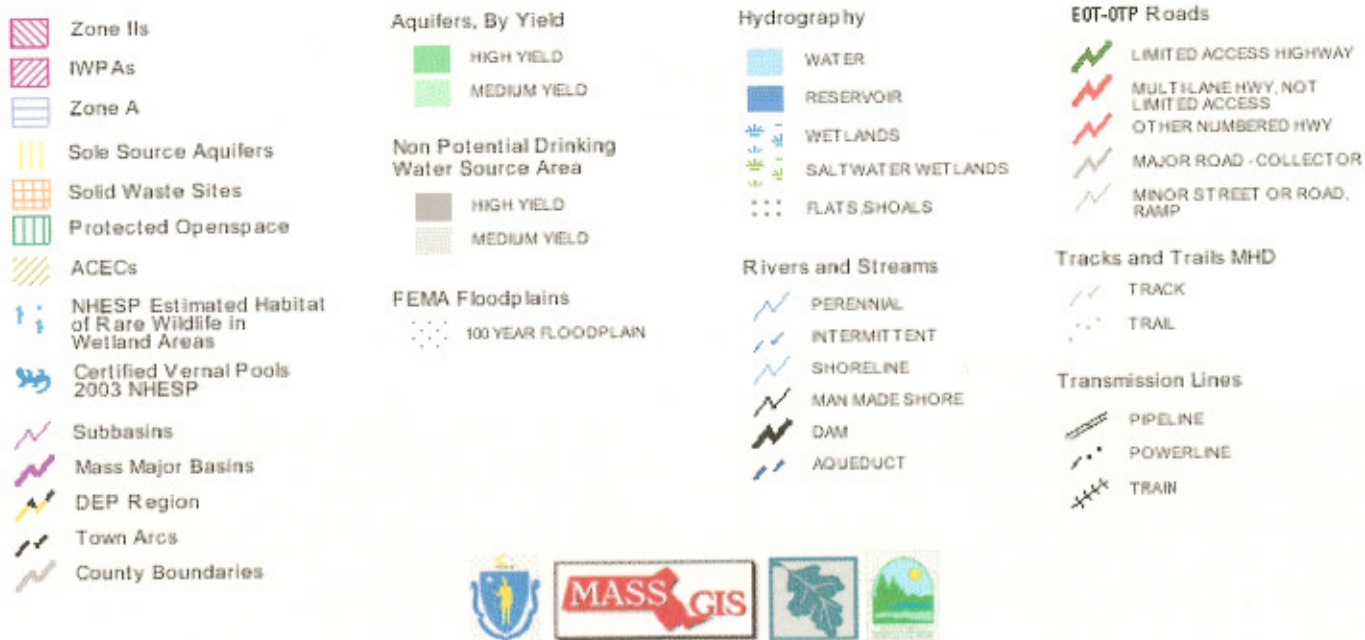
71°48'00" W

WGS84 71°47'00" W

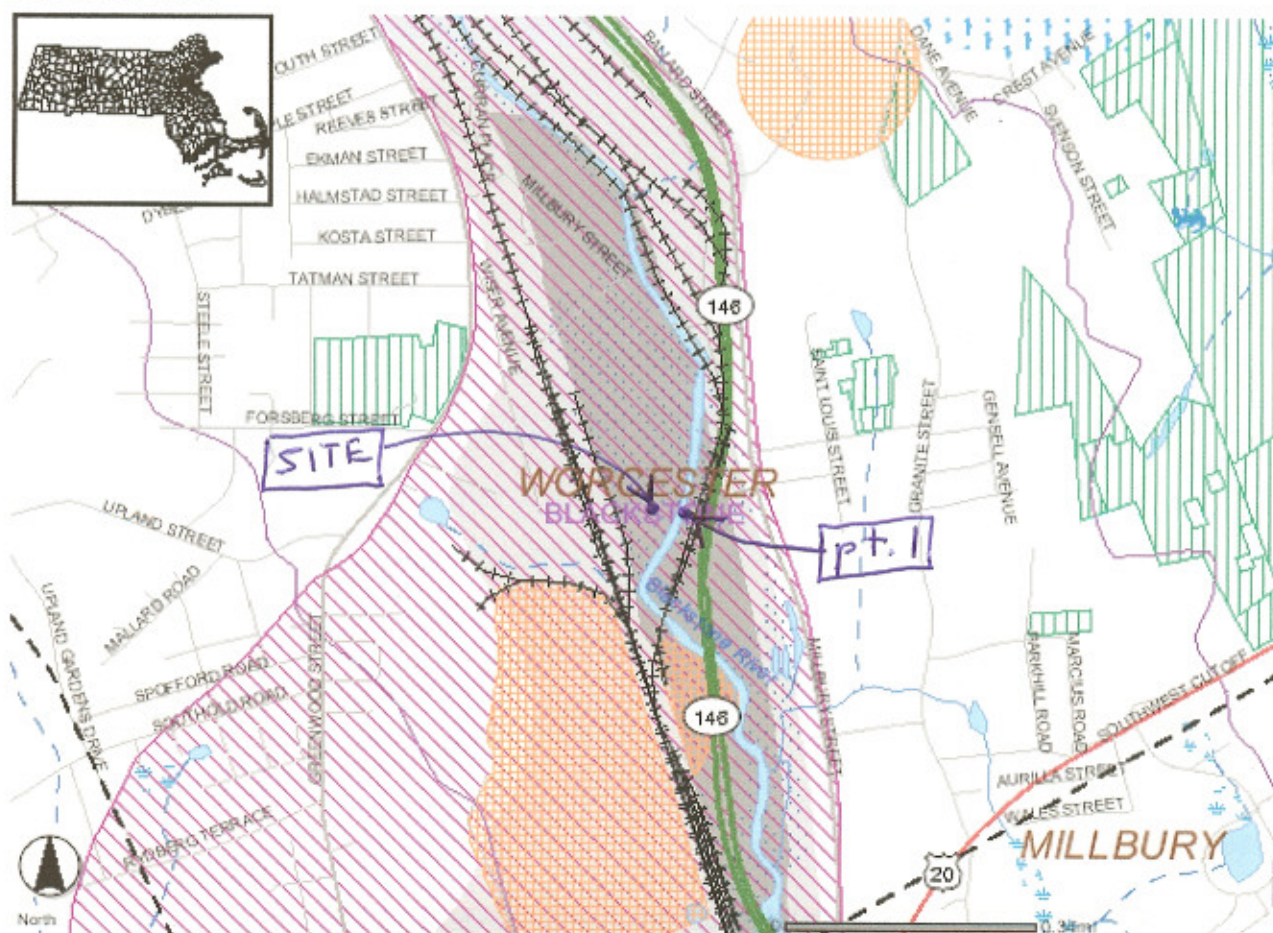


Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com)

DEP MCP 21e Map Legend



ArcIMS Viewer



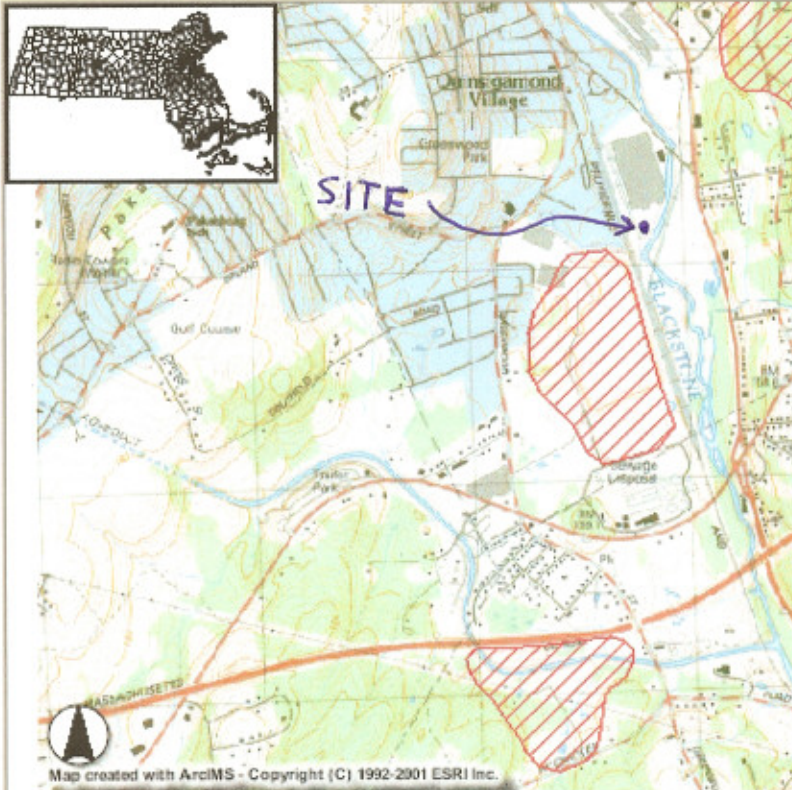


Natural Heritage & Endangered Species Program

2005 Priority Habitat & Estimated Habitat

- [NHESP Review](#)
- [Dept. of Fisheries, Wildlife & Environmental Law Enforcement Home Page](#)
- [Priority Habitat Info](#)
- [Estimated Habitat Info](#)

