

MAG 9/10/85

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: 10 Brookline Place West		Facility/site address: 10 Brookline Place West	
Location of facility/site: longitude: 42332 _____ latitude: 71117 _____	Facility SIC code(s): 2362	Street: 10 Brookline Place West	
b) Name of facility/site owner: Ten Brookline Place LLC		Town: Brookline	
Email address of owner:	State: MA	Zip: 02351	County: Norfolk
Telephone no. of facility/site owner: (617) 277-0905			
Fax no. of facility/site owner: (617) 277-2299		Owner is (check one): 1. Federal _____ 2. State/Tribal _____	
Address of owner (if different from site):		3. Private <input checked="" type="checkbox"/> 4. other, if so, describe:	
Street: 197 First Avenue			
Town: Needham	State: MA	Zip: 02194	County: Norfolk
c) Legal name of operator: Gale Associates, Inc.	Operator telephone no: (781) 335-6465		
	Operator fax no.: (781) 335-6467	Operator email: JAL@GAINC.com	
Operator contact name and title: James Luker			

Address of operator (if different from owner):		Street: 163 Libbey Parkway	
Town: Weymouth	State: MA	Zip: 02189	County: Norfolk
d) Check "yes" or "no" for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes___ No <input checked="" type="checkbox"/> , if "yes," number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes___ No <input checked="" type="checkbox"/> , if "yes," date and tracking #: 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes___ No <input checked="" type="checkbox"/> 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No___			
e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <input checked="" type="checkbox"/> No___ If "yes," please list: 1. site identification # assigned by the state of NH or MA: 3-25017 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number: MADEP, BWSC, Northeast Regional Office, Wilmington MA 781		f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y___ N <input checked="" type="checkbox"/> , if Y, number: 2. phase I or II construction storm water general permit? Y___ N <input checked="" type="checkbox"/> , if Y, number: 3. individual NPDES permit? Y___ N <input checked="" type="checkbox"/> , if Y, number: 4. any other water quality related permit? Y___ N <input checked="" type="checkbox"/> , 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: The proposed recovery system will consist of a network of vacuum extraction points using the existing 2 and 4 inch monitoring wells. Treated groundwater will be discharged through storm water system DMH-P-1. The system will consist of two 26 foot treatment trailers that contain both hi vac total fluids extraction system and a chemical oxidation injection system.. Any diesel fuel entering the trailer is separated into a product holding tank for off-site disposal. Any vapors collected are burned using a catalytic converter.		
b) Provide the following information about each discharge:	1) Number of discharge points: 2	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>45</u> Average flow <u>30</u> Is maximum flow a design value ? Y <input checked="" type="checkbox"/> N___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>42332</u> lat. <u>71117</u> ; pt.2: long. <u>42332</u> lat. <u>71113</u> ; 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 <u>01/15/06</u> end <u>01/15/08</u>	
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 <input checked="" type="checkbox"/> 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	<input checked="" type="checkbox"/>									
2. Total Residual Chlorine	<input checked="" type="checkbox"/>									
3. Total Petroleum Hydrocarbons		<input checked="" type="checkbox"/>	1	grab	418.1	500	22000			
4. Cyanide										
5. Benzene		<input checked="" type="checkbox"/>	1	grab	624	10	61			
6. Toluene	<input checked="" type="checkbox"/>		1	grab	624	10	<10			
7. Ethylbenzene		<input checked="" type="checkbox"/>	1	grab	624	10	76			
8. (m,p,o) Xylenes		<input checked="" type="checkbox"/>	1	grab	624	10	250			
9. Total BTEX ⁴	<input checked="" type="checkbox"/>		1	grab	624	10	390			

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	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)		✓	1	grab	624	10	310			
12. tert-Butyl Alcohol (TBA)	✓									
13. tert-Amyl Methyl Ether (TAME)	✓									
14. Naphthalene		✓	1	grab	624	10	390			
15. Carbon Tetrachloride	✓									
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 Dichloroethylene	✓									
23. Dichloromethane (Methylene Chloride)	✓									
24. Tetrachloroethylene	✓									

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	grab	624	10	<10			
26. 1,1,2 Trichloroethane	✓		1	grab	624	10	<10			
27. Trichloroethylene	✓		1	grab	624	10	<10			
28. Vinyl Chloride	✓		1	grab	624	10	<10			
29. Acetone	✓		1	grab	624	10	<10			
30. 1,4 Dioxane	✓									
31. Total Phenols	✓		1	grab	625	110	<110			
32. Pentachlorophenol	✓		1	grab	625	110	<110			
33. Total Phthalates ⁵ (Phthalate esters)	✓		1	grab	625	110	<110			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	grab	625	110	<110			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	grab	625	110	<110			
a. Benzo(a) Anthracene	✓		1	grab	625	110	<110			
b. Benzo(a) Pyrene	✓		1	grab	625	110	<110			
c. Benzo(b)Fluoranthene	✓		1	grab	625	110	<110			
d. Benzo(k) Fluoranthene	✓		1	grab	625	110	<110			
e. Chrysene	✓		1	grab	625	110	<110			

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	✓		1	grab	253	110	011>			
g. Indeno(1,2,3-cd) Pyrene	✓		1	grab	625	110	<110			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	grab	625	110	<110			
h. Acenaphthene	✓		1	grab	625	110	<110			
i. Acenaphthylene	✓		1	grab	625	110	<110			
j. Anthracene	✓		1	grab	625	110	<110			
k. Benzo(ghi) Perylene	✓		1	grab	625	110	<110			
l. Fluoranthene	✓		1	grab	625	110	<110			
m. Fluorene	✓		1	grab	625	110	<110			
n. Naphthalene-	✓		1	grab	625	110	<110			
o. Phenanthrene	✓		1	grab	625	110	<110			
p. Pyrene	✓		1	grab	625	110	<110			
37. Total Polychlorinated Biphenyls (PCBs)	✓									
38. Antimony	✓									
39. Arsenic	✓		1	grab	6010b	0.01	<0.01			
40. Cadmium	✓		1	grab	6010b	0.005	<.005			
41. Chromium III	✓		1	grab	7196	0.01	<0.01			
42. Chromium VI	✓		1	grab	7196a	0.01	<0.01			

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		✓	1	grab	3010	0.005	0.028			
45. Mercury	✓		1	grab	3010	0.002	<.002			
46. Nickel	✓									
47. Selenium	✓		1	grab	3010	0.05	<.05			
48. Silver	✓		1	grab	3010	0.007	<.007			
49. Zinc	✓									
50. Iron		✓	1	grab	3500	1	900			
Other (describe):										

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

<p><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___ ✓</p>	<p>If yes, which metals?</p>
<p><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: _____</p>	<p>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:</p>

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: Hi-vac extraction trailer and a chemical oxidatgion trailer, - see schematic						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator <div style="text-align: center;">✓</div>	Equalization tanks	Bag filter <div style="text-align: center;">✓</div>	GAC filter <div style="text-align: center;">✓</div>
	Chlorination	Dechlorination	Other (please describe): Catalytic Oxidizer			
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 <u>30</u> Maximum flow rate of treatment system <u>45</u> Design flow rate of treatment system <u>45</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Hydrogen peroxide and Ferrous sulfate						

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct _____	Within facility__	Storm drain ✓	River/brook ✓	Wetlands _____	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: Treated water will be discharged into DMH P-1, a stormwater drain which discharges to the Muddy River.						

