CORPORATE ENVIRONMENTAL ADVISORS, INC.

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Hand Delivered
October 24, 2005

US Environmental Protection Agency
RGP – NOC Processing
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1100
Boston, MA 02114-2023

RE: Remediation General Permit (RGP) - Notice of Intent (NOI) Submittal
Former University Motors
213 College Street
Amherst, MA 01002
MA DEP Release Tracking No. 1-15065
NPDES Permit Exclusion Reference #00-094

OCT 24 2005
U.S. EPA, Region 1, Mail Room

To Whom It May Concern:

On behalf of Route 9 Real Estate, Corporate Environmental Advisors, Inc. is submitting this Remediation General Permit (RGP) - Notice of Intent (NOI). A groundwater "pump and treat" remedial system has been operating at the above-referenced site and discharging treated groundwater under National Pollutant Discharge Elimination System (NPDES) Permit Exclusion since May 2000. The system extracted and treated groundwater from a basement sump from May 2000 until early 2004. In early 2004 a pumping well (PW-1) located on the northwest portion of the property was connected to the system. Currently, groundwater is extracted water from the basement sump and pumping well PW-1.

Extracted water is treated through two 300-pound granular activated carbon vessels, piped in series, prior to discharge to a storm drain on the property. The storm drain discharges to an unnamed stream adjacent to the southern property boundary that terminates in a wetland approximately 0.25-miles east of site.

The NPDES Permit Exclusion approval letter, dated April 10, 2000, indicates that the system effluent is discharged "to a storm water drainage system leading to Fort River." However, Fort River is located approximately one mile south of the point at which the stream terminates in the wetland.

If you have any questions, please feel free to contact our office at 508-835-8822.

Sincerely,

CORPORATE ENVIRONMENTAL ADVISORS, INC.

Alan A. Dion
Sr. Environmental Geologist

Attached: RGP-NOI
Laboratory Analytical Report
Figure 1 – Site Locus
Figure 2 – Process and Instrumentation Diagram
Figure 3 – System Layout w/ Location of NPDES Discharge Point
Figure 4 – MA GIS Priority Resource Map

pc: Daniel Pion, Owner - Route 9 Real Estate
P.O. Box 9646 Amherst, MA 01059

US Fish & Wildlife – NE Field Office
70 Commercial Street – Suite 300
Concord, NH 03301

CEA File 5946-05

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:** Former University Motors		**Facility/site address:**		
Location of **facility/site:** longitude: 72°30'32.32" latitude: 42°22'22.60"	Facility SIC code(s):	Street: 213 College Street		
b) Name of **facility/site owner:** Daniel Pion		Town: Amherst		
Email address of owner: daniel.pion@ps.ge.com		State: MA	Zip: 01002	County: Hampshire
Telephone no.of facility/site **owner:** 413-218-5429				
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): P.O. Box 9646				
Street:				
Town: North Amherst	State: MA	Zip: 01059	County: Hampshire	
c) Legal name of **operator:** (Same as owner)	**Operator** telephone no:			
	Operator fax no.:		**Operator** email:	
Operator contact name and title:				
Address of **operator** (if different from owner):	Street:			
Town:	State:	Zip:	County:	

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: # 00-094
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: RTN: 1-15065 2. permit or license # assigned: NA 3. state agency contact information: name, location, and telephone number: MA DEP Bureau of Waste Site Cleanup (Western Region) 436 Dwight Street Springfield MA 01103 (413-784-1100)	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:
A Groundwater Pump and Treat Remediation System is Currently in Place to Extract, Filter and Treat Gasoline Impacted Groundwater Prior to Discharge to a storm Drain that Discharges to an unnamed Brook that is A Tributary to a wetland associated with Fort River.

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 0.0223 Average flow <0.0022 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. Average flow is an estimate, No Flowmeter Currently in Place. Owner Informed to Install Flowmeter.

3) Latitude and longitude of each discharge within 100 feet: pt.1:long. 72°30'32.68" lat. 42°22'20.78" 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): N/A	5) Is the discharge intermittent NO or seasonal NO? Is discharge ongoing Yes ✓ No ___?

c) Expected dates of discharge (mm/dd/yy): start 10/24/05 end 10/24/07

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

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 (ug/L)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		✓	1	Grab	Sm2540 D	20,000	10,600,000	475		
2. Total Residual Chlorine	✓		1	"	Hach 8167	20	<ML			
3. Total Petroleum Hydrocarbons			1	"	EPA 1664	1,000	<ML			
4. Cyanide	✓		1	"	10-204-00-1-A SW846 9012A	10	<ML			
5. Benzene			1	"	8260B	0.5	<ML			
6. Toluene			1	"	"	0.5	<ML			
7. Ethylbenzene			1	"	"	0.5	<ML			
8. (m,p,o) Xylenes		✓	1	"	"	1	1.2	0.00005		
9. Total BTEX[4]		✓	1	"	"	Analyte Specific	1.2	0.00005		

[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 (ug/L)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide [5] (1,2- Dibromo-methane)	✓		1	Grab	504.1	0.01	<ML			
11. Methyl-tert-Butyl Ether (MtBE)			1	"	8260B	0.5	<ML			
12. tert-Butyl Alcohol (TBA)	✓		1	"	"	10	<ML			
13. tert-Amyl Methyl Ether (TAME)	✓		1	"	"	0.5	<ML			
14. Naphthalene		✓	1	"	"	0.5	0.6	0.00003		
15. Carbon Tetra-chloride	✓		1	"	"	0.5	<ML			
16. 1,4 Dichlorobenzene	✓		1	"	"	0.5	<ML			
17. 1,2 Dichlorobenzene	✓		1	"	"	0.5	<ML			
18. 1,3 Dichlorobenzene	✓		1	"	"	0.5	<ML			
19. 1,1 Dichloroethane	✓		1	"	"	0.5	<ML			
20. 1,2 Dichloroethane	✓		1	"	"	0.5	<ML			
21. 1,1 Dichloroethylene	✓		1	"	"	0.5	<ML			
22. cis-1,2 Dichloro-ethylene	✓		1	"	"	0.5	<ML			
23. Dichloromethane (Methylene Chloride)	✓		1	"	"	1.0	<ML			
24. Tetrachloroethylene	✓		1	"	"	0.5	<ML			

[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 (ug/L)	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	Grab	8260B	0.5	<ML			
26. 1,1,2 Trichloroethane	✓		1	"	"	0.5	"			
27. Trichloroethylene	✓		1	"	"	0.5	"			
28. Vinyl Chloride	✓		1	"	"	0.5	"			
29. Acetone	✓		1	"	"	10	"			
30. 1,4 Dioxane	✓		1	"	"	20	"			
31. Total Phenols	✓		1	"	EPA 625	1.0	"			
32. Pentachlorophenol	✓		1	"	"	1.0	"			
33. Total Phthalates [6] (Phthalate esthers)	✓		1	"	"	5.0	"			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	"	"	5.0	"			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	"	"	5.0	"			
a. Benzo(a) Anthracene	✓		1	"	"	5.0	"			
b. Benzo(a) Pyrene	✓		1	"	"	5.0	"			
c. Benzo(b)Fluoranthene	✓		1	"	"	5.0	"			
d. Benzo(k) Fluoranthene	✓		1	"	"	5.0	"			
e. Chrysene	✓		1	"	"	5.0	"			

[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 (ug/L)	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		1	Grab	EPA 625	5.0	<ML			
g. Indeno(1,2,3-cd) Pyrene	✓		1	"	"	5.0	"			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	"	"	5.0	"			
h. Acenaphthene	✓		1	"	"	1.0	"			
i. Acenaphthylene	✓		1	"	"	5.0	"			
j. Anthracene	✓		1	"	"	5.0	"			
k. Benzo(ghi) Perylene	✓		1	"	"	5.0	"			
l. Fluoranthene	✓		1	"	"	1.0	"			
m. Fluorene	✓		1	"	"	5.0	"			
n. Naphthalene-	✓		1	"	"	2.0	"			
o. Phenanthrene	✓		1	"	"	5.0	"			
p. Pyrene	✓		1	"	"	5.0	"			
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	"	EPA 608	0.267	"			
38. Antimony	✓		1	"	EPA 200.7	6.0	"			
39. Arsenic	✓		1	"	"	4.0	"			
40. Cadmium	✓		1	"	"	1.2	"			
41. Chromium III	✓		1	"	"	2.5	"			
42. Chromium VI	✓		1	"	SM 3500 Cr/ 7196A	10	"			

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 <1 gpm Maximum flow rate of treatment system 10 gpm Design flow rate of treatment system 10 gpm						
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 1ST	~~River~~brook 2ND	Wetlands 3RD	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: Treated water is discharged from the Remediation system to a storm drain on the property, which discharges to an unnamed stream adjacent to the property. The stream terminates in a wetland approximately 0.25 miles east of the site.						
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 5.3 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)? 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 ? 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: Former University Motors

Operator signature: [signature]

Title: Authorized representative

Date: 10/19/05

Report Date:
20-Oct-05 17:02

☑ Final Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

CEA, Inc.
127 Hartwell Street
West Boylston, MA 01583
Attn: Joe Landyn

Project: Rt 9 - Amherst, MA
Project #: 5946-05-01

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA35794-01	Inf	Ground Water	17-Oct-05 11:30	17-Oct-05 13:25

