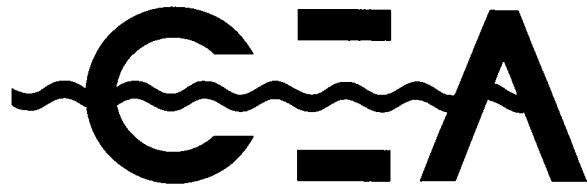


Via USPS
Delivery Confirmation



CORPORATE ENVIRONMENTAL ADVISORS, INC.



MAE910275

NOV 14 2006

NOV 14 2006

November 3, 2006

US-EPA Region 1
RGP-NOC Processing
Municipal Assistance Unit (CMU)
One Congress Street
Boston, Massachusetts 02114-2023

**RE: EPA Remediation General Permit Notice of Intent
Former Mutual Station No. 63
724 Washington Street
Stoughton, Massachusetts 02072
MA DEP RTN 4-0480**

To Whom It May Concern::

On behalf of Mutual Oil Company, Inc., (Mutual), Corporate Environmental Advisors, Inc. (CEA) is submitting this Notice of Intent (NOI) for an EPA Remediation General Permit (RGP) to treat and discharge petroleum-impacted groundwater at the above referenced site. This work is being conducted as part of Phase IV Remedial Actions at the site under 310 CMR 40.0870 of the Massachusetts Contingency Plan (MCP). **Figure 1**, Site Locus Map, shows the property location with respect to surrounding topography. **Figure 2**, Site Layout, depicts pertinent site features.

Groundwater and will be generated during underground storage tank removal and soil excavation to be initiated at the site during the week of November 20, 2006. Soil excavation and off-site recycling has been selected as the primary source area reduction measure for the site. Once groundwater and/or non-aqueous phase liquid (NAPL) is encountered during excavation activities, a groundwater recovery sump will be installed to an approximate depth of 15 feet below surface grade; 3 feet below the anticipated maximum depth of the excavation and approximately 8 feet below the observed depth to groundwater. A pump will placed in the sump to pump groundwater and NAPL from the excavation into a 21,000-gallon frac-tank. The groundwater treatment and NAPL recovery system configuration is further discussed below.

Groundwater and NAPL will be pumped from the excavation into an on-Site, 21,000-gallon frac-tank to remove suspended materials and to separate NAPL from groundwater. Groundwater will be pumped from the frac-tank using a submersible pump through an on-Site groundwater treatment system. Recovered groundwater will be pre-treated through two, 45-micron bag filters, in series, and then treated using three (3) 2,000-pound liquid-phase granular-activated-carbon-adsorption (GACA) vessels, piped in series. The groundwater treatment system will be designed to treat and discharge groundwater at a maximum flow rate of 50 gallons per minute (GPM). The flow meter and flow totalizer will be located immediately prior to discharge of the treated groundwater. Flow rates will be periodically monitored throughout discharging and total discharged gallons of treated groundwater will be recorded at the end of each day.

www.cea-inc.com

CORPORATE HEADQUARTERS: HARTWELL BUSINESS PARK • 127 HARTWELL STREET • WEST BOYLSTON, MA 01583 • PHONE: 508-835-8822 • FAX: 508-835-8812

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Generated groundwater will be treated and discharged to the Town of Stoughton stormwater drainage system via a catch basin located in Monk Street adjacent to the site. Based on engineering plans obtained from the Town of Stoughton engineering department and the results of dye testing performed at the catch basin in Monk Street, the stormwater drainage system was determined to discharge to Steep Hill Brook via an outfall located approximately ½ mile west of the site (refer to **Figure 1**). According to the United States Geological Survey (USGS) 7.5 Minute Topographic Norwood Quadrangle, Massachusetts, Steep Hill Brook flows north through the Town of Stoughton then north east through the Town of Canton and discharges into the Neponset River in Norwood. The Neponset River flows northeast and eventually discharges into Dorchester Bay of the Boston Harbor, refer to **Figure 1**.