<p>c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:</p> <p>1. For multiple discharges, number the discharges sequentially.</p> <p>2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water</p> <p>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.</p>
<p>d) Provide the state water quality classification of the receiving water <u>B</u></p>
<p>e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs</p> <p>Please attach any calculation sheets used to support stream flow and dilution calculations.</p>
<p>f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes ___ No <input checked="" type="checkbox"/> If yes, for which pollutant(s)?</p> <p>Is there a TMDL? Yes ___ No <input checked="" type="checkbox"/> If yes, for which pollutant(s)?</p>

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.

<p>a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ___ No ___</p> <p>Has any consultation with the federal services been completed? No ___ or is consultation underway? Yes <input checked="" type="checkbox"/> No ___</p> <p>What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):</p> <p>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?</p>
<p>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 <input checked="" type="checkbox"/></p> <p>Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No <input checked="" type="checkbox"/></p>

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: 10 Brookline Place West, Brookline, MA

Operator signature:

James G. Tucker
Environmental Group Manager

Title:

Date:

4/13/06



Gale Associates, Inc.

163 Libbey Parkway | P.O. Box 890189 | Weymouth, MA 02189-0004
P 781.335.6465 F 781.335.6467 www.gainc.com

December 27, 2005

Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
North Drive
Westborough, MA 01581

Re: Request for Determination of Species
Brookline Place
Brookline, MA
Gale JN 756660

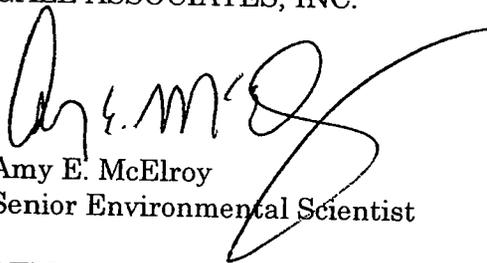
To Whom It May Concern:

Enclosed please find a check in the amount of \$50.00 and the MESA Information Request Form for a site-specific review of endangered species in the area of the referenced Property.

Thank you for your assistance in this matter. Please do not hesitate to call with questions or comments. Thank you.

Very truly yours,

GALE ASSOCIATES, INC.



Amy E. McElroy
Senior Environmental Scientist

AEM/gmc

Enclosure

G:\756660\NOI NPDES\fishandwildlife.doc

Boston
Baltimore
Orlando
San Francisco

MESA Information Request Form

Please complete this form to request site-specific information from the Natural Heritage & Endangered Species Program
(Please submit only one project per request form).

Please include a check for \$50.00 made out to the Natural Heritage & Endangered Species Fund.*

Requestor Information

Name: Amy McElroy

Affiliation: Gale Associates, Inc.

Address: 163 Libbey Parkway

City: Weymouth

State: MA

Zip Code: 02189

Daytime Phone: 781-335-6465

Ext. 223

Project Information

Project or Site Name: 10 Brookline Place

Location: 10 Brookline Pl., Brookline, MA USGS Quad: Boston South

Name of Landowner or Project Proponent:

Acreage of the Property:

2 Acres

Description of Proposed Project and Current Site Conditions: (If necessary attach additional sheet)

Groundwater remediation & NPDES

- Will this project be reviewed as a Notice of Intent by the local Conservation Commission? NO
- Will this project be undergoing MEPA review for reasons other than rare species? NO
- Have you enclosed the required copy of a USGS topographic map in the scale 1:24,000 or 1:25,000 (not copy reduced) with the site location clearly marked and centered on the copy page? (Copies of Natural Heritage Atlas pages are not accepted) YES

Please mail this completed form and topographic map to:

Regulatory Review
Natural Heritage and Endangered Species Program
MA Division of Fisheries and Wildlife
North Drive, Rte. 135
Westborough, MA 01581

Questions regarding this form should be directed to (508) 792-7270 ext. 154

Persons requesting information will receive a written response within 30 days of receipt of all information required. Please do not ask for an expedited review. *If you are requesting information for habitat management or conservation purposes and you are a non-profit conservation group, government agency or working with a government agency please fill out a Data Release Form.



Gale Associates, Inc.
 163 Libbey Parkway | P. O. Box 890189
 Weymouth MA 02189-0004
 P 781.335-6465 F 781.335.6467

Citizens Bank
 Boston, MA
 5-7017 / 2110

070826

CHECK DATE
 December 29, 2005

PAY Fifty and 00/100 Dollars

TO NATURAL HERITAGE & ENDANGERED
 SPECIES FUND
 MASS DIVISION OF FISHERIES & WILDLIFE
 NORTH DRIVE
 WESTBOROUGH MA 01581

AMOUNT \$50.00

Brad D. White

Security Check features included. Details on back.

⑈070826⑈ ⑆21070175⑆ 101090240⑈

^{MP}
 AUTHORIZED SIGNATURE



Gale Associates, Inc.
 163 Libbey Parkway | P. O. Box 890189
 Weymouth MA 02189-0004
 P 781.335-6465 F 781.335.6467

EMILY BUSINESS FORMS 800.392.6018 ADVANTAGE

070826

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
0512290	12/29/05	0056587	50.00			50.00
MASS FISHERIES & WILDLIFE						
001	1	Totals	50.00			50.00

007 01/23/04 FERROUS SULFATE - ALL GRADES

PRODUCT NAME: FERROUS SULFATE - ALL GRADES
 MSDS NUMBER: MZF1804
 EFFECTIVE DATE: 1/23/2004
 SUPERSEDES: 6/5/2003
 ISSUED BY: 008614

1. PRODUCT IDENTIFICATION

SYNONYMS: FERROUS SULPHATE; IRON SULFATE; SULFURIC ACID, IRON (2+)
 SALT (1:1),
 CAS NO: 7720-78-7 Anhydrous
 17375-41-6 Monohydrate
 7782-63-0 Heptahydrate

MOLECULAR WEIGHT: NOT APPLICABLE TO MIXTURES.
 CHEMICAL FORMULA: FESO4 . XH2O

Distributed by:
 Univar USA Inc.
 6100 Carillon Point
 Kirkland, WA 98033
 425-889-3400

=====

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO	PERCENT	HAZARDOUS
FERROUS SULFATE (Anhydrous)	7720-78-7	100%	YES
FERROUS SULFATE (Monohydrate)	17375-41-6	100%	YES
FERROUS SULFATE (Heptahydrate)	7782-63-0	100%	YES

=====

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE LIVER.

POTENTIAL HEALTH EFFECTS

INHALATION:

CAUSES IRRITATION TO THE RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE COUGHING, SHORTNESS OF BREATH.

INGESTION:

LOW TOXICITY IN SMALL QUANTITIES BUT LARGER DOSAGES MAY CAUSE NAUSEA, VOMITING, DIARRHEA, AND BLACK STOOL. PINK URINE DISCOLORATION IS A STRONG INDICATOR OF IRON POISONING. LIVER DAMAGE, COMA, AND DEATH FROM IRON POISONING HAS BEEN RECORDED. SMALLER DOSES ARE MUCH MORE TOXIC TO CHILDREN.

SKIN CONTACT:

CAUSES IRRITATION TO SKIN. SYMPTOMS INCLUDE REDNESS, ITCHING, AND PAIN.

EYE CONTACT:

CAUSES IRRITATION, REDNESS, AND PAIN.