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 19 pages of analytical data including Chain of Custody document(s).
This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Inf	5946-05-01	Ground Water	17-Oct-05 11:30	17-Oct-05
SA35794-01				

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
Volatile Organic Compounds			Prepared by method		SW846 5030 Water MS					
67-64-1	Acetone	BRL	10.0 µg/l	1	SW 846 8260B	19-Oct-05	20-Oct-05	5101201	RLJ	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-09-2	Methylene chloride	BRL	1.0 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	0.6	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	1.2	1.0 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	BRL	20.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.4*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*98.6*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*99.4*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*98.4*	*70-130 %*		"	"	"	"	"	
Microextractable Organic Compounds										
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.0100 µg/l	1	EPA 504.1	18-Oct-05	19-Oct-05	5101042	SM	
Extractable Petroleum Hydrocarbons										
	Non-polar material (SGT-HEM)	BRL	1.0 mg/l	1	EPA 1664	18-Oct-05	19-Oct-05	5101095	JK	
Semivolatile Organic Compounds by GC										
Polychlorinated Biphenyls by EPA 608			Prepared by method		SW846 3535					
12674-11-2	PCB 1016	BRL	0.267 µg/l	1	EPA 608	18-Oct-05	18-Oct-05	5101051	SM	
11104-28-2	PCB 1221	BRL	0.267 µg/l	1	"	"	"	"	"	
11141-16-5	PCB 1232	BRL	0.267 µg/l	1	"	"	"	"	"	
53469-21-9	PCB 1242	BRL	0.267 µg/l	1	"	"	"	"	"	
12672-29-6	PCB 1248	BRL	0.267 µg/l	1	"	"	"	"	"	
11097-69-1	PCB 1254	BRL	0.267 µg/l	1	"	"	"	"	"	
11096-82-5	PCB 1260	BRL	0.267 µg/l	1	"	"	"	"	"	
37324-23-5	PCB 1262	BRL	0.267 µg/l	1	"	"	"	"	"	
11100-14-4	PCB 1268	BRL	0.267 µg/l	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Inf	5946-05-01	Ground Water	17-Oct-05 11:30	17-Oct-05
SA35794-01				

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Semivolatile Organic Compounds by GC										
Polychlorinated Biphenyls by EPA 608			Prepared by method	SW846 3535						
Surrogate recoveries:										
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*120*	*30-150 %*		EPA 608	18-Oct-05	18-Oct-05	5101051	SM	
2051-24-3	*Decachlorobiphenyl (Sr)*	*145*	*30-150 %*		"	"	"	"	"	
Semivolatile Organic Compounds by GCMS										
Semivolatile Organic Compounds by EPA 625			Prepared by method	SW846 3535						
83-32-9	Acenaphthene	BRL	1.00 µg/l	1	EPA 625	18-Oct-05	18-Oct-05	5101052	M.B	
208-96-8	Acenaphthylene	BRL	5.00 µg/l	1	"	"	"	"	"	
120-12-7	Anthracene	BRL	5.00 µg/l	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL	5.00 µg/l	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL	5.00 µg/l	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL	5.00 µg/l	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL	5.00 µg/l	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL	5.00 µg/l	1	"	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	BRL	5.00 µg/l	1	"	"	"	"	"	
85-68-7	Butyl benzyl phthalate	BRL	5.00 µg/l	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	BRL	1.00 µg/l	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
218-01-9	Chrysene	BRL	5.00 µg/l	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL	5.00 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	2.00 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	2.00 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	2.00 µg/l	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
84-66-2	Diethyl phthalate	BRL	5.00 µg/l	1	"	"	"	"	"	
131-11-3	Dimethyl phthalate	BRL	5.00 µg/l	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	BRL	1.00 µg/l	1	"	"	"	"	"	
84-74-2	Di-n-butyl phthalate	BRL	5.00 µg/l	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	BRL	1.00 µg/l	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
117-84-0	Di-n-octyl phthalate	BRL	5.00 µg/l	1	"	"	"	"	"	
206-44-0	Fluoranthene	BRL	1.00 µg/l	1	"	"	"	"	"	
86-73-7	Fluorene	BRL	5.00 µg/l	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL	5.00 µg/l	1	"	"	"	"	"	
78-59-1	Isophorone	BRL	5.00 µg/l	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL	5.00 µg/l	1	"	"	"	"	"	
95-48-7	2-Methylphenol	BRL	1.00 µg/l	1	"	"	"	"	"	
108-39-4,106-4	3,4-Methylphenol	BRL	1.00 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	2.00 µg/l	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
85-01-8	Phenanthrene	BRL	5.00 µg/l	1	"	"	"	"	"	
108-95-2	Phenol	BRL	1.00 µg/l	1	"	"	"	"	"	
129-00-0	Pyrene	BRL	5.00 µg/l	1	"	"	"	"	"	
110-86-1	Pyridine	BRL	5.00 µg/l	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Inf SA35794-01	5946-05-01	Ground Water	17-Oct-05 11:30	17-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Semivolatile Organic Compounds by GCMS										
Semivolatile Organic Compounds by EPA 625			Prepared by method	SW846 3535						
95-95-4	2,4,5-Trichlorophenol	BRL	1.00 µg/l	1	EPA 625	18-Oct-05	18-Oct-05	5101052	M.B	
88-06-2	2,4,6-Trichlorophenol	BRL	1.00 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
321-60-8	*2-Fluorobiphenyl*	*51.8*	*30-130 %*		"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*55.8*	*15-110 %*		"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*46.4*	*30-130 %*		"	"	"	"	"	
4165-62-2	*Phenol-d5*	*44.2*	*15-110 %*		"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*69.8*	*30-130 %*		"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*64.3*	*15-110 %*		"	"	"	"	"	
Total Metals by EPA 200 Series Methods										
7440-22-4	Silver	BRL	0.0050 mg/l	1	EPA 200.7	18-Oct-05	18-Oct-05	5101025	HB	
7440-38-2	Arsenic	BRL	0.0040 mg/l	1	"	"	"	"	"	
7440-43-9	Cadmium	BRL	0.0012 mg/l	1	"	"	"	"	"	
7440-47-3	Chromium	BRL	0.0025 mg/l	1	"	"	"	"	"	
7440-50-8	Copper	0.0033	0.0025 mg/l	1	"	"	"	"	"	
7439-89-6	Iron	12.8	0.0025 mg/l	1	"	"	"	"	"	
7439-97-6	Mercury	BRL	0.00020 mg/l	1	EPA 245.2/7470A	"	19-Oct-05	5101026	YP	
7440-02-0	Nickel	BRL	0.0025 mg/l	1	EPA 200.7	"	18-Oct-05	5101025	HB	
7439-92-1	Lead	BRL	0.0038 mg/l	1	"	"	"	"	"	
7440-36-0	Antimony	BRL	0.0060 mg/l	1	"	"	"	"	"	
7782-49-2	Selenium	BRL	0.0075 mg/l	1	"	"	"	"	"	
7440-66-6	Zinc	0.0190	0.0025 mg/l	1	"	"	"	"	"	
General Chemistry Parameters										
1854-029-9	Hexavalent Chromium	BRL	0.010 mg/l	2	SM3500CrD/7196A	18-Oct-05 11:30	18-Oct-05	5101129	ES	
57-12-5	Cyanide (total)	BRL	0.0100 mg/l	1	10-204-00-1-A / SW-846 9012A	18-Oct-05	18-Oct-05	5101117	JAK	
7782-50-5	Total Residual Chlorine	BRL	0.020 mg/l	1	Hach 8167	17-Oct-05 19:15	17-Oct-05	5101007	ES	
	Total Suspended Solids	10,600	20.0 mg/l	4	SM2540D	19-Oct-05	19-Oct-05	5101178	EK	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101201 - SW846 5030 Water MS										
Blank (5101201-BLK1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	1.0	µg/l							
Acetone	BRL	10.0	µg/l							
Acrylonitrile	BRL	1.0	µg/l							
Benzene	BRL	0.5	µg/l							
Bromobenzene	BRL	1.0	µg/l							
Bromochloromethane	BRL	1.0	µg/l							
Bromodichloromethane	BRL	1.0	µg/l							
Bromoform	BRL	1.0	µg/l							
Bromomethane	BRL	2.0	µg/l							
2-Butanone (MEK)	BRL	10.0	µg/l							
n-Butylbenzene	BRL	1.0	µg/l							
sec-Butylbenzene	BRL	1.0	µg/l							
tert-Butylbenzene	BRL	1.0	µg/l							
Carbon disulfide	BRL	5.0	µg/l							
Carbon tetrachloride	BRL	0.5	µg/l							
Chlorobenzene	BRL	1.0	µg/l							
Chloroethane	BRL	2.0	µg/l							
Chloroform	BRL	1.0	µg/l							
Chloromethane	BRL	2.0	µg/l							
2-Chlorotoluene	BRL	1.0	µg/l							
4-Chlorotoluene	BRL	1.0	µg/l							
1,2-Dibromo-3-chloropropane	BRL	2.0	µg/l							
Dibromochloromethane	BRL	1.0	µg/l							
1,2-Dibromoethane (EDB)	BRL	1.0	µg/l							
Dibromomethane	BRL	1.0	µg/l							
1,2-Dichlorobenzene	BRL	0.5	µg/l							
1,3-Dichlorobenzene	BRL	0.5	µg/l							
1,4-Dichlorobenzene	BRL	0.5	µg/l							
Dichlorodifluoromethane (Freon12)	BRL	2.0	µg/l							
1,1-Dichloroethane	BRL	0.5	µg/l							
1,2-Dichloroethane	BRL	0.5	µg/l							
1,1-Dichloroethene	BRL	0.5	µg/l							
cis-1,2-Dichloroethene	BRL	0.5	µg/l							
trans-1,2-Dichloroethene	BRL	1.0	µg/l							
1,2-Dichloropropane	BRL	1.0	µg/l							
1,3-Dichloropropane	BRL	1.0	µg/l							
2,2-Dichloropropane	BRL	1.0	µg/l							
1,1-Dichloropropene	BRL	1.0	µg/l							
cis-1,3-Dichloropropene	BRL	1.0	µg/l							
trans-1,3-Dichloropropene	BRL	1.0	µg/l							
Ethylbenzene	BRL	0.5	µg/l							
Hexachlorobutadiene	BRL	1.0	µg/l							
2-Hexanone (MBK)	BRL	10.0	µg/l							
Isopropylbenzene	BRL	1.0	µg/l							
4-Isopropyltoluene	BRL	1.0	µg/l							
Methyl tert-butyl ether	BRL	0.5	µg/l							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	µg/l							
Methylene chloride	BRL	1.0	µg/l							
Naphthalene	BRL	0.5	µg/l							
n-Propylbenzene	BRL	1.0	µg/l							
Styrene	BRL	1.0	µg/l							
1,1,1,2-Tetrachloroethane	BRL	1.0	µg/l							
1,1,2,2-Tetrachloroethane	BRL	1.0	µg/l							
Tetrachloroethene	BRL	0.5	µg/l							