Groundwater discharge will be monitored according to the guidelines described in the RGP. In-line sample ports for sample collection will be installed at the GACA influent, midpoint 1, midpoint 2, and effluent discharge points. In addition, a totalizer and flow meter will be installed along the discharge line for proper recording of groundwater discharge volume and flow rates. The dewatering system is anticipated to be operated for a period of approximately three months. A dewatering schematic is provided in **Figure 4**. The NOI forms and supporting documentation are attached.

If you have any questions or require additional information, please do not hesitate to contact me at (508) 835-8822, Extension 224.

Sincerely,
CORPORATE ENVIRONMENTAL ADVISORS, INC.



Matthew J. Dowling
Senior Hydrogeologist

cc: Edward A. Rachins, Mutual Oil Co., Inc., 863 Crescent Street, Brockton, MA 02303



**NOTICE OF INTENT FORM
FOR THE
REMEDATION GENERAL PERMIT**



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 Mutual Oil Station No:63		Facility/site address: 724 Washington Street	
Location of facility/site: Longitude: -71.1 latitude: 42.12	Facility SIC code(s): 4471	Street: Washington Street	
b) Name of facility/site owner: Mutual Oil Company, inc.			
Email address of owner:		Town: Stoughton	County: Norfolk
Telephone no. of facility/site owner: (781) 341-1593		State: MA	Zip: 02072
Fax no. of facility/site owner:		Owner is (check one): 1. Federal 2. State/Tribal	
Address of owner (if different from site):		3. Private 4. other, if so, describe:	
Street: 863 Crescent Street, PO Box 250			
Town: Brockton	State: MA	Zip: 02303	County: Plymouth
c) Legal name of operator: Getty Oil Company, Inc.		Operator telephone no: (207) 799-8518	
		Operator fax no.:	Operator email:
Operator contact name and title: James Stewart			

Address of operator (if different from owner):		Street: 141 Main Street	
Town: South Portland	State: ME	Zip: 04106	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:

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: MA 2. permit or license # assigned: Release Tracking Number # 4-0480 3. state agency contact information: name, location, and telephone number: MADEP Bureau of Waste Site Clean-up, 20 Riverside Drive, Lakeville, MA	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y ___ N ☒, if Y, number: 2. phase I or II construction storm water general permit? Y ___ N ☒, if Y, number: 3. individual NPDES permit? Y ___ N ☒, if Y, number: 4. any other water quality related permit? Y ___ N ☒, if Y, number:
---	---

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage: Dewatering, treatment and discharge of water encountered during the excavation and removal of gasoline underground storage tanks and petroleum impacted soil performed in accordance with 310 CMR 40.00 of the Massachusetts Contingency Plan (MCP).		
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 0.11 Average flow 0.02 Is maximum flow a design value? Y ___ N ☒ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
3) Latitude and longitude of each discharge within 100 feet: pt.1:long. 71.11 lat. 42.12 ; pt.2: long. lat. ; pt.3: long. lat. ; pt.4:long. lat. ; pt.5: long. lat. ; pt.6:long. lat. ; pt.7: long. lat. ; pt.8:long. lat. ; etc.		

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent ☒ or seasonal _____? Is discharge ongoing Yes _____ No ☒ ?
c) Expected dates of discharge (mm/dd/yy): start <u>11/15/06</u> end <u>01/30/07</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 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		☒	1	GRAB	160.2	4 mg/l	253,000	13.01		
2. Total Residual Chlorine	☒		1	GRAB	330.4	.05mg/l	<50			
3. Total Petroleum Hydrocarbons	☒		1	GRAB	1664	4.3mg/l	<4.3			
4. Cyanide	☒		1	GRAB	335.3	.01mg/l	<10			
5. Benzene		☒	12	GRAB	8260B	.5 ug/l	290	.016	44.31	.002
6. Toluene		☒	12	GRAB	8260B	25 ug/l	1220	.067	124	.007
7. Ethylbenzene		☒	12	GRAB	8260B	25 ug/l	854	.047	239.8	.013
8. (m,p,o) Xylenes		☒	12	GRAB	8260B	25 ug/l	5290	.289	1499	.082
9. Total BTEX ⁴		☒	12	GRAB	8260B	25 ug/l	7654	.418	1907	.104