GROUNDWATER ANALYTICAL

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

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

December 20, 2005

Mr. Christopher Morris
Gale Associates, Inc.
163 Libbey Parkway
Weymouth, MA 02189

LABORATORY REPORT

Project: **Brookline/756660**
Lab ID: **90070**
Received: **12-13-05**

Dear Christopher:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

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

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

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

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

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/smd
Enclosures

GROUNDWATER ANALYTICAL

EPA Method 624 Volatile Organics by GC/MS

Field ID: RW-1
Project: Brookline/756660
Client: Gale Associates, Inc.
Laboratory ID: 90070-01
Sampled: 12-09-05 09:00
Received: 12-13-05 19:50
Analyzed: 12-16-05 08:35
Analyst: LMG

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM1-1732-WL
Instrument ID: MS-1 HP 5890
Sample Volume: 5 mL
Dilution Factor: 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	20
74-87-3	Chloromethane	BRL		ug/L	20
75-01-4	Vinyl Chloride	BRL		ug/L	20
74-83-9	Bromomethane	BRL		ug/L	20
75-00-3	Chloroethane	BRL		ug/L	20
75-69-4	Trichlorofluoromethane	BRL		ug/L	20
107-02-8	Acrolein †	BRL		ug/L	20
75-35-4	1,1-Dichloroethene	BRL		ug/L	10
67-64-1	Acetone	BRL		ug/L	100
75-15-0	Carbon Disulfide	BRL		ug/L	100
75-09-2	Methylene Chloride	BRL		ug/L	100
107-13-1	Acrylonitrile †	BRL		ug/L	20
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L	10
1634-04-4	Methyl tert-butyl Ether (MTBE)	310		ug/L	10
75-34-3	1,1-Dichloroethane	BRL		ug/L	10
108-05-4	Vinyl Acetate	BRL		ug/L	10
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L	10
78-93-3	2-Butanone (MEK)	BRL		ug/L	100
67-66-3	Chloroform	BRL		ug/L	10
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	10
56-23-5	Carbon Tetrachloride	BRL		ug/L	10
71-43-2	Benzene	61		ug/L	10
107-06-2	1,2-Dichloroethane	BRL		ug/L	10
79-01-6	Trichloroethene	BRL		ug/L	10
78-87-5	1,2-Dichloropropane	BRL		ug/L	10
75-27-4	Bromodichloromethane	BRL		ug/L	10
110-75-8	2-Chloroethyl Vinyl Ether	BRL		ug/L	10
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	10
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	100
108-88-3	Toluene	BRL		ug/L	10
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	10
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	10
127-18-4	Tetrachloroethene	BRL		ug/L	10
591-78-6	2-Hexanone	BRL		ug/L	100
124-48-1	Dibromochloromethane	BRL		ug/L	10
108-90-7	Chlorobenzene	BRL		ug/L	10
100-41-4	Ethylbenzene	76		ug/L	10
108-38-3/106-42-3	meta-Xylene and para-Xylene	130		ug/L	10
95-47-6	ortho-Xylene	120		ug/L	10
100-42-5	Styrene	BRL		ug/L	10
75-25-2	Bromoform	BRL		ug/L	10
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	50	56	112 %	70 - 130 %
1,2-Dichloroethane-d ₄	50	54	102 %	70 - 130 %
Toluene-d ₈	50	62	118 %	70 - 130 %
4-Bromofluorobenzene	50	63	126 %	70 - 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 C.F.R. 136, Appendix A (1986)
Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution

Groundwater Analytical, Inc., 200, 228 Main Street, Buzzards Bay, MA 02532

GROUNDWATER ANALYTICAL

EPA Method 625 Semivolatile Organics by GC/MS

Field ID: RW-1
 Project: Brookline/756660
 Client: Gale Associates, Inc.
 Laboratory ID: 90070-02
 Sampled: 12-09-05 09:00
 Received: 12-13-05 19:50
 Extracted: 12-14-05 21:00
 Analyzed: 12-20-05 12:50
 Analyst: CMM

Matrix: Aqueous
 Container: 1 L Amber Glass
 Preservation: Cool
 QC Batch ID: SV-1798-F
 Instrument ID: MS-3 HP 5890
 Sample Volume: 900 mL
 Final Volume: 1 mL
 Dilution Factor: 10

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine		BRL	ug/L	110
110-86-1	Pyridine		BRL	ug/L	110
108-95-2	Phenol		BRL	ug/L	110
111-44-4	Bis(2-chloroethyl) ether		BRL	ug/L	110
95-57-8	2-Chlorophenol		BRL	ug/L	110
62-53-3	Aniline		BRL	ug/L	110
124-18-5	n-Decane (C10)	170		ug/L	110
541-73-1	1,3-Dichlorobenzene		BRL	ug/L	110
106-46-7	1,4-Dichlorobenzene		BRL	ug/L	110
95-50-1	1,2-Dichlorobenzene		BRL	ug/L	110
108-60-1	Bis(2-chloroisopropyl) ether		BRL	ug/L	110
95-48-7	2-Methylphenol		BRL	ug/L	110
621-64-7	N-Nitrosodi-n-propylamine		BRL	ug/L	110
108-39-4/106-44-5	3 and 4-Methylphenol		BRL	ug/L	110
67-72-1	Hexachloroethane		BRL	ug/L	110
98-86-2	Acetophenone		BRL	ug/L	110
98-95-3	Nitrobenzene		BRL	ug/L	110
78-59-1	Isophorone		BRL	ug/L	110
88-75-5	2-Nitrophenol		BRL	ug/L	110
105-67-9	2,4-Dimethylphenol		BRL	ug/L	110
65-85-0	Benzoic Acid		BRL	ug/L	110
111-91-1	Bis(2-chloroethoxy) methane		BRL	ug/L	110
120-83-2	2,4-Dichlorophenol		BRL	ug/L	110
120-82-1	1,2,4-Trichlorobenzene		BRL	ug/L	110
98-55-5	alpha-Terpineol		BRL	ug/L	110
91-20-3	Naphthalene	390		ug/L	110
87-68-3	Hexachlorobutadiene		BRL	ug/L	110
59-50-7	4-Chloro-3-methylphenol		BRL	ug/L	110
77-47-4	Hexachlorocyclopentadiene		BRL	ug/L	110
608-27-5	2,3-Dichloroaniline		BRL	ug/L	110
88-06-2	2,4,6-Trichlorophenol		BRL	ug/L	110
91-58-7	2-Chloronaphthalene		BRL	ug/L	110
131-11-3	Dimethyl phthalate		BRL	ug/L	110
208-96-8	Acenaphthylene		BRL	ug/L	110
606-20-2	2,6-Dinitrotoluene		BRL	ug/L	110
83-32-9	Acenaphthene		BRL	ug/L	110
51-28-5	2,4-Dinitrophenol		BRL	ug/L	110
100-02-7	4-Nitrophenol		BRL	ug/L	110
121-14-2	2,4-Dinitrotoluene		BRL	ug/L	110
84-66-2	Diethyl phthalate		BRL	ug/L	110
7005-72-3	4-Chlorophenyl phenyl ether		BRL	ug/L	110
86-73-7	Fluorene		BRL	ug/L	110
534-52-1	4,6-Dinitro-2-methylphenol		BRL	ug/L	110
86-30-6	N-Nitrosodiphenylamine [†]		BRL	ug/L	110
122-66-7	1,2-Diphenylhydrazine [‡]		BRL	ug/L	110

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

Field ID: **RW-1**
 Project: **Brookline/756660**
 Client: **Gale Associates, Inc.**
 Laboratory ID: **90070-02**
 Sampled: **12-09-05 09:00**
 Received: **12-13-05 19:50**
 Extracted: **12-14-05 21:00**
 Analyzed: **12-20-05 12:50**
 Analyst: **CMM**