- Legend**
- Surrounding States
 - NHESP 2005 MA Priority Habitats for State-Protected Rare Species
 - NHESP 2005 MA Estimated Habitats of Rare Wildlife
 - TOPO Image



Produced by the NHESP GIS Program
with the Assistance of MassGIS
and the DFWELLS GIS Program.

MASSGIS

Choose a Town

GO

Tools to Use with the Map

Click on an icon below, then perform action with mouse on map. Red square indicates active tool.

Click the map or draw a box to zoom in

Click the map or draw a box to zoom out

Drag the map to move it

Get an ID value for Priority Habitat

Next 4 icons: action happens when icon is clicked.

Zooms all the way out

Hide/show the overview map

Zooms to previous extent

Use to print the map.
(Using the File menu/Print Frame will not work)

April 12, 2006

Mr. Paul Reiter
Environmental Reclamation, LLC
137 Newbury Street
7th Floor
Boston, MA 02116

LABORATORY REPORT

Project: **1060 Milbury**
Lab ID: **93313**
Received: **04-07-06**

Dear Paul:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 3 Business Day turnaround.

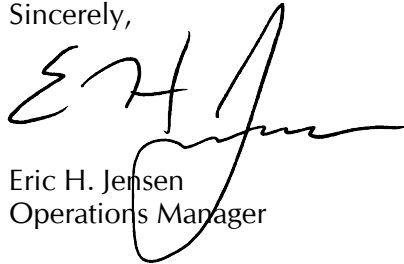
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of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

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

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

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

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/kh
Enclosures

Sample Receipt Report

Project: **1060 Milbury**
 Client: **Environmental Reclamation, LLC**
 Lab ID: **93313**

Delivery: **Hand**
 Airbill: **n/a**
 Lab Receipt: **04-07-06**

Temperature: **2.8'C**
 Chain of Custody: **Present**
 Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method			Notes
93313-1	INF		Aqueous	4/5/06 0:00	EPA 8270C Semivolatile Organics			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C736185	1 L Amber Glass	Proline	BX20556	None	n/a	n/a	03-30-06	
C736184	1 L Amber Glass	Proline	BX20556	None	n/a	n/a	03-30-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
93313-2	INF		Aqueous	4/5/06 0:00	EPA 608 PCBs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C736183	1 L Amber Glass	Proline	BX20556	None	n/a	n/a	03-30-06	
C736180	1 L Amber Glass	Proline	BX20556	None	n/a	n/a	03-30-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
93313-6	INF		Aqueous	4/5/06 0:00	EPA 6010B Sb Cd Cr Cu Fe Pb Ni Se Ag Zn As Total EPA 7470A Hg Total EPA 7041 Sb Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C789192	250 mL Plastic	Proline	BX20279	HNO3	R-4550E	03-15-06	03-31-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
93313-10	INF		Aqueous	4/5/06 0:00	SM 4500-Cl G Total Residual Chlorine			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C772587	250 mL Glass	Proline	BX19346	None	n/a	n/a	03-31-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
93313-11	INF		Aqueous	4/5/06 0:00	EPA 7196A Hexavalent Chromium			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C783771	250 mL Plastic	Proline	BX20736	None	n/a	n/a	03-31-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
93313-12	INF		Aqueous	4/5/06 0:00	EPA 9012A Total Cyanide			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C786050	500 mL Plastic	Proline	BX20245	NaOH	R-4593A	03-10-06	03-31-06	

EPA Method 8270C Semivolatile Organics by GC/MS

Field ID: INF
Project: 1060 Milbury
Client: Environmental Reclamation, LLC

Laboratory ID: 93313-01
Sampled: 04-05-06 00:00
Received: 04-07-06 08:40
Extracted: 04-10-06 11:15
Analyzed: 04-12-06 13:52
Analyst: CMM