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101201 - SW846 5030 Water MS										
Blank (5101201-BLK1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Toluene	BRL	0.5	µg/l							
1,2,3-Trichlorobenzene	BRL	1.0	µg/l							
1,2,4-Trichlorobenzene	BRL	1.0	µg/l							
1,1,1-Trichloroethane	BRL	0.5	µg/l							
1,1,2-Trichloroethane	BRL	0.5	µg/l							
Trichloroethene	BRL	0.5	µg/l							
Trichlorofluoromethane (Freon 11)	BRL	1.0	µg/l							
1,2,3-Trichloropropane	BRL	1.0	µg/l							
1,2,4-Trimethylbenzene	BRL	1.0	µg/l							
1,3,5-Trimethylbenzene	BRL	1.0	µg/l							
Vinyl chloride	BRL	0.5	µg/l							
m,p-Xylene	BRL	1.0	µg/l							
o-Xylene	BRL	0.5	µg/l							
Tetrahydrofuran	BRL	10.0	µg/l							
Ethyl ether	BRL	1.0	µg/l							
Tert-amyl methyl ether	BRL	0.5	µg/l							
Ethyl tert-butyl ether	BRL	1.0	µg/l							
Di-isopropyl ether	BRL	1.0	µg/l							
Tert-Butanol / butyl alcohol	BRL	10.0	µg/l							
1,4-Dioxane	BRL	20.0	µg/l							
Surrogate: 4-Bromofluorobenzene	*46.6*		µg/l	*50.0*		*93.2*	*70-130*			
Surrogate: Toluene-d8	*48.4*		µg/l	*50.0*		*96.8*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*52.2*		µg/l	*50.0*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*51.0*		µg/l	*50.0*		*102*	*70-130*			
LCS (5101201-BS1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Acetone	10.4		µg/l	20.0		52.0	2.17-194			
Acrylonitrile	17.5		µg/l	20.0		87.5	70-130			
Benzene	20.0		µg/l	20.0		100	70-130			
Bromobenzene	21.9		µg/l	20.0		110	70-130			
Bromochloromethane	21.2		µg/l	20.0		106	70-130			
Bromodichloromethane	20.8		µg/l	20.0		104	70-130			
Bromoform	18.5		µg/l	20.0		92.5	70-130			
Bromomethane	19.7		µg/l	20.0		98.5	61.9-145			
2-Butanone (MEK)	11.1		µg/l	20.0		55.5	14.9-165			
n-Butylbenzene	17.0		µg/l	20.0		85.0	70-130			
sec-Butylbenzene	19.7		µg/l	20.0		98.5	70-130			
tert-Butylbenzene	19.2		µg/l	20.0		96.0	70-130			
Carbon disulfide	17.5		µg/l	20.0		87.5	70-130			
Carbon tetrachloride	19.3		µg/l	20.0		96.5	70-130			
Chlorobenzene	21.6		µg/l	20.0		108	70-130			
Chloroethane	20.1		µg/l	20.0		100	64.4-134			
Chloroform	20.6		µg/l	20.0		103	70-130			
Chloromethane	21.8		µg/l	20.0		109	70-130			
2-Chlorotoluene	22.7		µg/l	20.0		114	70-130			
4-Chlorotoluene	22.3		µg/l	20.0		112	70-130			
1,2-Dibromo-3-chloropropane	19.3		µg/l	20.0		96.5	70-130			
Dibromochloromethane	20.9		µg/l	20.0		104	45.3-146			
1,2-Dibromoethane (EDB)	20.7		µg/l	20.0		104	70-130			
Dibromomethane	20.5		µg/l	20.0		102	70-130			
1,2-Dichlorobenzene	21.7		µg/l	20.0		108	70-130			
1,3-Dichlorobenzene	22.1		µg/l	20.0		110	70-130			
1,4-Dichlorobenzene	20.4		µg/l	20.0		102	70-130			
Dichlorodifluoromethane (Freon12)	26.7		µg/l	20.0		134	49.6-201			
1,1-Dichloroethane	18.8		µg/l	20.0		94.0	70-130			