Matrix: **Aqueous**
 Container: **1 L Amber Glass**
 Preservation: **Cool**
 QC Batch ID: **SV-1798-F**
 Instrument ID: **MS-3 HP 5890**
 Sample Volume: **900 mL**
 Final Volume: **1 mL**
 Dilution Factor: **10**

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	110
118-74-1	Hexachlorobenzene	BRL		ug/L	110
87-86-5	Pentachlorophenol	BRL		ug/L	110
593-45-3	n-Octadecane (C18)	450		ug/L	110
85-01-8	Phenanthrene	89		ug/L	110
120-12-7	Anthracene	BRL		ug/L	110
86-74-8	Carbazole	BRL		ug/L	110
84-74-2	Di-n-butyl phthalate	BRL		ug/L	110
206-44-0	Fluoranthene	BRL		ug/L	110
92-87-5	Benzidine	BRL		ug/L	110
129-00-0	Pyrene	BRL		ug/L	110
85-68-7	Butyl benzyl phthalate	BRL		ug/L	110
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	110
56-55-3	Benzo[a]anthracene	BRL		ug/L	110
218-01-9	Chrysene	BRL		ug/L	110
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	110
117-84-0	Di-n-octyl phthalate	BRL		ug/L	110
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	110
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	110
50-32-8	Benzo[a]pyrene	BRL		ug/L	110
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	110
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	110
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	110

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	220	140	65 %	15 - 110 %
Phenol-d5	220	120	54 %	15 - 110 %
Nitrobenzene-d5	110	120	108 %	30 - 130 %
2-Fluorobiphenyl	110	100	93 %	30 - 130 %
2,4,6-Tribromophenol	220	270	120 % m	15 - 110 %
Terphenyl-d14	110	110	100 %	30 - 130 %

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

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 † Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.
 ◊ Analyzed as Azobenzene.
 m Surrogate recovery outside recommended limits due to sample matrix interference.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **RW-1**
 Project: **Brookline/756660**
 Client: **Gale Associates, Inc.**
 Laboratory ID: **90070-03**
 Sampled: **12-09-05 09:00**
 Received: **12-13-05 19:50**

Matrix: **Aqueous**
 Container: **250 mL Plastic**
 Preservation: **HNO3 / Cool**
 Preserved: **12-13-05 19:50**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B ¹	MB-1845-W	EPA 3010A	12-15-05 08:00	50 mL	ICP-1 PE 3000	MWR
EPA 7470A ²	MP-1775-W	EPA 7470A	12-15-05 11:30	25 mL	CVAA-1 PE TMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	0.01		mg/L	0.01	1	12-16-05 12:23	EPA 6010B ¹
7440-39-3	Barium, Total	BRL		mg/L	0.2	1	12-16-05 12:23	EPA 6010B ¹
7440-43-9	Cadmium, Total	BRL		mg/L	0.005	1	12-19-05 13:04	EPA 6010B ¹
7440-47-3	Chromium, Total	BRL		mg/L	0.01	1	12-16-05 12:23	EPA 6010B ¹
7439-92-1	Lead, Total	0.028		mg/L	0.005	1	12-19-05 13:04	EPA 6010B ¹
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	12-15-05 15:36	EPA 7470A ²
7782-49-2	Selenium, Total	BRL		mg/L	0.05	1	12-16-05 12:23	EPA 6010B ¹
7440-22-4	Silver, Total	BRL		mg/L	0.007	1	12-16-05 12:23	EPA 6010B ¹

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

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

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: RW-1
 Project: Brookline/756660
 Client: Gale Associates, Inc.

Matrix: Aqueous
 Container: 250 mL Plastic
 Preservation: HNO3 / Cool
 Preserved: 12-13-05 19:50

Laboratory ID: 90070-04
 Sampled: 12-13-05 09:25
 Received: 12-13-05 19:50

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B ¹	MB-1845-W	EPA 3010A	12-15-05 08:00	50 mL	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-47-3	Chromium, Total	BRL		mg/L	0.01	1	12-16-05 12:26	EPA 6010B ¹
N/A	Chromium, Trivalent	BRL		mg/L	0.01	1	12-16-05 12:26	EPA 6010B ¹

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

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

GROUNDWATER ANALYTICAL

Inorganic Chemistry

Field ID: **RW-1**
 Project: **Brookline/756660**
 Client: **Gale Associates, Inc.**

Matrix: **Aqueous**
 Received: **12-13-05 19:50**

Lab ID: **90070-05** Sampled: **12-09-05 09:00** Container: **1 L Amber Glass** Preservation: **H2SO4/Cool**

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Total Petroleum Hydrocarbons	22	mg/L	0.5	1	1000 mL	12-16-05 10:30	HI-1345-W	SM 5520 CF	3	MW

Lab ID: **90070-06** Sampled: **12-13-05 09:25** 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	12-14-05 17:44	HC-0238-W	EPA 7196A	1	JK
Iron, Ferrous	9	mg/L	1	5	5 mL	12-14-05 15:00	FI-0153-W	SM 3500-Fe B	2	JK

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

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

RL Reporting Limit.

DF Dilution Factor.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: PE 1625 FT-IR

Project Narrative

Project: **Brookline/756660**
Client: **Gale Associates, Inc.**

Lab ID: **90070**
Received: **12-13-05 19:50**

A. Documentation and Client Communication

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

1. Sample 90070-04 was analyzed for Trivalent Chromium, per Chris Morris, 12-14-05.
2. Sample 90070-06 was analyzed for Hexavalent Chromium and Ferrous Iron, per Chris Morris, 12-14-05.

B. Method Modifications, Non-Conformances and Observations

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

1. EPA 624 Note: Sample 90070-01. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
2. EPA 625 Note: Sample 90070-02. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
3. EPA 625 Non-conformance: Sample 90070-02. Sample had a surrogate recovery outside recommended limits due to sample matrix interference.
4. Sample 90070-05 for TPH by IR analysis was received without preservation. The sample was preserved with H₂SO₄ by the laboratory upon receipt.
5. Sample 90070-03 for Total Metals analysis was received without preservation. The samples were preserved with HNO₃ by the laboratory upon receipt.
6. EPA 625 Non-conformance: Method Blank had a surrogate recovery above recommended limits for QC Batch SV-1798-F.

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

Telephone: (508) 759-4441
FAX: (508) 759-4475

GROUNDWATER ANALYTICAL

Fax

To: Christopher Morris	From: Client Services
Gale Associates, Inc.	Pages: 23
Fax: 17813356467	Date: 12/21/2005 12:44:07 PM
Re: 90070	CC:

NOTE

The format or contents of this fax transmission may not meet all applicable National Environmental Laboratory Accreditation Conference (NELAC) Standards for data reporting.