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

QC Batch ID: SV-1868-F
Instrument ID: MS-3 HP 5890
Sample Volume: 1000 mL
Final Volume: 1 mL
Dilution Factor: 1

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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	11		ug/L	5
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	5
108-39-4/106-44-5	3 and 4-Methylphenol *	7		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	27		ug/L	5
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	5
120-83-2	2,4-Dichlorophenol	BRL		ug/L	5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	5
91-20-3	Naphthalene	120		ug/L	5
106-47-8	4-Chloroaniline	BRL		ug/L	5
87-68-3	Hexachlorobutadiene	BRL		ug/L	5
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	98		ug/L	5
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	5
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	5
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	5
91-58-7	2-Chloronaphthalene	BRL		ug/L	5
88-74-4	2-Nitroaniline	BRL		ug/L	5
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	5
131-11-3	Dimethyl phthalate	BRL		ug/L	5
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	5
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	5
99-09-2	3-Nitroaniline	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
51-28-5	2,4-Dinitrophenol	BRL		ug/L	5
100-02-7	4-Nitrophenol	BRL		ug/L	5
132-64-9	Dibenzofuran	BRL		ug/L	5
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	5

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

Field ID: **INF**
Project: **1060 Milbury**
Client: **Environmental Reclamation, LLC**

Laboratory ID: **93313-01**
Sampled: **04-05-06 00:00**
Received: **04-07-06 08:40**
Extracted: **04-10-06 11:15**
Analyzed: **04-12-06 13:52**
Analyst: **CMM**

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

QC Batch ID: **SV-1868-F**
Instrument ID: **MS-3 HP 5890**
Sample Volume: **1000 mL**
Final Volume: **1 mL**
Dilution Factor: **1**

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
84-66-2	Diethyl phthalate	BRL		ug/L	5
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	5
86-73-7	Fluorene	7		ug/L	5
100-01-6	4-Nitroaniline	BRL		ug/L	5
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	5
86-30-6	N-Nitrosodiphenylamine [†]	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
118-74-1	Hexachlorobenzene	BRL		ug/L	5
87-86-5	Pentachlorophenol	BRL		ug/L	5
85-01-8	Phenanthrene	12		ug/L	5
120-12-7	Anthracene	8		ug/L	5
86-74-8	Carbazole	21		ug/L	5
84-74-2	Di-n-butyl phthalate	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
85-68-7	Butyl benzyl phthalate	BRL		ug/L	5
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	5
117-84-0	Di-n-octyl phthalate	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	200	110	55 %	15 - 110 %
Phenol-d5	200	87	44 %	15 - 110 %
Nitrobenzene-d5	100	75	75 %	30 - 130 %
2-Fluorobiphenyl	100	89	89 %	30 - 130 %
2,4,6-Tribromophenol	200	180	90 %	15 - 110 %
Terphenyl-d14	100	84	84 %	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.

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

Field ID: **INF**
 Project: **1060 Milbury**
 Client: **Environmental Reclamation, LLC**
 Laboratory ID: **93313-02**
 Sampled: **04-05-06 00:00**
 Received: **04-07-06 08:40**
 Extracted: **04-10-06 20:00**
 Cleaned Up: **04-11-06 09:00**
 Analyzed: **04-11-06 12:32**
 Analyst: **CRL**

Matrix: **Aqueous**
 Container: **1 L Amber Glass**
 Preservation: **Cool**
 QC Batch ID: **PB-2229-F**
 Instrument ID: **GC-11 Agilent 6890**
 Sample Weight: **1000 mL**
 Final Volume: **1 mL**
 Dilution Factor: **1**

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

QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
First	Tetrachloro- <i>m</i> -xylene	0.20	0.17	83 %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.19	93 %	30 - 150 %
Second	Tetrachloro- <i>m</i> -xylene	0.20	0.14	70 %	30 - 150 %
Column	Decachlorobiphenyl	0.20	0.23	116 %	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.