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)	✓		1	GRAB	8260B	2 ug/l	<2.0			
11. Methyl-tert-Butyl Ether (MtBE)		✓	12	GRAB	8260B	25 ug/l	5460	.298	554.2	.030
12. tert-Butyl Alcohol (TBA)		✓	1	GRAB	8260B	100 ug/l	655	.036		
13. tert-Amyl Methyl Ether (TAME)		✓	1	GRAB	8260B	2 ug/l	68.4	.004		
14. Naphthalene		✓	12	GRAB	8260B	5.2 ug/l	435	.024	186	.010
15. Carbon Tetra-chloride	✓		1	GRAB	8260B	1 ug/l	<1.0			
16. 1,4 Dichlorobenzene	✓		1	GRAB	8260B	1 ug/l	<1.0			
17. 1,2 Dichlorobenzene	✓		1	GRAB	8260B	1 ug/l	<1.0			
18. 1,3 Dichlorobenzene	✓		1	GRAB	8260B	1 ug/l	<1.0			
19. 1,1 Dichloroethane	✓		1	GRAB	8260B	1 ug/l	<1.0			
20. 1,2 Dichloroethane	✓		1	GRAB	8260B	1 ug/l	<1.0			
21. 1,1 Dichloroethylene	✓		1	GRAB	8260B	1 ug/l	<1.0			
22. cis-1,2 Dichloro-ethylene	✓		1	GRAB	8260B	1 ug/l	<1.0			
23. Dichloromethane (Methylene Chloride)	✓		1	GRAB	8260B	2 ug/l	<2.0			
24. Tetrachloroethylene	✓		1	GRAB	8260B	1 ug/l	<1.0			

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	GRAB	8260B	1 ug/l	<1.0			
26. 1,1,2 Trichloroethane	✓		1	GRAB	8260B	1 ug/l	<1.0			
27. Trichloroethylene	✓		1	GRAB	8260B	1 ug/l	<1.0			
28. Vinyl Chloride	✓		1	GRAB	8260B	1 ug/l	<1.0			
29. Acetone	✓		1	GRAB	8260B	5 ug/l	<5.0			
30. 1,4 Dioxane	✓		1	GRAB	8260B	25 ugl	<25.0			
31. Total Phenols	✓		1	GRAB	8270C	100 ugl	<100			
32. Pentachlorophenol	✓		1	GRAB	8270C	10 ug/l	<10			
33. Total Phthalates ⁵ (Phthalate esthers)	✓		1	GRAB	8270C	50 ug/l	<50			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	GRAB	8270C	10 ug/l	<10			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	GRAB	8270C	35 ug/l	<35			
a. Benzo(a) Anthracene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
b. Benzo(a) Pyrene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
c. Benzo(b)Fluoranthene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
d. Benzo(k) Fluoranthene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
e. Chrysene	✓		1	GRAB	8270C	5.2 ugl	<5.2			

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	8270C	5.2 ugl	<5.2			
g. Indeno(1,2,3-cd) Pyrene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		✓	1	GRAB	8270C	100 ugl	129	.007	186.1	.010
h. Acenaphthene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
i. Acenaphthylene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
j. Anthracene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
k. Benzo(ghi) Perylene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
l. Fluoranthene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
m. Fluorene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
n. Naphthalene-		✓	12	GRAB	8270C	5.2 ugl	129	.007	186.1	.010
o. Phenanthrene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
p. Pyrene	✓		1	GRAB	8270C	5.2 ugl	<5.2			
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	GRAB	608	.5 ug/l	<0.5			
38. Antimony	✓		1	GRAB	200.7	6 ug/l	<6.0			
39. Arsenic	✓		1	GRAB	200.7	10 ug/l	<10			
40. Cadmium	✓		1	GRAB	200.7	4 ug/l	<4.0			
41. Chromium III	✓		1	GRAB	200.7	10 ug/l	<10			
42. Chromium VI	✓		1	GRAB	200.7	10 ug/l	<10			