- **Comments:** Project Number: 90070

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GROUNDWATER ANALYTICAL

Groundwater Analytical, inc
P.O. Box 1306
228 Main Street
Buzzards Bay MA 02532

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

December 20, 2005

Mr. Christopher Morris
Gale Associates, Inc.
163 Libbey Parkway
Weymouth, MA 02189

LABORATORY REPORT

Project: **Brookline/756660**
Lab ID: **90070**
Received: **12-13-05**

Dear Christopher:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

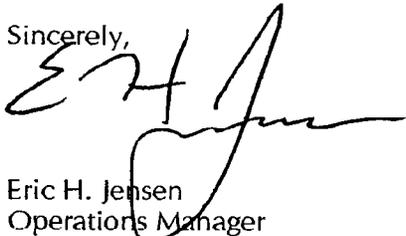
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of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

The analytical results contained in this report meet all applicable NEI AC 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

FHJ/smd
Enclosures

Sample Receipt Report

Project: Brookline/756660
Client: Gale Associates, Inc.
Lab ID: 90070

Delivery: GWA Courier
Airbill: n/a
Lab Receipt: 12-13-05

Temperature: 2°C
Chain of Custody: Present
Custody Seal(s): n/a

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90070-1	RW-1	Aqueous	12/9/05 9:00	EPA 624 Volatile Organics				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C620266	40 mL VOA Vial	Proline	BX16524	HCl	R-4297A	05-31-05	n/a	
C620260	40 mL VOA Vial	Proline	BX16524	HCl	R-4297A	05-31-05	n/a	
C620259	40 mL VOA Vial	Proline	BX16524	HCl	R-4297A	05-31-05	n/a	
C620258	40 mL VOA Vial	Proline	BX16524	HCl	R-4297A	05-31-05	n/a	
C620254	40 mL VOA Vial	Proline	BX16524	HCl	R-4297A	05-31-05	n/a	
C620253	40 mL VOA Vial	Proline	BX16524	HCl	R-4297A	05-31-05	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90070-2	RW-1	Aqueous	12/9/05 9:00	EPA 625 Semivolatile Organics				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C748341	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90070-3	RW-1	Aqueous	12/9/05 9:00	EPA 6010B/7470A 8 RCRA Metals				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C694758	250 mL Plastic	Greenwood	BX18981	HNO3	n/a	n/a	11-01-05	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90070-4	RW-1	Aqueous	12/13/05 9:25	EPA 6010B Cr Total EPA 7196/EPA 6010B Trivalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C768369	250 mL Plastic	Proline	BX19112	HNO3	R-4550E	12-07-05	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90070-5	RW-1	Aqueous	12/9/05 9:00	SM 5520 CF Total Petroleum Hydrocarbons by IR				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C748342	1 L Amber Glass	n/a	n/a	H2SO4	n/a	n/a	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
90070-6	RW-1	Aqueous	12/13/05 9:25	SM 3500-Fe D Ferrous Iron EPA 7196A Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C748343	250 mL Plastic	n/a	n/a	None	n/a	n/a	n/a	

EPA Method 624 Volatile Organics by GC/MS

Field ID: RW-1
 Project: Brookline/756660
 Client: Gale Associates, Inc.
 Laboratory ID: 90070-01
 Sampled: 12-09-05 09:00
 Received: 12-13-05 19:50
 Analyzed: 12-16-05 08:35
 Analyst: LMG

Matrix: Aqueous
 Container: 40 mL VOA Vial
 Preservation: HCl/Cool
 QC Batch ID: VM1-1732-WL
 Instrument ID: MS-1 HP 5890
 Sample Volume: 5 mL
 Dilution Factor: 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	20
74-87-3	Chloromethane	BRL		ug/L	20
75-01-4	Vinyl Chloride	BRL		ug/L	20
74-83-9	Bromomethane	BRL		ug/L	20
75-00-3	Chloroethane	BRL		ug/L	20
75-69-4	Trichlorofluoromethane	BRL		ug/L	20
107-02-8	Acrolein †	BRL		ug/l	20
75-35-4	1,1-Dichloroethene	BRL		ug/L	10
67-64-1	Acetone	BRL		ug/L	100
75-15-0	Carbon Disulfide	BRI		ug/l	100
75-09-2	Methylene Chloride	BRL		ug/l	100
107-13-1	Acrylonitrile †	BRI		ug/l	20
156-60-5	trans-1,2-Dichloroethene	BRI		ug/l	10
1634-04-4	Methyl tert-butyl Ether (MTBE)	310		ug/l	10
75-34-3	1,1-Dichloroethane	BRI		ug/L	10
108-05-4	Vinyl Acetate	BRI		ug/L	10
156-59-2	cis-1,2-Dichloroethene	BRI		ug/l	10
78-93-3	2-Butanone (MEK)	BRL		ug/L	100
67-66-3	Chloroform	BRI		ug/L	10
71-55-6	1,1,1-Trichloroethane	BRI		ug/L	10
56-23-5	Carbon Tetrachloride	BRL		ug/L	10
71-43-2	Benzene	61		ug/L	10
107-06-2	1,2-Dichloroethane	BRL		ug/L	10
79-01-6	Trichloroethene	BRL		ug/L	10
78-87-5	1,2-Dichloropropane	BRL		ug/L	10
75-27-4	Bromodichloromethane	BRL		ug/L	10
110-75-8	2-Chloroethyl Vinyl Ether	BRL		ug/L	10
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	10
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	100
108-88-3	Toluene	BRL		ug/L	10
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	10
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	10
127-18-4	Tetrachloroethene	BRL		ug/L	10
591-78-6	2-Hexanone	BRL		ug/L	100
124-48-1	Dibromochloromethane	BRL		ug/L	10
108-90-7	Chlorobenzene	BRL		ug/L	10
100-41-4	Ethylbenzene	76		ug/L	10
108-38-3/106-42-3	meta-Xylene and para-Xylene	130		ug/L	10
95-47-6	ortho-Xylene	120		ug/L	10
100-42-5	Styrene	BRL		ug/L	10
75-25-2	Bromoform	BRL		ug/L	10
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	10
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	10
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	10
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	10

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	50	56	112 %	70 130 %
1,2-Dichloroethane-d ₄	50	51	102 %	70 130 %
Toluene-d ₈	50	62	118 %	70 130 %
1 Bromofluorobenzene	50	63	126 %	70 130 %

Method Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 C.F.R. 136, Appendix A (1986).
 Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**EPA Method 625
Semivolatile Organics by GC/MS**

Field ID: RW-1
Project: Brookline/756660
Client: Gale Associates, Inc.

Laboratory ID: 90070-02
Sampled: 12-09-05 09:00
Received: 12-13-05 19:50
Extracted: 12-14-05 21:00
Analyzed: 12-20-05 12:50
Analyst: CMM

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

QC Batch ID: SV-1798-F
Instrument ID: MS-3 HP 5890
Sample Volume: 900 mL
Final Volume: 1 mL
Dilution Factor: 10

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	110
110-86-1	Pyridine	BRL		ug/L	110
108-95-2	Phenol	BRL		ug/L	110
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	110
95-57-8	2-Chlorophenol	BRL		ug/L	110
62-53-3	Aniline	BRL		ug/L	110
124-18-5	n-Decane (C10)	170		ug/L	110
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	110
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	110
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	110
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	110
95-48-7	2-Methylphenol	BRL		ug/L	110
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	110
108-39-4/106-44-5	3 and 4-Methylphenol	BRL		ug/L	110
67-72-1	Hexachloroethane	BRL		ug/L	110
98-86-2	Acetophenone	BRL		ug/L	110
98-95-3	Nitrobenzene	BRL		ug/L	110
78-59-1	Isophorone	BRL		ug/L	110
88-75-5	2-Nitrophenol	BRL		ug/L	110
105-67-9	2,4-Dimethylphenol	BRL		ug/L	110
65-85-0	Benzoic Acid	BRL		ug/L	110
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	110
120-83-2	2,4-Dichlorophenol	BRL		ug/L	110
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	110
98-55-5	alpha-Terpineol	BRL		ug/L	110
91-20-3	Naphthalene	390		ug/L	110
87-68-3	Hexachlorobutadiene	BRL		ug/L	110
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	110
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	110
608-27-5	2,3-Dichloroaniline	BRL		ug/L	110
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	110
91-59-7	2-Chloronaphthalene	BRL		ug/L	110
131-11-3	Dimethyl phthalate	BRL		ug/L	110
208-96-8	Acenaphthylene	BRL		ug/L	110
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	110
83-32-9	Acenaphthene	BRL		ug/L	110
51-28-5	2,4-Dinitrophenol	BRL		ug/L	110
100-02-7	4-Nitrophenol	BRL		ug/L	110
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	110
84-66-2	Dichyl phthalate	BRL		ug/L	110
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	110
86-73-7	Fluorene	BRL		ug/L	110
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	110
86-30-6	N-Nitrosodiphenylamine [†]	BRL		ug/L	110
122-66-7	1,2-Diphenylhydrazine ^o	BRL		ug/L	110