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101201 - SW846 5030 Water MS										
LCS (5101201-BS1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
1,2-Dichloroethane	20.1		µg/l	20.0		100	70-130			
1,1-Dichloroethene	18.4		µg/l	20.0		92.0	70-130			
cis-1,2-Dichloroethene	20.6		µg/l	20.0		103	70-130			
trans-1,2-Dichloroethene	17.6		µg/l	20.0		88.0	70-130			
1,2-Dichloropropane	20.3		µg/l	20.0		102	70-130			
1,3-Dichloropropane	20.7		µg/l	20.0		104	70-130			
2,2-Dichloropropane	13.8		µg/l	20.0		69.0	70-130			QC-1
1,1-Dichloropropene	19.2		µg/l	20.0		96.0	70-130			
cis-1,3-Dichloropropene	18.7		µg/l	20.0		93.5	70-130			
trans-1,3-Dichloropropene	18.3		µg/l	20.0		91.5	70-130			
Ethylbenzene	21.8		µg/l	20.0		109	70-130			
Hexachlorobutadiene	20.0		µg/l	20.0		100	68.6-137			
2-Hexanone (MBK)	13.5		µg/l	20.0		67.5	70-130			QC-2
Isopropylbenzene	21.1		µg/l	20.0		106	70-130			
4-Isopropyltoluene	19.9		µg/l	20.0		99.5	70-130			
Methyl tert-butyl ether	20.2		µg/l	20.0		101	70-130			
4-Methyl-2-pentanone (MIBK)	19.6		µg/l	20.0		98.0	48.6-137			
Methylene chloride	19.7		µg/l	20.0		98.5	70-130			
Naphthalene	19.9		µg/l	20.0		99.5	70-130			
n-Propylbenzene	18.8		µg/l	20.0		94.0	70-130			
Styrene	18.8		µg/l	20.0		94.0	70-130			
1,1,1,2-Tetrachloroethane	22.0		µg/l	20.0		110	70-130			
1,1,2,2-Tetrachloroethane	21.3		µg/l	20.0		106	70-130			
Tetrachloroethene	19.1		µg/l	20.0		95.5	70-130			
Toluene	19.6		µg/l	20.0		98.0	70-130			
1,2,3-Trichlorobenzene	21.8		µg/l	20.0		109	70-130			
1,2,4-Trichlorobenzene	20.2		µg/l	20.0		101	70-130			
1,1,1-Trichloroethane	19.5		µg/l	20.0		97.5	70-130			
1,1,2-Trichloroethane	20.5		µg/l	20.0		102	70-130			
Trichloroethene	19.8		µg/l	20.0		99.0	70-130			
Trichlorofluoromethane (Freon 11)	20.5		µg/l	20.0		102	67.9-143			
1,2,3-Trichloropropane	21.3		µg/l	20.0		106	70-130			
1,2,4-Trimethylbenzene	19.6		µg/l	20.0		98.0	70-130			
1,3,5-Trimethylbenzene	19.2		µg/l	20.0		96.0	70-130			
Vinyl chloride	20.3		µg/l	20.0		102	70-130			
m,p-Xylene	41.8		µg/l	40.0		104	70-130			
o-Xylene	21.4		µg/l	20.0		107	70-130			
Tetrahydrofuran	18.6		µg/l	20.0		93.0	70-130			
Ethyl ether	19.6		µg/l	20.0		98.0	70-136			
Tert-amyl methyl ether	19.9		µg/l	20.0		99.5	70-130			
Ethyl tert-butyl ether	21.5		µg/l	20.0		108	70-130			
Di-isopropyl ether	20.6		µg/l	20.0		103	70-130			
Tert-Butanol / butyl alcohol	173		µg/l	200		86.5	70-130			
1,4-Dioxane	180		µg/l	200		90.0	36.5-156			
Surrogate: 4-Bromofluorobenzene	*50.7*		µg/l	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*49.0*		µg/l	*50.0*		*98.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*48.4*		µg/l	*50.0*		*96.8*	*70-130*			
Surrogate: Dibromofluoromethane	*49.8*		µg/l	*50.0*		*99.6*	*70-130*			
LCS Dup (5101201-BSD1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Acetone	10.8		µg/l	20.0		54.0	2.17-194	3.77	50	
Acrylonitrile	17.9		µg/l	20.0		89.5	70-130	2.26	25	
Benzene	20.9		µg/l	20.0		104	70-130	3.92	25	
Bromobenzene	22.6		µg/l	20.0		113	70-130	2.69	25	
Bromochloromethane	21.4		µg/l	20.0		107	70-130	0.939	25	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101201 - SW846 5030 Water MS										
LCS Dup (5101201-BSD1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Bromodichloromethane	21.4		µg/l	20.0		107	70-130	2.84	25	
Bromoform	19.0		µg/l	20.0		95.0	70-130	2.67	25	
Bromomethane	20.5		µg/l	20.0		102	61.9-145	3.49	50	
2-Butanone (MEK)	11.6		µg/l	20.0		58.0	14.9-165	4.41	50	
n-Butylbenzene	18.2		µg/l	20.0		91.0	70-130	6.82	25	
sec-Butylbenzene	20.9		µg/l	20.0		104	70-130	5.43	25	
tert-Butylbenzene	20.4		µg/l	20.0		102	70-130	6.06	25	
Carbon disulfide	18.8		µg/l	20.0		94.0	70-130	7.16	25	
Carbon tetrachloride	20.4		µg/l	20.0		102	70-130	5.54	25	
Chlorobenzene	22.3		µg/l	20.0		112	70-130	3.64	25	
Chloroethane	21.4		µg/l	20.0		107	64.4-134	6.76	50	
Chloroform	21.4		µg/l	20.0		107	70-130	3.81	25	
Chloromethane	23.0		µg/l	20.0		115	70-130	5.36	25	
2-Chlorotoluene	23.8		µg/l	20.0		119	70-130	4.29	25	
4-Chlorotoluene	23.3		µg/l	20.0		116	70-130	3.51	25	
1,2-Dibromo-3-chloropropane	19.6		µg/l	20.0		98.0	70-130	1.54	25	
Dibromochloromethane	21.8		µg/l	20.0		109	45.3-146	4.69	50	
1,2-Dibromoethane (EDB)	21.4		µg/l	20.0		107	70-130	2.84	25	
Dibromomethane	21.0		µg/l	20.0		105	70-130	2.90	25	
1,2-Dichlorobenzene	22.4		µg/l	20.0		112	70-130	3.64	25	
1,3-Dichlorobenzene	22.9		µg/l	20.0		114	70-130	3.57	25	
1,4-Dichlorobenzene	21.4		µg/l	20.0		107	70-130	4.78	25	
Dichlorodifluoromethane (Freon12)	28.6		µg/l	20.0		143	49.6-201	6.50	50	
1,1-Dichloroethane	19.4		µg/l	20.0		97.0	70-130	3.14	25	
1,2-Dichloroethane	20.6		µg/l	20.0		103	70-130	2.96	25	
1,1-Dichloroethene	19.7		µg/l	20.0		98.5	70-130	6.82	25	
cis-1,2-Dichloroethene	21.4		µg/l	20.0		107	70-130	3.81	25	
trans-1,2-Dichloroethene	18.6		µg/l	20.0		93.0	70-130	5.52	25	
1,2-Dichloropropane	21.0		µg/l	20.0		105	70-130	2.90	25	
1,3-Dichloropropane	21.1		µg/l	20.0		106	70-130	1.90	25	
2,2-Dichloropropane	14.8		µg/l	20.0		74.0	70-130	6.99	25	
1,1-Dichloropropene	20.4		µg/l	20.0		102	70-130	6.06	25	
cis-1,3-Dichloropropene	19.3		µg/l	20.0		96.5	70-130	3.16	25	
trans-1,3-Dichloropropene	19.0		µg/l	20.0		95.0	70-130	3.75	25	
Ethylbenzene	23.0		µg/l	20.0		115	70-130	5.36	25	
Hexachlorobutadiene	21.3		µg/l	20.0		106	68.6-137	5.83	50	
2-Hexanone (MBK)	13.5		µg/l	20.0		67.5	70-130	0.00	25	QC-2
Isopropylbenzene	22.3		µg/l	20.0		112	70-130	5.50	25	
4-Isopropyltoluene	21.0		µg/l	20.0		105	70-130	5.38	25	
Methyl tert-butyl ether	20.6		µg/l	20.0		103	70-130	1.96	25	
4-Methyl-2-pentanone (MIBK)	19.6		µg/l	20.0		98.0	48.6-137	0.00	50	
Methylene chloride	20.2		µg/l	20.0		101	70-130	2.51	25	
Naphthalene	21.4		µg/l	20.0		107	70-130	7.26	25	
n-Propylbenzene	19.9		µg/l	20.0		99.5	70-130	5.68	25	
Styrene	19.6		µg/l	20.0		98.0	70-130	4.17	25	
1,1,1,2-Tetrachloroethane	22.4		µg/l	20.0		112	70-130	1.80	25	
1,1,2,2-Tetrachloroethane	21.6		µg/l	20.0		108	70-130	1.87	25	
Tetrachloroethene	20.3		µg/l	20.0		102	70-130	6.58	25	
Toluene	20.7		µg/l	20.0		104	70-130	5.94	25	
1,2,3-Trichlorobenzene	23.0		µg/l	20.0		115	70-130	5.36	25	
1,2,4-Trichlorobenzene	21.4		µg/l	20.0		107	70-130	5.77	25	
1,1,1-Trichloroethane	20.7		µg/l	20.0		104	70-130	6.45	25	
1,1,2-Trichloroethane	21.5		µg/l	20.0		108	70-130	5.71	25	
Trichloroethene	20.8		µg/l	20.0		104	70-130	4.93	25	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101201 - SW846 5030 Water MS										
LCS Dup (5101201-BSD1)				Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Trichlorofluoromethane (Freon 11)	22.0		µg/l	20.0		110	67.9-143	7.55	50	
1,2,3-Trichloropropane	21.5		µg/l	20.0		108	70-130	1.87	25	
1,2,4-Trimethylbenzene	20.6		µg/l	20.0		103	70-130	4.98	25	
1,3,5-Trimethylbenzene	20.1		µg/l	20.0		100	70-130	4.08	25	
Vinyl chloride	21.6		µg/l	20.0		108	70-130	5.71	25	
m,p-Xylene	44.0		µg/l	40.0		110	70-130	5.61	25	
o-Xylene	22.2		µg/l	20.0		111	70-130	3.67	25	
Tetrahydrofuran	19.3		µg/l	20.0		96.5	70-130	3.69	25	
Ethyl ether	20.0		µg/l	20.0		100	70-136	2.02	50	
Tert-amyl methyl ether	20.5		µg/l	20.0		102	70-130	2.48	25	
Ethyl tert-butyl ether	21.8		µg/l	20.0		109	70-130	0.922	25	
Di-isopropyl ether	21.2		µg/l	20.0		106	70-130	2.87	25	
Tert-Butanol / butyl alcohol	176		µg/l	200		88.0	70-130	1.72	25	
1,4-Dioxane	178		µg/l	200		89.0	36.5-156	1.12	25	
Surrogate: 4-Bromofluorobenzene	*50.8*		µg/l	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*49.6*		µg/l	*50.0*		*99.2*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*49.2*		µg/l	*50.0*		*98.4*	*70-130*			
Surrogate: Dibromofluoromethane	*50.0*		µg/l	*50.0*		*100*	*70-130*			
Matrix Spike (5101201-MS1)		**Source: SA35335-01RE1**		Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Benzene	12.3		µg/l	15.0	BRL	82.0	70-130			
Chlorobenzene	16.3		µg/l	15.0	BRL	109	70-130			
1,1-Dichloroethene	6.4		µg/l	15.0	BRL	42.7	70-130			QM-07
Toluene	14.2		µg/l	15.0	BRL	94.7	70-130			
Trichloroethene	13.6		µg/l	15.0	BRL	90.7	70-130			
Surrogate: 4-Bromofluorobenzene	*46.8*		µg/l	*50.0*		*93.6*	*70-130*			
Surrogate: Toluene-d8	*48.2*		µg/l	*50.0*		*96.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.7*		µg/l	*50.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*50.5*		µg/l	*50.0*		*101*	*70-130*			
Matrix Spike Dup (5101201-MSD1)		**Source: SA35335-01RE1**		Prepared: 19-Oct-05 Analyzed: 20-Oct-05						
Benzene	12.7		µg/l	15.0	BRL	84.7	70-130	3.24	30	
Chlorobenzene	17.1		µg/l	15.0	BRL	114	70-130	4.48	30	
1,1-Dichloroethene	6.5		µg/l	15.0	BRL	43.3	70-130	1.40	30	QM-07
Toluene	14.8		µg/l	15.0	BRL	98.7	70-130	4.14	30	
Trichloroethene	13.9		µg/l	15.0	BRL	92.7	70-130	2.18	30	
Surrogate: 4-Bromofluorobenzene	*46.4*		µg/l	*50.0*		*92.8*	*70-130*			
Surrogate: Toluene-d8	*47.9*		µg/l	*50.0*		*95.8*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.9*		µg/l	*50.0*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*50.4*		µg/l	*50.0*		*101*	*70-130*			