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	✓		1	GRAB	200.7	25 ug/l	<25			
44. Lead		✓	1	GRAB	200.7	5 ug/l	10.3	.562		
45. Mercury	✓		1	GRAB	245.1	.2 ug/l	<0.2			
46. Nickel	✓		1	GRAB	200.7	40 ug/l	<40			
47. Selenium	✓		1	GRAB	200.7	10 ug/l	<10			
48. Silver	✓		1	GRAB	200.7	5 ug/l	<5.0			
49. Zinc	✓		1	GRAB	200.7	20 ug/l	<20			
50. Iron		✓	1	GRAB	200.7	100ug/l	30600	1670		
Other (describe):										

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

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <u>✓</u> N <u> </u>	If yes, which metals? Lead and Iron
<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: Lead = 6.5 ug/l, Iron = 5,000 ug/l DF: <u>6.55</u>	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 <u>✓</u> N <u> </u> If "Yes," list which metals: Lead and Iron. However, treatment system infiltration components are anticipated to remove these concentrations to below EPA limits

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: See attached						
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 <u>10</u> Maximum flow rate of treatment system <u>50</u> Design flow rate of treatment system _____						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Not Applicable						

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 <u>✓</u>	Wetlands _____	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: Steep Hill Brook. See attached.						

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 5,

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.61 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)?

Cause unknown, nutrients and pH

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

Cause unknown, nutrients and pH

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.

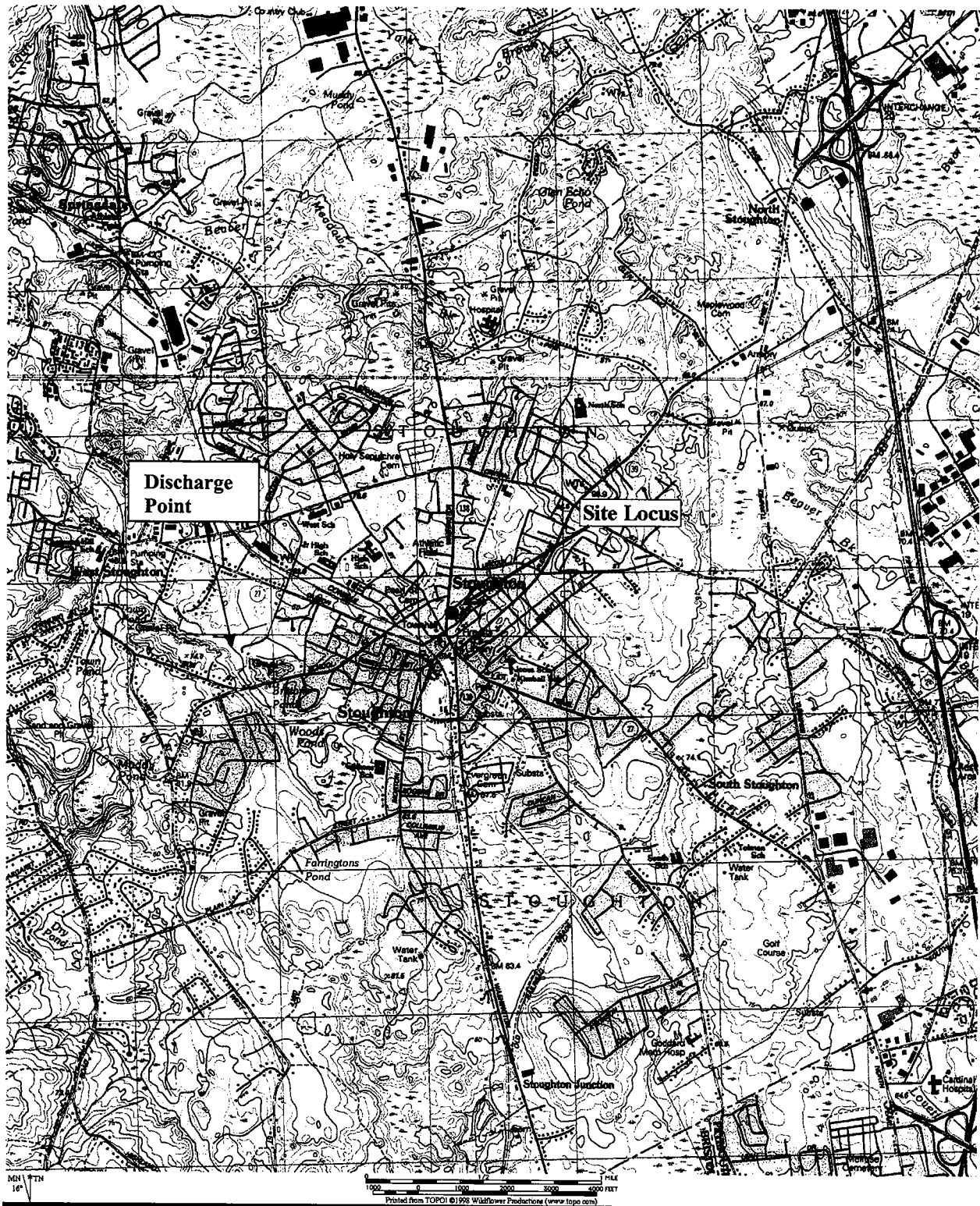
Facility/Site Name: Former Mutual Oil Station No: 63, 724 Washington Street, Stoughton, MA