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

Field ID: RW-1
 Project: Brookline/756660
 Client: Gale Associates, Inc.
 Laboratory ID: 90070-02
 Sampled: 12-09-05 09:00
 Received: 12-13-05 19:50
 Extracted: 12-14-05 21:00
 Analyzed: 12-20-05 12:50
 Analyst: CMM

Matrix: Aqueous
 Container: 1 L Amber Glass
 Preservation: Cool
 QC Batch ID: SV-1798-F
 Instrument ID: MS-3 HP 3890
 Sample Volume: 900 mL
 Final Volume: 1 mL
 Dilution Factor: 10

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	110
118-74-1	1,1-dichlorobenzene	BRL		ug/L	110
87-86-5	Pentachlorophenol	BRL		ug/L	110
593-45-3	n-Octadecane (C18)	450		ug/L	110
85-01-8	Phenanthrene	89	i	ug/L	110
120-12-7	Anthracene	BRL		ug/L	110
86-74-8	Carbazole	BRL		ug/L	110
84-74-2	Di-n-butyl phthalate	BRL		ug/L	110
206-44-0	Fluoranthene	BRL		ug/L	110
92-87-5	Benzidine	BRL		ug/L	110
129-00-0	Pyrene	BRL		ug/L	110
85-68-7	Butyl benzyl phthalate	BRL		ug/L	110
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	110
56-55-3	Benzo[a]anthracene	BRL		ug/L	110
218-01-9	Chrysene	BRL		ug/L	110
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	110
117-84-0	Di-n-octyl phthalate	BRL		ug/L	110
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	110
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	110
50-32-8	Benzo[a]pyrene	BRL		ug/L	110
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	110
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	110
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	110

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	220	140	65 %	15 - 110 %
Phenol-d5	220	120	54 %	15 - 110 %
Nitrobenzene-d5	110	120	108 %	30 - 130 %
2-Fluorobiphenyl	110	100	93 %	30 - 130 %
2,4,6-Tribromophenol	220	270	120 % m	15 - 110 %
Terphenyl-d14	110	110	100 %	30 - 130 %

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

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 † Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.
 ∅ Analyzed as Azobenzene.
 m Surrogate recovery outside recommended limits due to sample matrix interference.

Trace Metals

Field ID: RW-1
 Project: Brookline/756660
 Client: Gale Associates, Inc.
 Laboratory ID: 90070-03
 Sampled: 12-09-05 09:00
 Received: 12-13-05 19:50

Matrix: Aqueous
 Container: 250 mL Plastic
 Preservation: HNO₃ / Cool
 Preserved: 12-13-05 19:50

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B ¹	MB-1845-W	EPA 3010A	12-15-05 08:00	50 mL	ICP 1 PE 3000	MWR
EPA 7470A ²	MP-1775-W	EPA 7470A	12-15-05 11:30	25 mL	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	0.01		mg/L	0.01	1	12-16-05 12:23	EPA 6010B ¹
7440-39-3	Barium, Total	BRL		mg/L	0.2	1	12-16-05 12:23	EPA 6010B ¹
7440-43-9	Cadmium, Total	BRL		mg/L	0.005	1	12-19-05 13:04	EPA 6010B ¹
7440-47-3	Chromium, Total	BRL		mg/L	0.01	1	12-16-05 12:23	EPA 6010B ¹
7439-92-1	Lead, Total	0.028		mg/L	0.005	1	12-19-05 13:04	EPA 6010B ¹
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	12-15-05 15:36	EPA 7470A ²
7782-49-2	Selenium, Total	BRL		mg/L	0.05	1	12-16-05 12:23	EPA 6010B ¹
7440-277-4	Silver, Total	BRL		mg/l	0.007	1	12-16-05 12:23	EPA 6010B ¹

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

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

Trace Metals

Field ID: RW-1
 Project: Brookline/756660
 Client: Gale Associates, Inc.
 Laboratory ID: 90070-04
 Sampled: 12-13-05 09:25
 Received: 12-13-05 19:50

Matrix: Aqueous
 Container: 250 mL Plastic
 Preservation: HNO₃ / Cool
 Preserved: 12-13-05 19:50

<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 ¹	MB-1845-W	EPA 3010A	12-15-05 08:00	50 mL	ICP 1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-47-3	Chromium, Total		BRL	mg/L	0.01	1	12-16-05 12:26	EPA 6010B ¹
N/A	Chromium, Trivalent		BRL	mg/L	0.01	1	12-16-05 12:26	EPA 6010B ¹

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

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

Inorganic Chemistry

Field ID: RW-1
Project: Brookline/756660
Client: Gale Associates, Inc.

Matrix: Aqueous
Received: 12-13-05 19:50

Lab ID: 90070-05 Sampled: 12-09-05 09:00 Container: 1 L Amber Glass Preservation: H2SO4/Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Total Petroleum Hydrocarbons	22	mg/L	0.5	1	1000 mL	12-16-05 10:30	HI-1345-W	SM 5520 CF	3	MW

Lab ID: 90070-06 Sampled: 12-13-05 09:25 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	12-14-05 17:44	HC-0238-W	EPA 7196A	1	JK
Iron, Ferrous	9	mg/L	1	5	5 mL	12-14-05 15:00	FI-0153-W	SM 3500-Fe B	2	JK

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

Report Notations:

- BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
- RL Reporting Limit.
- DF Dilution Factor.
- 1 Instrument ID: Lachat 8000 Autoanalyzer
- 2 Instrument ID: Milton Roy Spectronic 401
- 3 Instrument ID: PF 1625 FT-IR