Microextractable Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101042 - Microextr. by 504.1										
Blank (5101042-BLK1)				Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
1,2-Dibromoethane (EDB)	BRL	0.0100	µg/l							
LCS (5101042-BS1)				Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
1,2-Dibromoethane (EDB)	0.196	0.0100	µg/l	0.200		98.0	50-150			
Duplicate (5101042-DUP1)		**Source: SA35701-01**		Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
1,2-Dibromoethane (EDB)	BRL	0.0100	µg/l		BRL				30	

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101095 - SW846 3510C										
Blank (5101095-BLK1)				Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Non-polar material (SGT-HEM)	BRL	1.0	mg/l							
LCS (5101095-BS1)				Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Non-polar material (SGT-HEM)	28.4		mg/l	33.0		86.1	0-200			

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101051 - SW846 3535										
Blank (5101051-BLK1)				Prepared & Analyzed: 18-Oct-05						
PCB 1016	BRL	0.200	µg/l							
PCB 1221	BRL	0.200	µg/l							
PCB 1232	BRL	0.200	µg/l							
PCB 1242	BRL	0.200	µg/l							
PCB 1248	BRL	0.200	µg/l							
PCB 1254	BRL	0.200	µg/l							
PCB 1260	BRL	0.200	µg/l							
PCB 1262	BRL	0.200	µg/l							
PCB 1268	BRL	0.200	µg/l							
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.170*		µg/l	*0.200*		*85.0*	*30-150*			
Surrogate: Decachlorobiphenyl (Sr)	*0.240*		µg/l	*0.200*		*120*	*30-150*			
LCS (5101051-BS1)				Prepared & Analyzed: 18-Oct-05						
PCB 1016	2.22	0.200	µg/l	2.50		88.8	40-140			
PCB 1260	1.83	0.200	µg/l	2.50		73.2	40-140			
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.190*		µg/l	*0.200*		*95.0*	*30-150*			
Surrogate: Decachlorobiphenyl (Sr)	*0.200*		µg/l	*0.200*		*100*	*30-150*			

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101052 - SW846 3535										
Blank (5101052-BLK1)				Prepared & Analyzed: 18-Oct-05						
Acenaphthene	BRL	1.00	µg/l							
Acenaphthylene	BRL	5.00	µg/l							
Aniline	BRL	5.00	µg/l							
Anthracene	BRL	5.00	µg/l							
Azobenzene/Diphenyldiazine	BRL	5.00	µg/l							
Benzidine	BRL	5.00	µg/l							
Benzo (a) anthracene	BRL	5.00	µg/l							
Benzo (a) pyrene	BRL	5.00	µg/l							
Benzo (b) fluoranthene	BRL	5.00	µg/l							
Benzo (g,h,i) perylene	BRL	5.00	µg/l							
Benzo (k) fluoranthene	BRL	5.00	µg/l							
Benzoic acid	BRL	5.00	µg/l							
Benzyl alcohol	BRL	5.00	µg/l							
Bis(2-chloroethoxy)methane	BRL	5.00	µg/l							
Bis(2-chloroethyl)ether	BRL	5.00	µg/l							
Bis(2-chloroisopropyl)ether	BRL	5.00	µg/l							
Bis(2-ethylhexyl)phthalate	BRL	5.00	µg/l							
4-Bromophenyl phenyl ether	BRL	5.00	µg/l							
Butyl benzyl phthalate	BRL	5.00	µg/l							
Carbazole	BRL	5.00	µg/l							
4-Chloro-3-methylphenol	BRL	1.00	µg/l							
4-Chloroaniline	BRL	5.00	µg/l							
2-Chloronaphthalene	BRL	5.00	µg/l							
2-Chlorophenol	BRL	1.00	µg/l							
4-Chlorophenyl phenyl ether	BRL	5.00	µg/l							
Chrysene	BRL	5.00	µg/l							
Dibenzo (a,h) anthracene	BRL	5.00	µg/l							
Dibenzofuran	BRL	5.00	µg/l							
1,2-Dichlorobenzene	BRL	2.00	µg/l							
1,3-Dichlorobenzene	BRL	2.00	µg/l							
1,4-Dichlorobenzene	BRL	2.00	µg/l							
3,3'-Dichlorobenzidine	BRL	5.00	µg/l							
2,4-Dichlorophenol	BRL	1.00	µg/l							
Diethyl phthalate	BRL	5.00	µg/l							
Dimethyl phthalate	BRL	5.00	µg/l							
2,4-Dimethylphenol	BRL	1.00	µg/l							
Di-n-butyl phthalate	BRL	5.00	µg/l							
4,6-Dinitro-2-methylphenol	BRL	1.00	µg/l							
2,4-Dinitrophenol	BRL	1.00	µg/l							
2,4-Dinitrotoluene	BRL	5.00	µg/l							
2,6-Dinitrotoluene	BRL	5.00	µg/l							
Di-n-octyl phthalate	BRL	5.00	µg/l							
Fluoranthene	BRL	1.00	µg/l							
Fluorene	BRL	5.00	µg/l							
Hexachlorobenzene	BRL	5.00	µg/l							
Hexachlorobutadiene	BRL	5.00	µg/l							
Hexachlorocyclopentadiene	BRL	5.00	µg/l							
Hexachloroethane	BRL	5.00	µg/l							
Indeno (1,2,3-cd) pyrene	BRL	5.00	µg/l							
Isophorone	BRL	5.00	µg/l							
2-Methylnaphthalene	BRL	5.00	µg/l							
2-Methylphenol	BRL	1.00	µg/l							
3,4-Methylphenol	BRL	1.00	µg/l							
Naphthalene	BRL	2.00	µg/l							

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101052 - SW846 3535										
Blank (5101052-BLK1)				Prepared & Analyzed: 18-Oct-05						
2-Nitroaniline	BRL	5.00	µg/l							
3-Nitroaniline	BRL	5.00	µg/l							
4-Nitroaniline	BRL	5.00	µg/l							
Nitrobenzene	BRL	5.00	µg/l							
2-Nitrophenol	BRL	1.00	µg/l							
4-Nitrophenol	BRL	1.00	µg/l							
N-Nitrosodimethylamine	BRL	5.00	µg/l							
N-Nitrosodi-n-propylamine	BRL	5.00	µg/l							
N-Nitrosodiphenylamine	BRL	5.00	µg/l							
Pentachlorophenol	BRL	1.00	µg/l							
Phenanthrene	BRL	5.00	µg/l							
Phenol	BRL	1.00	µg/l							
Pyrene	BRL	5.00	µg/l							
Pyridine	BRL	5.00	µg/l							
1,2,4-Trichlorobenzene	BRL	5.00	µg/l							
2,4,5-Trichlorophenol	BRL	1.00	µg/l							
2,4,6-Trichlorophenol	BRL	1.00	µg/l							
Surrogate: 2-Fluorobiphenyl	*49.5*		µg/l	*100*		*49.5*	*30-130*			
Surrogate: 2-Fluorophenol	*63.2*		µg/l	*100*		*63.2*	*15-110*			
Surrogate: Nitrobenzene-d5	*63.8*		µg/l	*100*		*63.8*	*30-130*			
Surrogate: Phenol-d5	*55.2*		µg/l	*100*		*55.2*	*15-110*			
Surrogate: Terphenyl-dl4	*53.6*		µg/l	*100*		*53.6*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*70.5*		µg/l	*100*		*70.5*	*15-110*			
LCS (5101052-BS1)				Prepared & Analyzed: 18-Oct-05						
Acenaphthene	64.2	1.00	µg/l	100		64.2	40-140			
Acenaphthylene	60.3	5.00	µg/l	100		60.3	40-140			
Aniline	58.4	5.00	µg/l	100		58.4	40-140			
Anthracene	60.1	5.00	µg/l	100		60.1	40-140			
Azobenzene/Diphenyldiazine	60.0	5.00	µg/l	100		60.0	40-140			
Benzidine	39.1	5.00	µg/l	100		39.1	40-140			QC-2
Benzo (a) anthracene	70.0	5.00	µg/l	100		70.0	40-140			
Benzo (a) pyrene	72.6	5.00	µg/l	100		72.6	40-140			
Benzo (b) fluoranthene	71.0	5.00	µg/l	100		71.0	40-140			
Benzo (g,h,i) perylene	75.8	5.00	µg/l	100		75.8	40-140			
Benzo (k) fluoranthene	67.0	5.00	µg/l	100		67.0	40-140			
Benzoic acid	83.8	5.00	µg/l	100		83.8	30-130			
Benzyl alcohol	62.8	5.00	µg/l	100		62.8	40-140			
Bis(2-chloroethoxy)methane	68.3	5.00	µg/l	100		68.3	40-140			
Bis(2-chloroethyl)ether	48.3	5.00	µg/l	100		48.3	40-140			
Bis(2-chloroisopropyl)ether	60.6	5.00	µg/l	100		60.6	40-140			
Bis(2-ethylhexyl)phthalate	72.4	5.00	µg/l	100		72.4	40-140			
4-Bromophenyl phenyl ether	71.1	5.00	µg/l	100		71.1	40-140			
Butyl benzyl phthalate	73.7	5.00	µg/l	100		73.7	40-140			
Carbazole	62.9	5.00	µg/l	100		62.9	0-200			
4-Chloro-3-methylphenol	84.0	1.00	µg/l	100		84.0	30-130			
4-Chloroaniline	67.1	5.00	µg/l	100		67.1	40-140			
2-Chloronaphthalene	62.2	5.00	µg/l	100		62.2	40-140			
2-Chlorophenol	65.2	1.00	µg/l	100		65.2	30-130			
4-Chlorophenyl phenyl ether	68.6	5.00	µg/l	100		68.6	40-140			
Chrysene	67.4	5.00	µg/l	100		67.4	40-140			
Dibenzo (a,h) anthracene	82.3	5.00	µg/l	100		82.3	40-140			
Dibenzofuran	63.6	5.00	µg/l	100		63.6	40-140			
1,2-Dichlorobenzene	57.8	2.00	µg/l	100		57.8	40-140			
1,3-Dichlorobenzene	56.4	2.00	µg/l	100		56.4	40-140			