Operator signature:

Title: Principal Hydrogeologist / Consultant Environmental Services, Inc.

Date: 11/2/06

FIGURES



Coordinates:

Longitude:
71° 06' 07"

Latitude:
42° 07' 35"

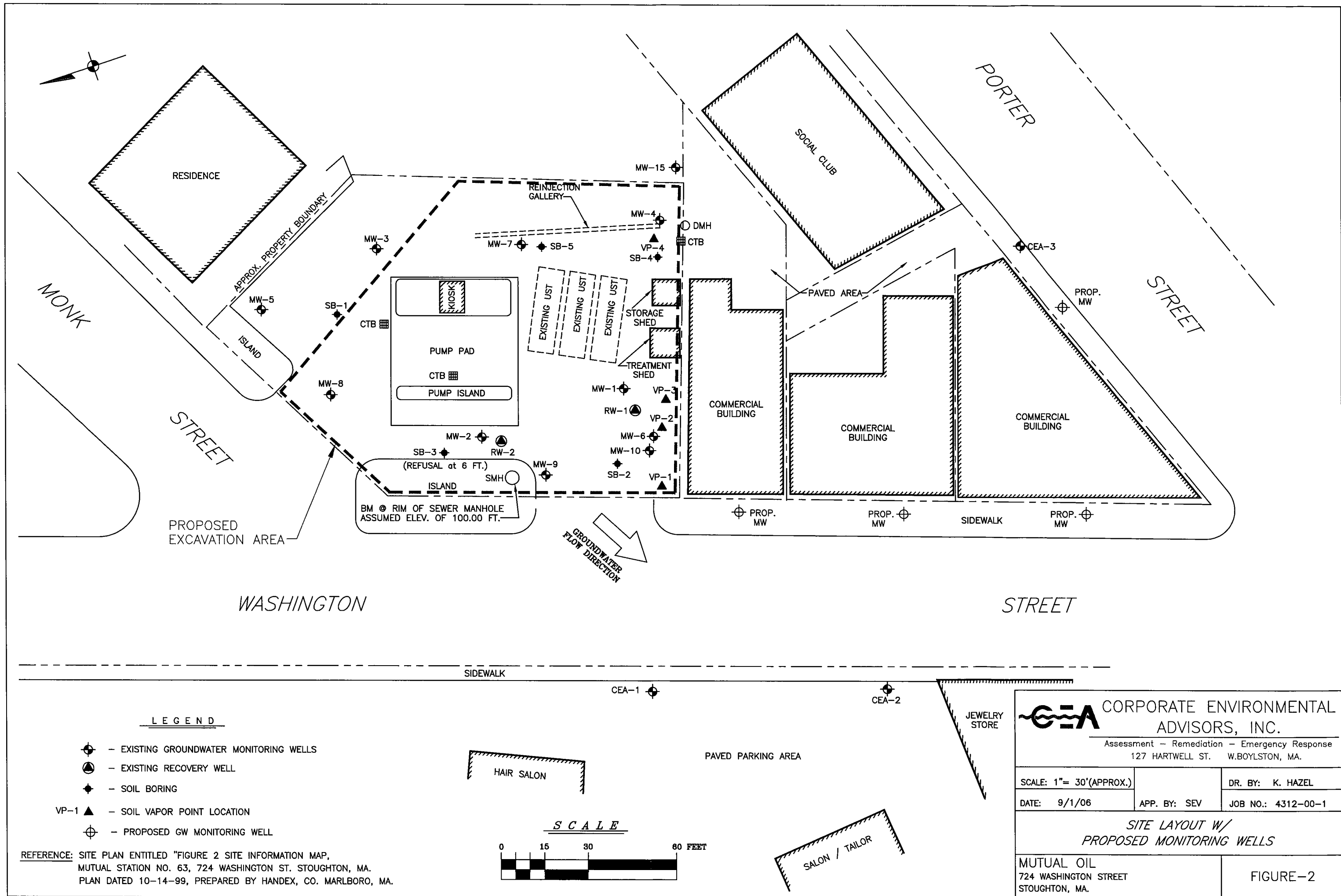
**Address: 724 Washington Street
Stoughton, MA**