Trace Metals

Field ID: **INF**
Project: **1060 Milbury**
Client: **Environmental Reclamation, LLC**

Matrix: **Aqueous**
Container: **250 mL Plastic**
Preservation: **HNO₃ / Cool**
Preserved: **04-05-06 00:00**

Laboratory ID: **93313-06**
Sampled: **04-05-06 00:00**
Received: **04-07-06 08:40**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 7041 ¹	MB-2028-W	EPA 3010A	04-10-06 10:30	50 mL	GFAA-1 PE 5100	MWR
EPA 6010B ²	MB-2028-W	EPA 3010A	04-10-06 10:30	50 mL	ICP-2 PE 3300	MWR
EPA 7470A ³	MP-1821-W	EPA 7470A	04-10-06 08:10	25 mL	CVAA-1 PE FIMS	KLB

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Total		BRL	mg/L	0.06	1	04-11-06 21:30	EPA 7041 ¹
7440-38-2	Arsenic, Total		BRL	mg/L	0.03	1	04-10-06 17:45	EPA 6010B ²
7440-43-9	Cadmium, Total		BRL	mg/L	0.004	1	04-10-06 17:45	EPA 6010B ²
7440-47-3	Chromium, Total		BRL	mg/L	0.01	1	04-10-06 17:45	EPA 6010B ²
7440-50-8	Copper, Total	0.070		mg/L	0.025	1	04-10-06 17:45	EPA 6010B ²
7439-89-6	Iron, Total	29		mg/L	0.1	1	04-10-06 17:45	EPA 6010B ²
7439-97-6	Mercury, Total		BRL	mg/L	0.0002	1	04-10-06 17:45	EPA 7470A ³
7439-92-1	Lead, Total	0.058		mg/L	0.005	1	04-10-06 17:45	EPA 6010B ²
7440-02-0	Nickel, Total		BRL	mg/L	0.04	1	04-10-06 17:45	EPA 6010B ²
7782-49-2	Selenium, Total		BRL	mg/L	0.05	1	04-10-06 17:45	EPA 6010B ²
7440-22-4	Silver, Total		BRL	mg/L	0.007	1	04-10-06 17:45	EPA 6010B ²
7440-66-6	Zinc, Total		BRL	mg/L	0.2	1	04-10-06 17:45	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.

Inorganic Chemistry

Field ID: **INF**
 Project: **1060 Milbury**
 Client: **Environmental Reclamation, LLC**

Matrix: **Aqueous**
 Received: **04-07-06 08:40**

Lab ID: **93313-10** Sampled: **04-05-06 00:00** Container: **250 mL Glass** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	BRL	mg/L	0.2	1	5 mL	04-07-06 18:30	TRC-0428-W	SM 4500-Cl G	2	DDW

Lab ID: **93313-11** Sampled: **04-05-06 00:00** Container: **250 mL Plastic** Preservation: **Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	BRL	mg/L	0.01	1	5 mL	04-10-06 18:34	HC-0261-W	EPA 7196A	1	DDW

Lab ID: **93313-12** Sampled: **04-05-06 00:00** Container: **500 mL Plastic** Preservation: **NaOH/Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Cyanide, Total	BRL	mg/L	0.01	1	50 mL	04-10-06 22:01	TCN-1192-W	EPA 9012A	1	IJD

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

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

RL Reporting Limit.

DF Dilution Factor.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

Project Narrative

Project: **1060 Milbury**
Client: **Environmental Reclamation, LLC**

Lab ID: **93313**
Received: **04-07-06 08:40**

A. Documentation and Client Communication

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

- 1 . Samples for analysis by MA DEP EPH and VPH were processed for Priority Turnaround as project number 93410, per Paul Reiter, 04-10-06.

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 7196A Hexavalent Chromium Non-conformance: Sample 93313-11. Sample was received outside of the recommended holding time. Sample analyzed as received.

GROUNDWATER ANALYTICAL

228 Main Street, P.O. Box 1200
Buzards Bay, MA 02532
Telephone (508) 759-4441 • FAX (508) 759-4475
www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

No 208085

Project Name:

1060 Milbury

Project Number:

Environmental Reclamation, LLC

Address:

137 Newbury St 7th Floor

Sampler Name:

MP P

City / State / Zip:

Boston MA 02116

Project Manager:

Paul Reiter

Telephone:

617 859 1701

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

TURNAROUND

☐ STANDARD (10 Business Days)

☐ PRIORITY (5 Business Days)

☒ RUSH (RAN-213)
(Rush requires Rush Authorization Number)

☒ Please Email to: Paul.Reiter@Qcomet.net

☐ Please FAX to:

BILLING

☐ Purchase Order No.:

☐ Third Party Billing:

☐ GWA Quote:

SAMPLE IDENTIFICATION

Sampling

DATE

TIME

4/15/06

4/13/06

4/13/06

4/15/06

1NF

S-1

S-2

S-3

Preservation

Filtered

NO

YES

ICC

Sodium Borate

Method

MOH

H₂SO₄

HNO₃

HCl

100ml, Sterile

1L/22 oz Plastic

500ml/16 oz Plastic

250ml/8 oz Plastic

1L/32 oz Amber Glass

500ml/16 oz Glass

250ml/8 oz Glass

120ml/4 oz Amber Glass

60ml/2 oz Glass

40ml VOA Vial

NUMBER

GRAB

COMPOSITE

OTHER SOLID

SOIL

WASTEWATER

DRINKING WATER

GROUNDWATER

LABORATORY NUMBER (Lab Use Only)

ANALYSIS REQUEST

Volatiles

Sum/Volatiles

Pesticides/CCA's

Extractable Vol.

Media

Specific For

Water Samples

Ext. TPH

Metals

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CHAIN-OF-CUSTODY RECORD

REMARKS / SPECIAL INSTRUCTIONS

MA DEP MCP Data Enhancement Affirmation

☐ YES ☐ NO MCP Data Certification required.

☐ YES ☐ NO MCP Drinking Water Sample included.

(Require collection of contingent duplicate sample.

Trip blanks are also required, if VOA sample collected).

Signature

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

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

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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.

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

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Relinquished by: Paul Reiter

Date: 4-17-06

Time: 8:40

Receipt Temperature: 2.8°C

☐ Refrigerated 2.8°C

☐ Room Temperature

Container Count: 2.8°C

Shipping/Airbill Number: 2.8°C

Custody Seal Number: 2.8°C

Method of Shipment: ☐ GWA Courier ☐ Express Mail ☐ Federal Express

☐ UPS ☐ Hand

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.

Quality Control Report Laboratory Control Samples

Category: **Inorganics**

Matrix: **Aqueous**

Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 7196A	HC-0261-W	EPA 7196A	4/10/2006 18:00	4/10/2006 18:31	Lachat 8000 Autoanalyzer	LJD
LCSD	EPA 7196A	HC-0261-W	EPA 7196A	4/10/2006 18:00	4/10/2006 18:33	Lachat 8000 Autoanalyzer	LJD

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Chromium, Hexavalent	0.10	0.11	107%	0.10	0.11	109%	1 %	80-120%	20 %	EPA 7196A

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.

Laboratory Control Samples

Category: **Inorganics**

Matrix: **Aqueous**

Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 9012A	TCN-1192-W	EPA 9012A	4/10/2006 11:30	4/10/2006 22:06	Lachat 8000 Autoanalyzer	AVB
LCS D	EPA 9012A	TCN-1192-W	EPA 9012A	4/10/2006 11:30	4/10/2006 22:08	Lachat 8000 Autoanalyzer	AVB

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Cyanide, Total	0.45	0.51	114%	0.45	0.50	111%	1 %	80-120%	20 %	EPA 9012A

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

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

**Quality Control Report
Laboratory Control Sample**Category: **Inorganic Chemistry**Matrix: **Aqueous**

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	mg/L	1	1	95 %	80 - 120 %	04-07-06 18:30	TRC-0428-W	SM 4500-Cl G	2	DDW

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

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

- 1 Instrument ID: Lachat 8000 Autoanalyzer
- 2 Instrument ID: Milton Roy Spectronic 401

**Quality Control Report
Method Blank**

Category: **Inorganic Chemistry**

Matrix: **Aqueous**

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	BRL	mg/L	0.2	04-07-06 18:30	TRC-0428-W	SM 4500-Cl G	2	DDW
Chromium, Hexavalent	BRL	mg/L	0.01	04-10-06 18:32	HC-0261-W	EPA 7196A	1	DDW
Cyanide, Total	BRL	mg/L	0.01	04-10-06 22:06	TCN-1192-W	EPA 9012A	1	LJD

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

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

RL Reporting Limit.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

Quality Control Report Laboratory Control Samples

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

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-2028-WL	EPA 3010A	04-10-06 10:30	04-10-06 17:40	ICP-2 PE 3300	MWR
LCS	EPA 7470A	MP-1821-WL	EPA 7470A	04-10-06 08:10	04-10-06 11:35	CVAA-1 PE FIMS	KLB
LCSD	EPA 6010B	MB-2028-WL	EPA 3010A	04-10-06 10:30	04-10-06 17:42	ICP-2 PE 3300	MWR
LCSD	EPA 7470A	MP-1821-WL	EPA 7470A	04-10-06 08:10	04-10-06 11:38	CVAA-1 PE FIMS	KLB