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101052 - SW846 3535										
LCS (5101052-BS1)				Prepared & Analyzed: 18-Oct-05						
1,4-Dichlorobenzene	56.0	2.00	µg/l	100		56.0	40-140			
3,3'-Dichlorobenzidine	74.3	5.00	µg/l	100		74.3	40-140			
2,4-Dichlorophenol	71.9	1.00	µg/l	100		71.9	30-130			
Diethyl phthalate	70.6	5.00	µg/l	100		70.6	40-140			
Dimethyl phthalate	72.4	5.00	µg/l	100		72.4	40-140			
2,4-Dimethylphenol	68.2	1.00	µg/l	100		68.2	30-130			
Di-n-butyl phthalate	55.5	5.00	µg/l	100		55.5	40-140			
4,6-Dinitro-2-methylphenol	90.2	1.00	µg/l	100		90.2	30-130			
2,4-Dinitrophenol	129	1.00	µg/l	100		129	30-130			
2,4-Dinitrotoluene	92.2	5.00	µg/l	100		92.2	40-140			
2,6-Dinitrotoluene	85.6	5.00	µg/l	100		85.6	40-140			
Di-n-octyl phthalate	64.7	5.00	µg/l	100		64.7	40-140			
Fluoranthene	62.5	1.00	µg/l	100		62.5	40-140			
Fluorene	66.6	5.00	µg/l	100		66.6	40-140			
Hexachlorobenzene	71.6	5.00	µg/l	100		71.6	40-140			
Hexachlorobutadiene	59.4	5.00	µg/l	100		59.4	40-140			
Hexachlorocyclopentadiene	53.2	5.00	µg/l	100		53.2	40-140			
Hexachloroethane	58.2	5.00	µg/l	100		58.2	40-140			
Indeno (1,2,3-cd) pyrene	78.0	5.00	µg/l	100		78.0	40-140			
Isophorone	68.8	5.00	µg/l	100		68.8	40-140			
2-Methylnaphthalene	65.4	5.00	µg/l	100		65.4	40-140			
2-Methylphenol	66.8	1.00	µg/l	100		66.8	40-140			
3,4-Methylphenol	56.8	1.00	µg/l	100		56.8	40-140			
Naphthalene	58.6	2.00	µg/l	100		58.6	40-140			
2-Nitroaniline	81.1	5.00	µg/l	100		81.1	40-140			
3-Nitroaniline	78.0	5.00	µg/l	100		78.0	40-140			
4-Nitroaniline	83.3	5.00	µg/l	100		83.3	40-140			
Nitrobenzene	63.3	5.00	µg/l	100		63.3	40-140			
2-Nitrophenol	75.1	1.00	µg/l	100		75.1	30-130			
4-Nitrophenol	69.6	1.00	µg/l	100		69.6	30-130			
N-Nitrosodimethylamine	66.4	5.00	µg/l	100		66.4	40-140			
N-Nitrosodi-n-propylamine	66.4	5.00	µg/l	100		66.4	40-140			
N-Nitrosodiphenylamine	72.6	5.00	µg/l	100		72.6	40-140			
Pentachlorophenol	101	1.00	µg/l	100		101	30-130			
Phenanthrene	61.8	5.00	µg/l	100		61.8	40-140			
Phenol	67.2	1.00	µg/l	100		67.2	30-130			
Pyrene	62.7	5.00	µg/l	100		62.7	40-140			
Pyridine	48.2	5.00	µg/l	100		48.2	40-140			
1,2,4-Trichlorobenzene	61.9	5.00	µg/l	100		61.9	40-140			
2,4,5-Trichlorophenol	70.9	1.00	µg/l	100		70.9	30-130			
2,4,6-Trichlorophenol	70.3	1.00	µg/l	100		70.3	30-130			
Surrogate: 2-Fluorobiphenyl	*59.3*		µg/l	*100*		*59.3*	*30-130*			
Surrogate: 2-Fluorophenol	*59.6*		µg/l	*100*		*59.6*	*15-110*			
Surrogate: Nitrobenzene-d5	*63.7*		µg/l	*100*		*63.7*	*30-130*			
Surrogate: Phenol-d5	*53.7*		µg/l	*100*		*53.7*	*15-110*			
Surrogate: Terphenyl-dl4	*66.3*		µg/l	*100*		*66.3*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*81.2*		µg/l	*100*		*81.2*	*15-110*			

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101025 - EPA 200 Series										
Blank (5101025-BLK1)				Prepared & Analyzed: 18-Oct-05						
Antimony	BRL	0.0060	mg/l							
Selenium	BRL	0.0075	mg/l							
Lead	BRL	0.0038	mg/l							
Nickel	BRL	0.0025	mg/l							
Iron	BRL	0.0025	mg/l							
Zinc	BRL	0.0025	mg/l							
Copper	BRL	0.0025	mg/l							
Chromium	BRL	0.0025	mg/l							
Silver	BRL	0.0050	mg/l							
Cadmium	BRL	0.0012	mg/l							
Arsenic	BRL	0.0040	mg/l							
LCS (5101025-BS1)				Prepared & Analyzed: 18-Oct-05						
Iron	0.108	0.0025	mg/l	0.100		108	85-115			
Antimony	0.0968	0.0060	mg/l	0.100		96.8	85-115			
Zinc	0.104	0.0025	mg/l	0.100		104	85-115			
Selenium	0.104	0.0075	mg/l	0.100		104	85-115			
Nickel	0.100	0.0025	mg/l	0.100		100	85-115			
Lead	0.0956	0.0038	mg/l	0.100		95.6	85-115			
Chromium	0.0963	0.0025	mg/l	0.100		96.3	85-115			
Cadmium	0.104	0.0012	mg/l	0.100		104	85-115			
Arsenic	0.0954	0.0040	mg/l	0.100		95.4	85-115			
Silver	0.0526	0.0050	mg/l	0.0500		105	85-115			
Copper	0.0974	0.0025	mg/l	0.100		97.4	85-115			
Duplicate (5101025-DUP1)	**Source: SA35795-01**			Prepared & Analyzed: 18-Oct-05						
Zinc	0.340	0.0025	mg/l		0.340			0.00	20	
Selenium	BRL	0.0075	mg/l		BRL				20	
Antimony	BRL	0.0060	mg/l		BRL				20	
Lead	BRL	0.0065	mg/l		0.0063			21.1	20	QR-04
Nickel	0.173	0.0025	mg/l		0.169			2.34	20	
Iron	2.00	0.0025	mg/l		1.94			3.05	20	
Copper	0.840	0.0025	mg/l		0.742			12.4	20	
Silver	0.0060	0.0050	mg/l		0.0062			3.28	20	
Cadmium	0.0117	0.0012	mg/l		0.0115			1.72	20	
Chromium	24.4	0.0025	mg/l		23.7			2.91	20	
Arsenic	BRL	0.0040	mg/l		BRL				20	
Matrix Spike (5101025-MS1)	**Source: SA35800-01**			Prepared & Analyzed: 18-Oct-05						
Nickel	0.0947	0.0025	mg/l	0.100	0.0117	83.0	70-130			
Iron	23.3	0.0025	mg/l	0.100	23.7	NR	70-130			QM-02
Lead	0.108	0.0038	mg/l	0.100	0.0290	79.0	70-130			
Antimony	0.114	0.0060	mg/l	0.100	0.0595	54.5	70-130			QM-07
Selenium	0.0780	0.0075	mg/l	0.100	BRL	78.0	70-130			
Zinc	0.214	0.0025	mg/l	0.100	0.132	82.0	70-130			
Silver	0.0488	0.0050	mg/l	0.0500	BRL	97.6	70-130			
Cadmium	0.0861	0.0012	mg/l	0.100	BRL	86.1	70-130			
Chromium	0.0988	0.0025	mg/l	0.100	0.0170	81.8	70-130			
Copper	0.114	0.0025	mg/l	0.100	0.0277	86.3	70-130			
Arsenic	0.0808	0.0040	mg/l	0.100	BRL	80.8	70-130			
Matrix Spike Dup (5101025-MSD1)	**Source: SA35800-01**			Prepared & Analyzed: 18-Oct-05						
Nickel	0.0945	0.0025	mg/l	0.100	0.0117	82.8	70-130	0.211	20	
Lead	0.109	0.0038	mg/l	0.100	0.0290	80.0	70-130	0.922	20	
Iron	23.0	0.0025	mg/l	0.100	23.7	NR	70-130	1.30	20	QM-02
Antimony	0.113	0.0060	mg/l	0.100	0.0595	53.5	70-130	0.881	20	QM-07