Stoughton, Mass.
Topo! Interactive Maps on
CD-Rom®
1998

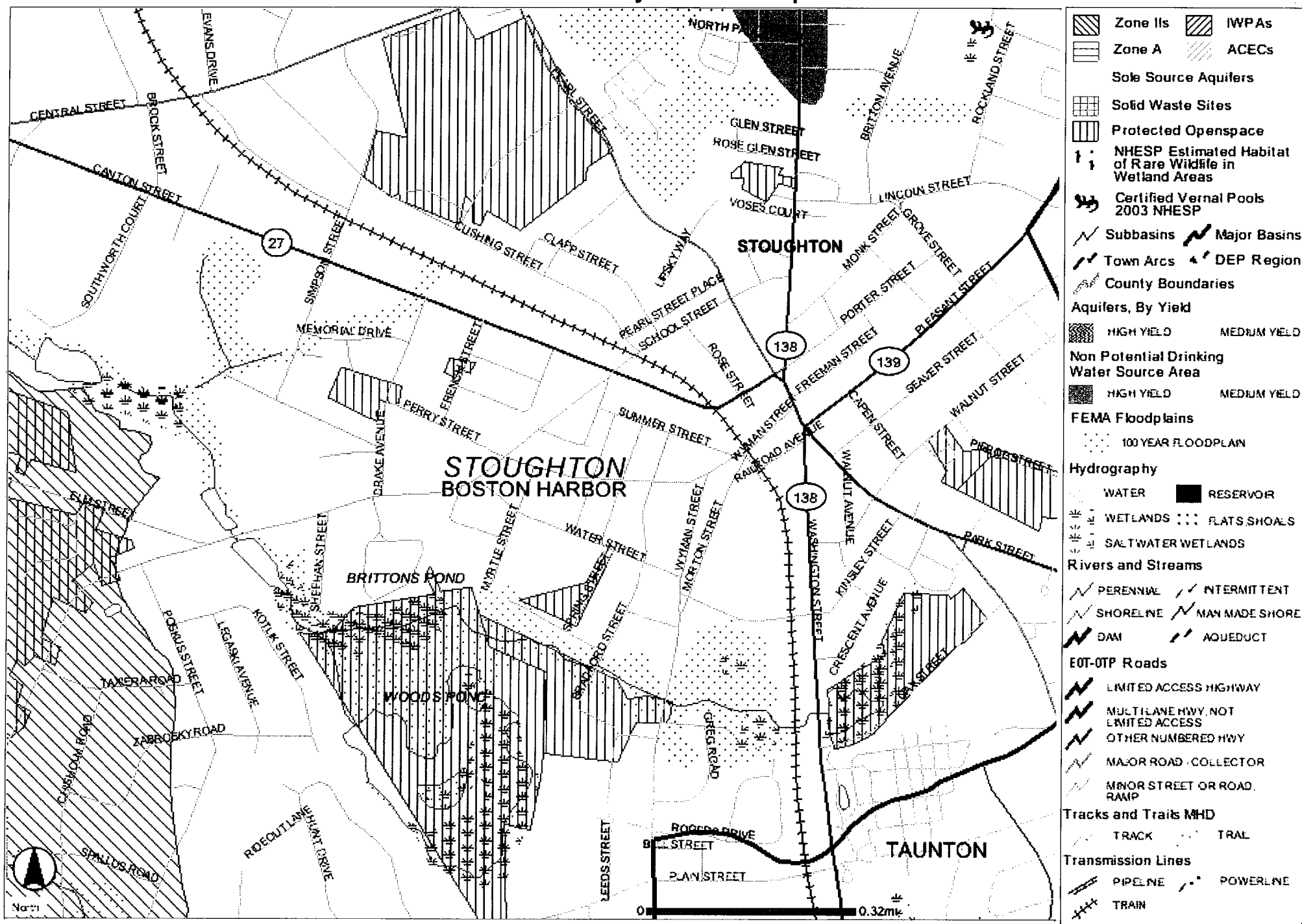
**Figure 1
Site Locus**



CORPORATE ENVIRONMENTAL ADVISORS, INC.



SLP Priority Resource Map



DEP MCP 21e Map Legend

-  Zone IIs
-  IWPA's
-  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

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
-  SALT WATER WETLANDS
-  FLATS SHOALS

Rivers and Streams

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

EOT-OTF Roads

-  LIMITED ACCESS HIGHWAY
-  MULTILANE HWY NOT LIMITED ACCESS
-  OTHER NUMBERED HWY
-  MAJOR ROAD COLLECTOR
-  MINOR STREET OR ROAD RAMP