Project Narrative

Project: **Brookline/756660**
Client: **Gale Associates, Inc.**

Lab ID: **90070**
Received: **12-13-05 19:50**

A. Documentation and Client Communication

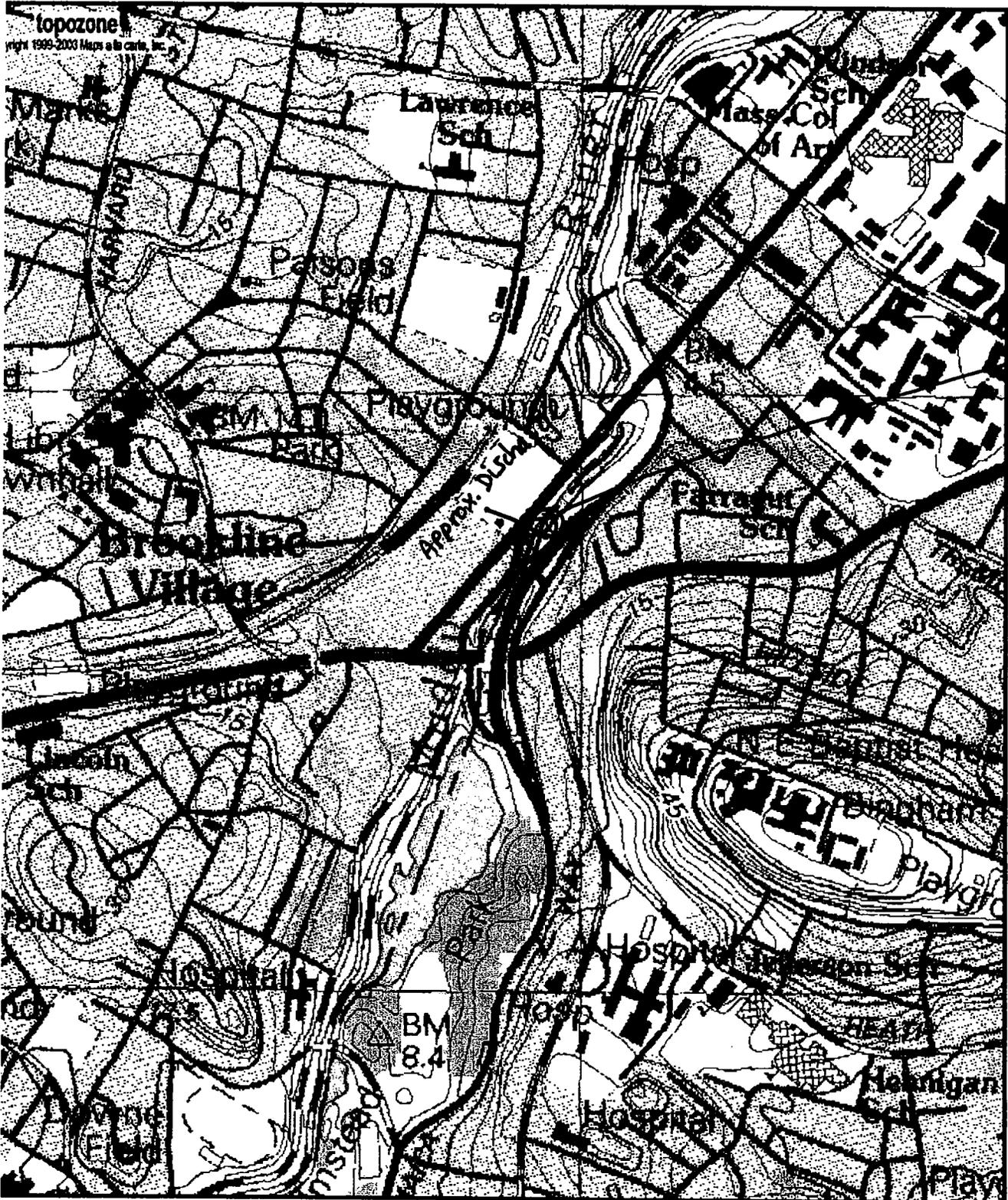
The following documentation discrepancies, and client changes or amendments were noted for this project:

1. Sample 90070-04 was analyzed for Trivalent Chromium, per Chris Morris, 12-14-05.
2. Sample 90070-06 was analyzed for Hexavalent Chromium and Ferrous Iron, per Chris Morris, 12-14-05.

B. Method Modifications, Non-Conformances and Observations

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

1. EPA 624 Note: Sample 90070-01. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
2. EPA 625 Note: Sample 90070-02. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
3. EPA 625 Non-conformance: Sample 90070-02. Sample had a surrogate recovery outside recommended limits due to sample matrix interference.
4. Sample 90070-05 for TP11 by IR analysis was received without preservation. The sample was preserved with H2SO4 by the laboratory upon receipt.
5. Sample 90070-03 for Total Metals analysis was received without preservation. The samples were preserved with HNO3 by the laboratory upon receipt.
6. EPA 625 Non-conformance: Method Blank had a surrogate recovery above recommended limits for QC Batch SV-1798-F.

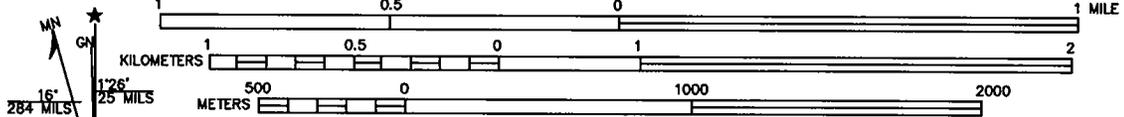


Approximate
 Discharge
 location
 of
 storm drain
 to
 Muddy
 River.

M*
 G
 M=-15.603
 G=-1.424



SCALE 1: 25,000



CONTOUR INTERVAL 3 METERS

NATIONAL GEODETIC VERTICAL DATUM OF 1929
 DEPTH CURVES AND SOUNDINGS IN FEET - DATUM IS MEAN LOW WATER
 THE RELATIONSHIP BETWEEN THE TWO DATUM IS VARIABLE
 SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE ON MEAN HIGH WATER
 THE MEAN RANGE OF TIDE IS APPROXIMATELY 9.5 FEET

UTM grid convergence
 (GN) and 1987 magnetic
 declination (MN)
 at center of map
 Diagram is approximate



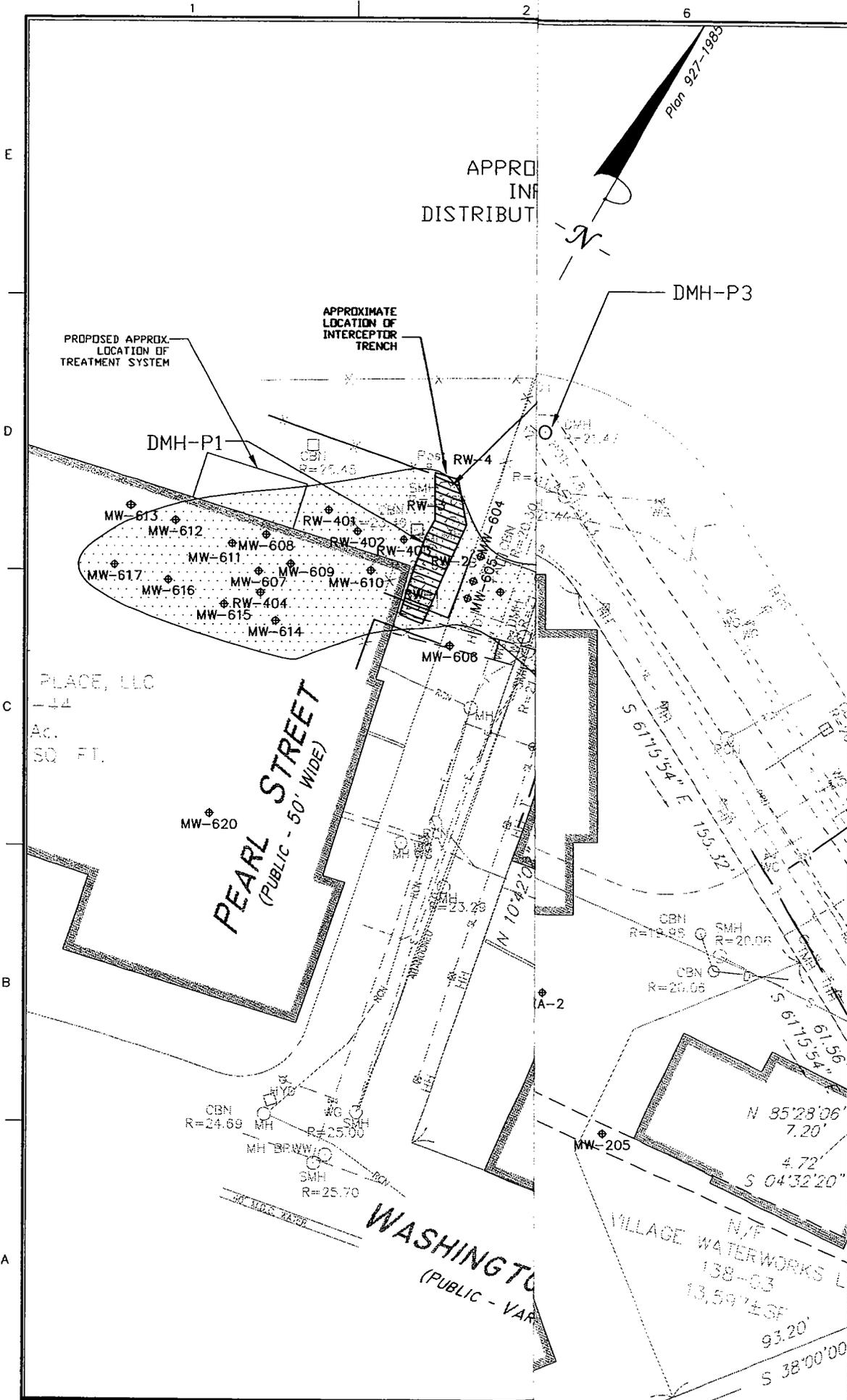
Gale Associates, Inc.
 Engineers Architects Planners
 183 Libbey Parkway | Weymouth, MA 02189-0004
 P 781.335.6465 F 781.335.6467 www.gainc.com
 Boston Baltimore Orlando San Francisco