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101025 - EPA 200 Series										
Matrix Spike Dup (5101025-MSD1)	**Source: SA35800-01**			Prepared & Analyzed: 18-Oct-05						
Selenium	0.0812	0.0075	mg/l	0.100	BRL	81.2	70-130	4.02	20	
Zinc	0.219	0.0025	mg/l	0.100	0.132	87.0	70-130	2.31	20	
Arsenic	0.0789	0.0040	mg/l	0.100	BRL	78.9	70-130	2.38	20	
Copper	0.114	0.0025	mg/l	0.100	0.0277	86.3	70-130	0.00	20	
Silver	0.0498	0.0050	mg/l	0.0500	BRL	99.6	70-130	2.03	20	
Cadmium	0.0859	0.0012	mg/l	0.100	BRL	85.9	70-130	0.233	20	
Chromium	0.0986	0.0025	mg/l	0.100	0.0170	81.6	70-130	0.203	20	
Batch 5101026 - EPA200/SW7000 Series										
Blank (5101026-BLK1)				Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Mercury	BRL	0.00020	mg/l							
LCS (5101026-BS1)				Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Mercury	0.00257	0.00010	mg/l	0.00250		103	80-120			
Duplicate (5101026-DUP1)	**Source: SA35794-01**			Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Mercury	BRL	0.00020	mg/l		0.00013				20	
Matrix Spike (5101026-MS1)	**Source: SA35800-01**			Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Mercury	0.00336	0.00020	mg/l	0.00250	0.00010	130	75-125			QM-07
Matrix Spike Dup (5101026-MSD1)	**Source: SA35800-01**			Prepared: 18-Oct-05 Analyzed: 19-Oct-05						
Mercury	0.00351	0.00020	mg/l	0.00250	0.00010	136	75-125	4.37	20	QM-07

General Chemistry Parameters - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 5101007 - General Preparation										
Blank (5101007-BLK1)				Prepared & Analyzed: 17-Oct-05						
Total Residual Chlorine	BRL	0.020	mg/l							
LCS (5101007-BS1)				Prepared & Analyzed: 17-Oct-05						
Total Residual Chlorine	0.054	0.020	mg/l	0.0500		108	90-110			
Duplicate (5101007-DUP1)	**Source: SA35681-01**			Prepared & Analyzed: 17-Oct-05						
Total Residual Chlorine	BRL	0.020	mg/l		0.009			0.00	20	
Matrix Spike (5101007-MS1)	**Source: SA35681-01**			Prepared & Analyzed: 17-Oct-05						
Total Residual Chlorine	0.011	0.020	mg/l	0.0500	0.009	4.00	80-120			QM-05
Reference (5101007-SRM1)				Prepared & Analyzed: 17-Oct-05						
Total Residual Chlorine	0.099	0.020	mg/l	0.107		92.5	85-115			
Batch 5101117 - General Preparation										
Blank (5101117-BLK1)				Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	BRL	0.0100	mg/l							
Blank (5101117-BLK2)				Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	BRL	0.0100	mg/l							
LCS (5101117-BS1)				Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	0.316	0.0100	mg/l	0.300		105	90-110			
LCS (5101117-BS2)				Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	0.308	0.0100	mg/l	0.300		103	90-110			
Matrix Spike (5101117-MS1)	**Source: SA35469-08**			Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	0.316	0.0100	mg/l	0.300	BRL	105	75-125			
Matrix Spike Dup (5101117-MSD1)	**Source: SA35469-08**			Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	0.312	0.0100	mg/l	0.300	BRL	104	75-125	1.27	20	
Reference (5101117-SRM1)				Prepared & Analyzed: 18-Oct-05						
Cyanide (total)	0.331	0.0100	mg/l	0.333		99.4	75.7-125			
Batch 5101129 - General Preparation										
Blank (5101129-BLK1)				Prepared & Analyzed: 18-Oct-05						
Hexavalent Chromium	BRL	0.005	mg/l							
LCS (5101129-BS1)				Prepared & Analyzed: 18-Oct-05						
Hexavalent Chromium	0.049	0.005	mg/l	0.0500		98.0	90-110			
Duplicate (5101129-DUP1)	**Source: SA35794-01**			Prepared & Analyzed: 18-Oct-05						
Hexavalent Chromium	BRL	0.010	mg/l		BRL				20	
Matrix Spike (5101129-MS1)	**Source: SA35794-01**			Prepared & Analyzed: 18-Oct-05						
Hexavalent Chromium	0.038	0.010	mg/l	0.100	BRL	38.0	80-120			QM-05
Reference (5101129-SRM1)				Prepared & Analyzed: 18-Oct-05						
Hexavalent Chromium	0.027	0.005	mg/l	0.0250		108	85-115			
Batch 5101178 - General Preparation										
Blank (5101178-BLK1)				Prepared & Analyzed: 19-Oct-05						
Total Suspended Solids	BRL	5.00	mg/l							
Duplicate (5101178-DUP1)	**Source: SA35644-01**			Prepared & Analyzed: 19-Oct-05						
Total Suspended Solids	62.0	10.0	mg/l		64.0			3.17	20	
Duplicate (5101178-DUP2)	**Source: SA35657-01**			Prepared & Analyzed: 19-Oct-05						
Total Suspended Solids	200	5.00	mg/l		193			3.56	20	
Reference (5101178-SRM1)				Prepared & Analyzed: 19-Oct-05						
Total Suspended Solids	98.0	10.0	mg/l	95.3		103	90-110			

Notes and Definitions

QC-1	Analyte out of acceptance range.
QC-2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR-04	Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

Gasoline - includes regular, unleaded, premium, etc.
Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
Fuel Oil #4 - includes #4 fuel oil
Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
Motor Oil - includes virgin and waste automobile oil
Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
Aviation Fuel - includes kerosene, Jet A and JP-4
Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as *TPH (Calculated as).

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA35794(5)

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Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 10-19-05
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: CEA

Invoice To: CEA

Project No.: 6946-05-01
Site Name: 129 BRADFORD ESTATE
Location: ANDOVER State: MA
Sampler(s): JOHN BRIGGS

Project Mgr.: J Goudey

P.O. No.: RQN:

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: X VPH/EPH Requested	QA Reporting Notes: (check if needed)
SA35794-01	INF	10-17	1130	G	SW		4	3		3	X	State specific reporting standards If applicable, please list below.

☐ Provide MCP CAM Report Were all field QC requirements met as per MADEP CAM Section 2.0? ☐ Yes ☐ No (Response required for CAM report)

☐ Fax results when available to (___) _____
☐ E-mail to AADIZIO@CEA-INC.COM
EDD Format _____

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C 17

Relinquished by:	Received by:	Date:	Time:
		10/17/05	125

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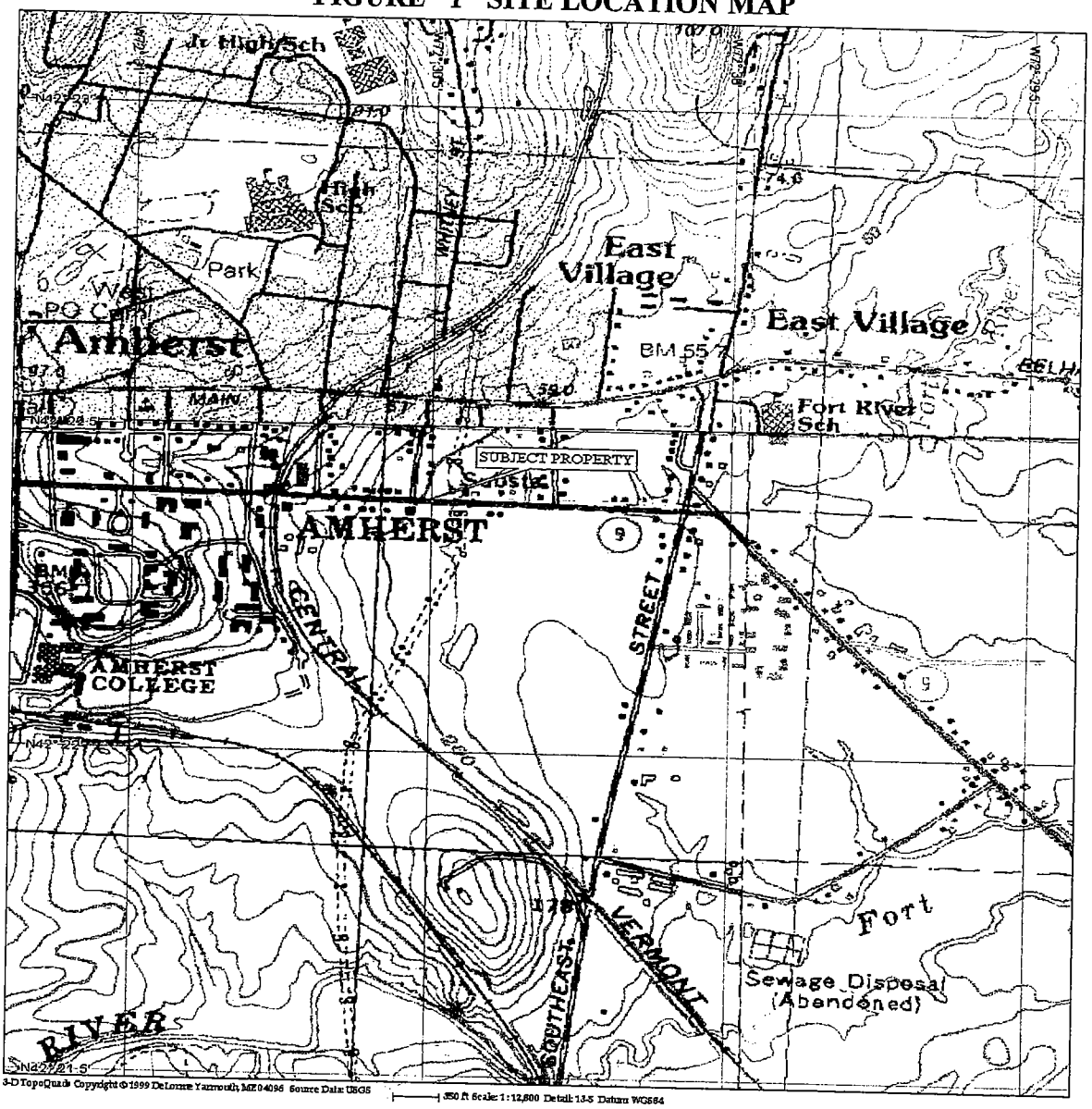
* Reportable Detection Limit BRL = Below Reporting Limit