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-36-0	Antimony	5.0	5.1	102%	5.0	5.1	101%	0 %	80-120 %	20 %	EPA 6010B
7440-38-2	Arsenic	5.0	5.3	106%	5.0	5.2	105%	0 %	80-120 %	20 %	EPA 6010B
7440-43-9	Cadmium	1.0	1.0	104%	1.0	1.0	103%	0 %	80-120 %	20 %	EPA 6010B
7440-47-3	Chromium	1.0	1.0	104%	1.0	1.0	103%	0 %	80-120 %	20 %	EPA 6010B
7440-50-8	Copper	1.0	1.0	101%	1.0	1.0	101%	0 %	80-120 %	20 %	EPA 6010B
7439-89-6	Iron	5.0	4.8	96%	5.0	4.5	89%	4 %	80-120 %	20 %	EPA 6010B
7439-97-6	Mercury	0.0010	0.0010	95%	0.0010	0.0010	97%	1 %	80-120 %	20 %	EPA 7470A
7440-02-0	Nickel	1.0	1.0	102%	1.0	1.0	101%	0 %	80-120 %	20 %	EPA 6010B
7440-22-4	Silver	1.0	1.1	105%	1.0	1.0	98%	3 %	80-120 %	20 %	EPA 6010B
7440-66-6	Zinc	1.0	1.0	103%	1.0	1.0	102%	0 %	80-120 %	20 %	EPA 6010B

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

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

Quality Control Report Method Blank

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

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-2028-WB	EPA 3010A	04-10-06 10:30	50 mL	ICP-2 PE 3300	MWR
EPA 7470A	MP-1821-WB	EPA 7470A	04-10-06 08:10	25 mL	CVAA-1 PE FIMS	KLB

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.06	1	04-10-06 17:37	EPA 6010B
7440-38-2	Arsenic	BRL		mg/L	0.03	1	04-10-06 17:37	EPA 6010B
7440-43-9	Cadmium	BRL		mg/L	0.005	1	04-10-06 17:37	EPA 6010B
7440-47-3	Chromium	BRL		mg/L	0.01	1	04-10-06 17:37	EPA 6010B
7440-50-8	Copper	BRL		mg/L	0.025	1	04-10-06 17:36	EPA 6010B
7439-89-6	Iron	BRL		mg/L	0.1	1	04-11-06 12:25	EPA 6010B
7439-97-6	Mercury	BRL		mg/L	0.0002	1	04-10-06 11:35	EPA 7470A
7440-02-0	Nickel	BRL		mg/L	0.04	1	04-10-06 17:37	EPA 6010B
7440-22-4	Silver	BRL		mg/L	0.007	1	04-10-06 17:36	EPA 6010B
7440-66-6	Zinc	BRL		mg/L	0.2	1	04-10-06 17:37	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.

Quality Control Report Laboratory Control Samples

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

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-2028-WL	EPA 3010A	04-10-06 10:30	04-11-06 12:34	ICP-2 PE 3300	MFP
LCSD	EPA 6010B	MB-2028-WL	EPA 3010A	04-10-06 10:30	04-10-06 17:42	ICP-2 PE 3300	MFP

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7439-92-1	Lead	5.0	4.9	98%	5.0	4.9	98%	0 %	80-120 %	20 %	EPA 6010B
7782-49-2	Selenium	5.0	5.1	103%	5.0	5.1	102%	0 %	80-120 %	20 %	EPA 6010B

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

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

**Quality Control Report
Method Blank**

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

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-2028-WB	EPA 3010A	04-10-06 10:30	50 mL	ICP-2 PE 3300	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7439-92-1	Lead	BRL		mg/L	0.005	1	04-11-06 12:25	EPA 6010B
7782-49-2	Selenium	BRL		mg/L	0.05	1	04-10-06 17:37	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.

Certifications and Approvals

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

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

CONNECTICUT, Department of Health Services, PH-0586

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

FLORIDA, Department of Health, Bureau of Laboratories, E87643

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

MAINE, Department of Human Services, MA103

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

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

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

NEW HAMPSHIRE, Department of Environmental Services, 202703

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

NEW YORK, Department of Health, 11754

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

PENNSYLVANIA, Department of Environmental Protection, 68-665

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

RHODE ISLAND, Department of Health, 54

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

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

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

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