LOCUS MAP

SUBSURFACE INVESTIGATION REPORT
 2, 4, & 10 BROOKLINE PLACE
 BROOKLINE, MASSACHUSETTS

DATE:	
SCALE:	
REVISION:	
FIGURE 1	
SHEET	OF

PROJ. NO:	DRAWN	REVIEWED	CADD FILE
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GALE

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 Engineers Architects Planners

163 Libbey Parkway | Weymouth, MA 02189-0004
 P 781.335.6465 F 781.335.6467 www.gale.com

Boston Baltimore Orlando San Francisco

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PROJECT	BROOKLINE PLACE WEST RTN3-25017
	OWNER 10 BROOKLINE PLACE, LLC 10 BROOKLINE PL. BROOKLINE, MA

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	756660		
CADD FILE	Muddy River_ec		
DESIGNED BY	CWM		
DRAWN BY	CWM		
CHECKED BY	JAL		
DATE	DEC 2005		
DRAWING SCALE	1"=50'-0"		

GRAPHIC SCALE

SHEET TITLE

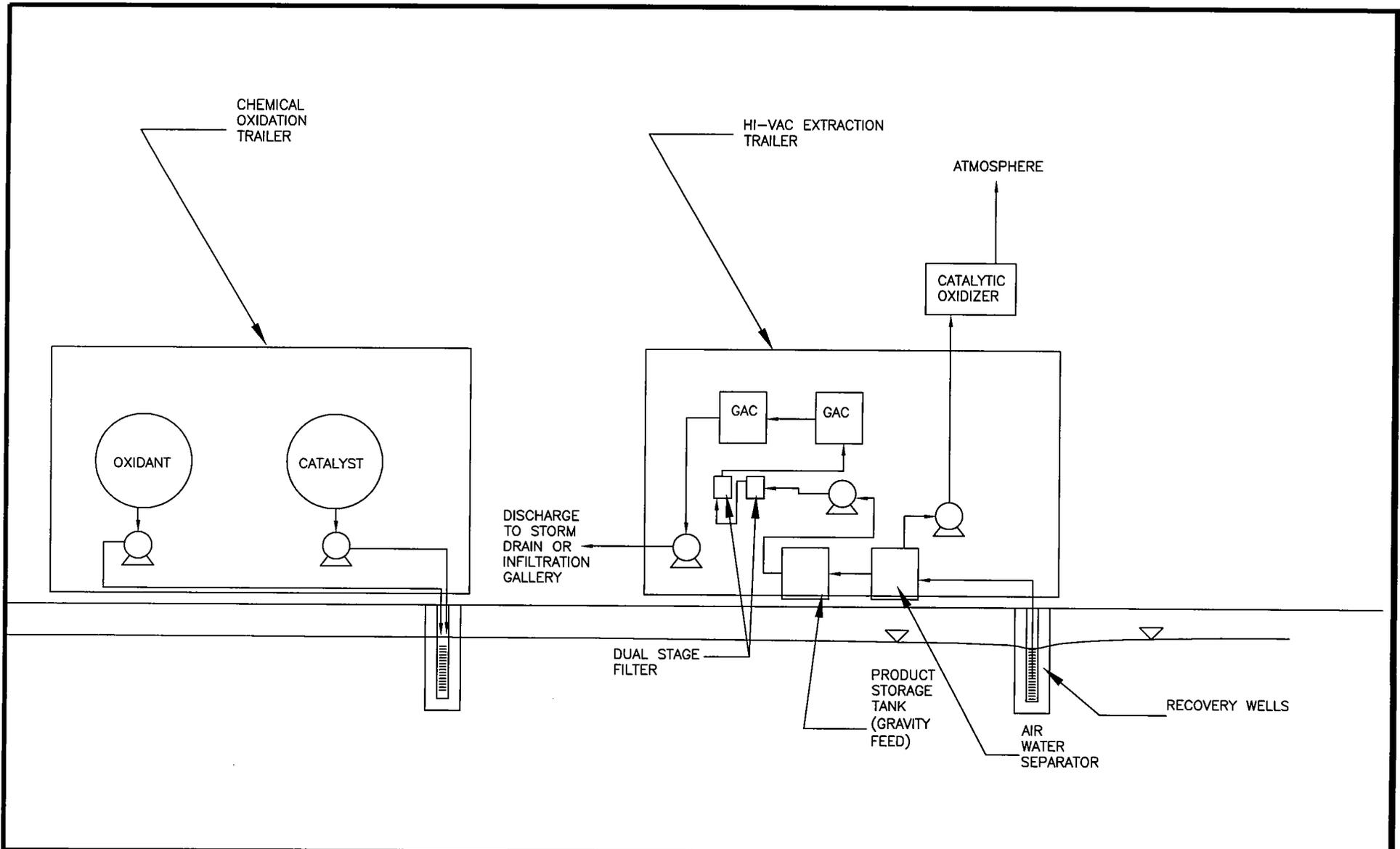
**PLAN SHOWING
 MONITORING RECOVERY
 WELLS NETWORK
 FOR PRODUCT/GW
 EXTRACTION**

DRAWING NO.

1

5 OF 7

PLOT SCALE 1/16"=1'-0"



ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING.



Gale Associates, Inc.
 Engineers Architects Planners
 163 Libbey Parkway | Weymouth, MA 02189-0004
 P 781.335.6465 F 781.335.6467 www.gainc.com
 Boston Baltimore Orlando San Francisco

PROPOSED CHEMICAL OXIDATION SYSTEM

10 BROOKLINE PL, LLC
 10 BROOKLINE PLACE
 BROOKLINE, MASSACHUSETTS

PROJ. NO:	DRAWN	REVIEWED	CADD FILE
756660	CWM	JAL	REMEDATION

DATE:	SEPT 2005
SCALE:	N.T.S.
REVISION:	

FIGURE 2

SHEET 8 OF 8

PLOT SCALE 3" = 1'-0"