FIGURE 1 SITE LOCATION MAP



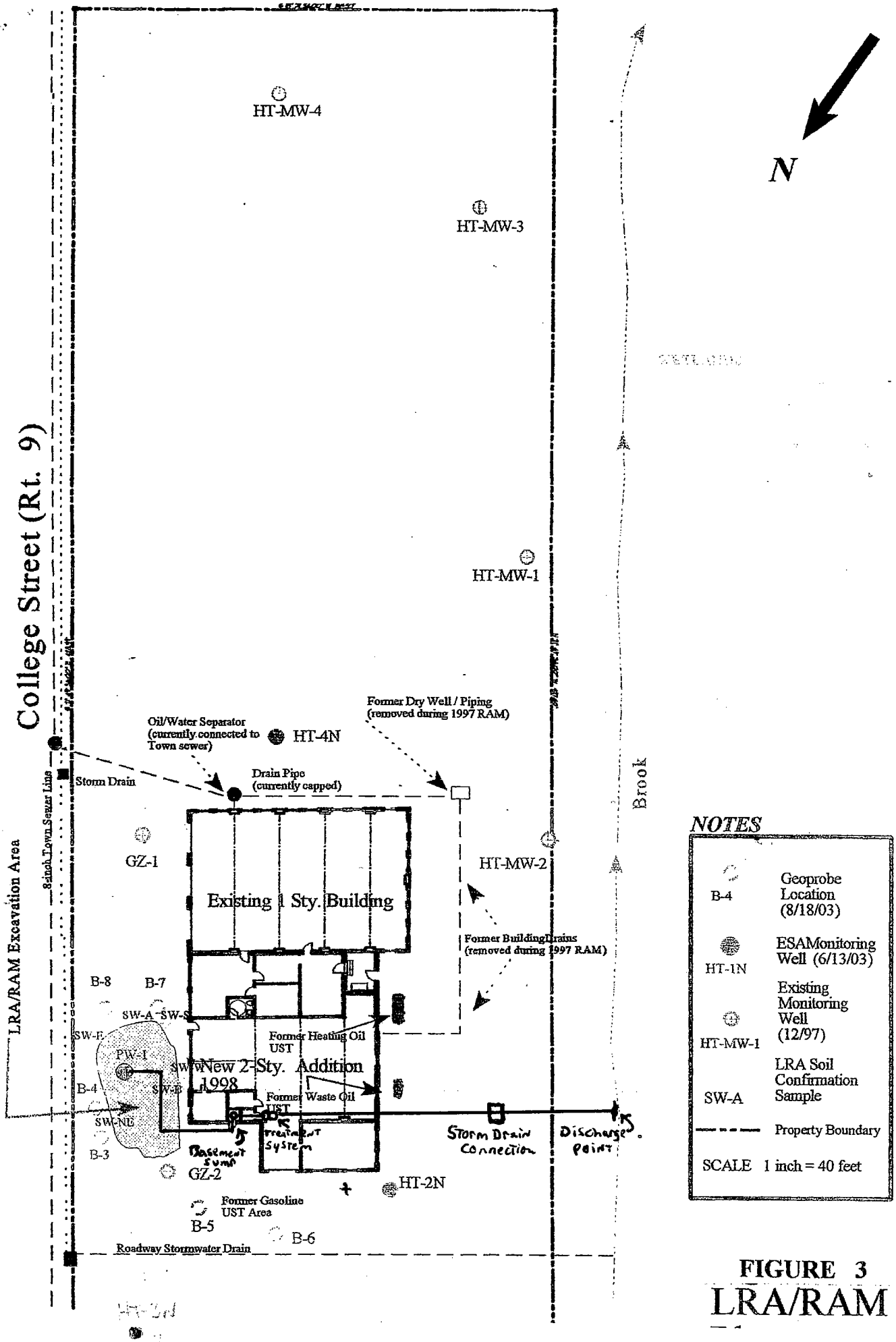
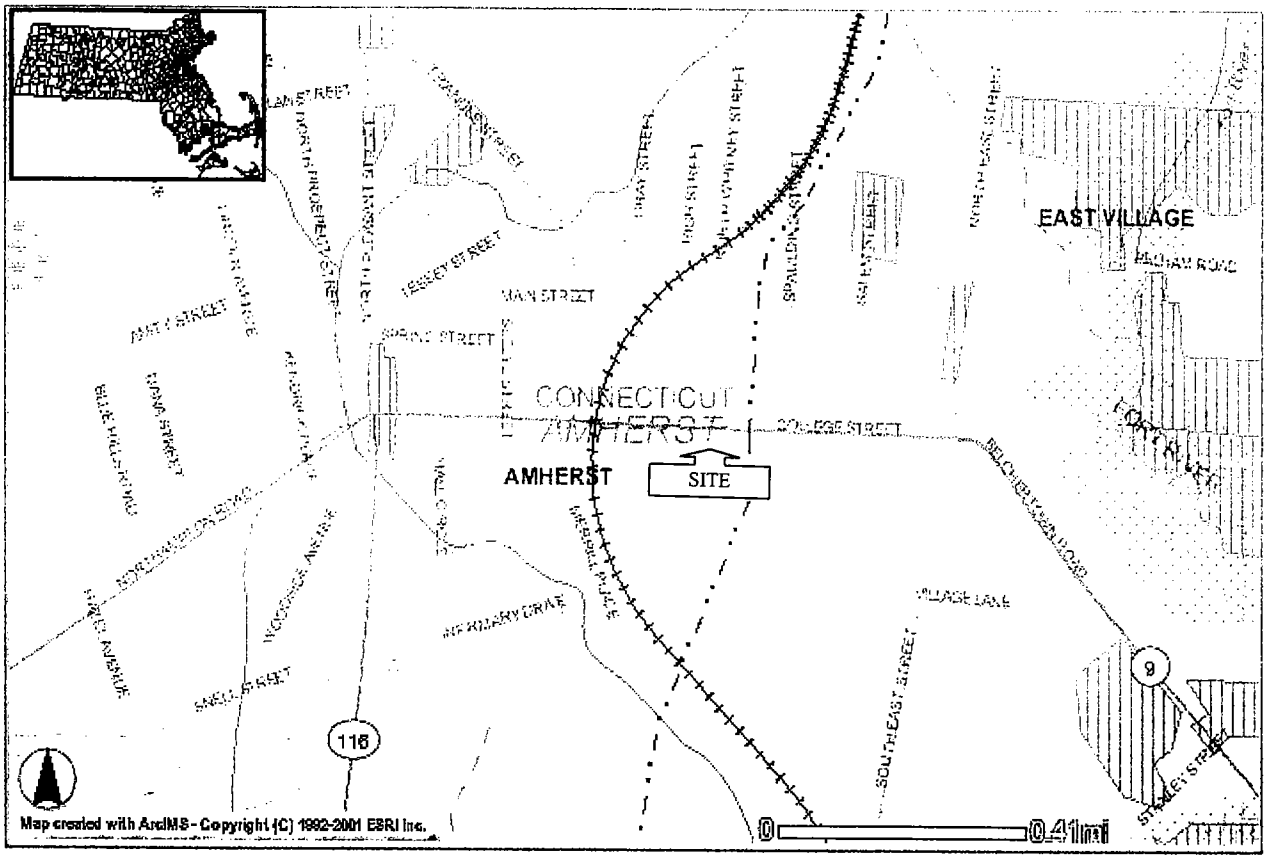


FIGURE 3

LRA/RAM

FIGURE 4 MAGIS MAP



DEP MCP 21e Map Legend

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

Public Water Supplies

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

Aquifers, By Yield

- HIGH YIELD
- MEDIUM YIELD

Non Potential Drinking Water Source Area

- HIGH YIELD
- MEDIUM YIELD

FEMA Floodplains

- 100 YEAR FLOODPLAIN

Hydrography

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

Rivers and Streams

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

MHD Roads

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

Tracks and Trails MHD

- TRACK
- TRAIL

Transmission Lines

- PIPELINE
- POWERLINE
- TRAIN