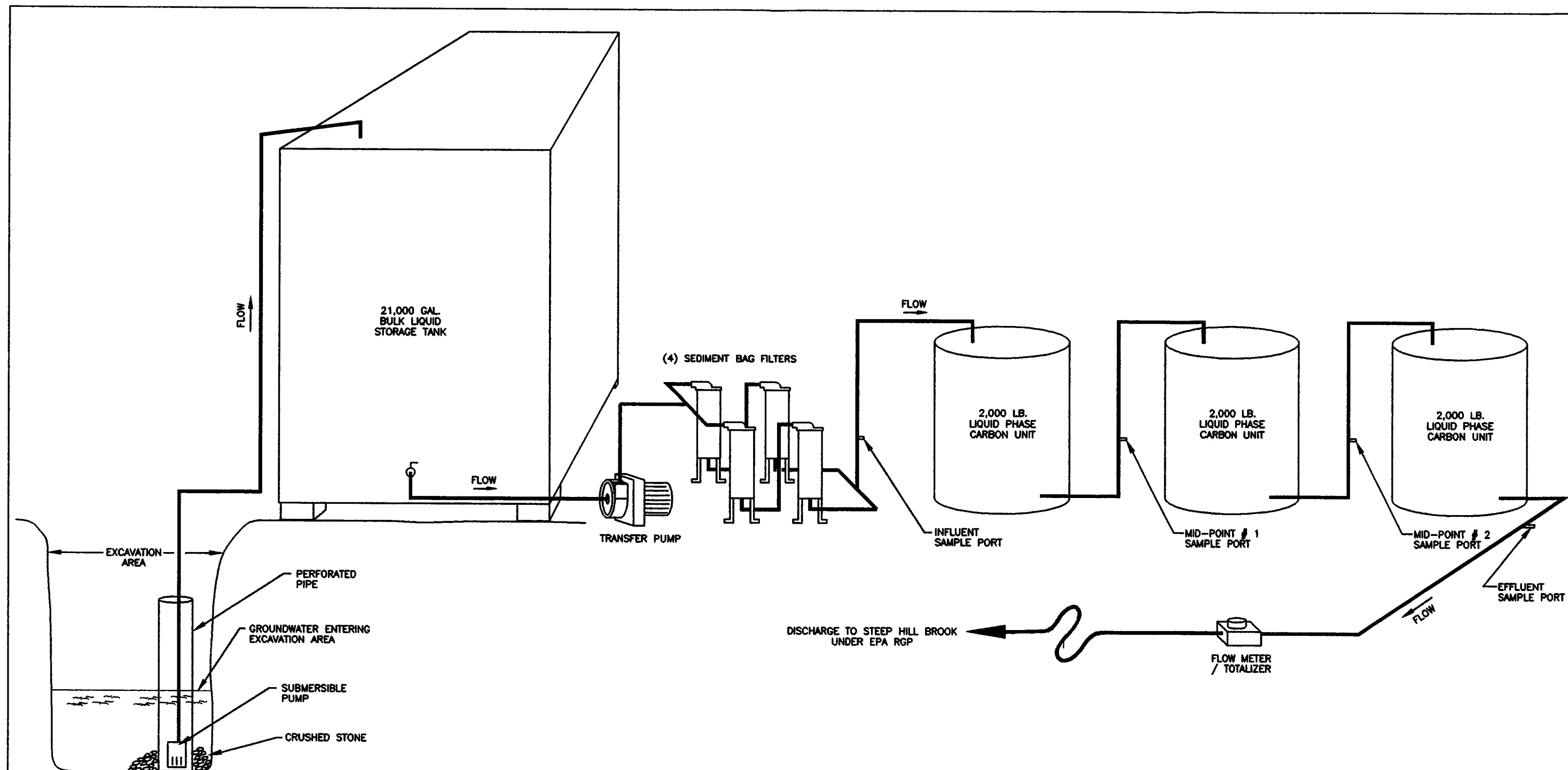
Tracks and Trails MHD

-  TRACK
-  TRAIL

Transmission Lines

-  PIPELINE
-  POWERLINE
-  TRAIN





CEA CORPORATE ENVIRONMENTAL ADVISORS, INC. Assessments - Remediation - Emergency Response 127 HARTWELL ST. W.BOYLSTON, MA.		
SCALE: NOT TO SCALE		DR. BY: K. HAZEL
DATE: 11/3/06	APP. BY: SEV	JOB NO.: 4312-00
EXCAVATION DEWATERING PROCESS & INSTRUMENTATION DIAGRAM		
MUTUAL OIL		FIGURE 4
724 WASHINGTON STREET STOUGHTON, MA.		

TABLES

Table I
Groundwater Sampling Analytical Results
Mutual Station No. 63
724 Washington Street
Stoughton, MA

Sample ID	Sample Date	VPH			Benzene (ug/l)	Toluene (ug/l)	Ethyl-Benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)	TPH (mg/l)	Ammonia Nitrogen (mg/l)	Nitrate Nitrogen (mg/l)	Nitrite Nitrogen (mg/l)	Total Kjeldahl Nitrogen (mg/l)	Total Phosphorus (mg/l)	Dissolved Oxygen (mg/l)	pH
		C5-C8 Aliphatics (ug/l)	C9-C12 Aliphatics (ug/l)	C9-C10 Aromatics (ug/l)														
MW-4 GW-2/GW-3	30-Aug-94				190	3,700	2,800	18,000	ND									
	14-Jul-95				ND	930	1,600	8,000	ND									
	18-Oct-95				ND	1,300	1,900	12,000	ND									
	10-Jan-96				26	1,500	2,400	11,000	ND		27				19	6.3	4.2	9
	22-Jul-98								ND								1.4	
	06-Dec-99	ND	ND	162	ND	ND	14.4	48.2	ND	9								
	06-Mar-00	145	ND	781	ND	10.6	113	618	63.2	34.2								
	31-Jul-00	170	130	580	<5	12.0	36	126	24.0	38.0								
	30-Jan-01	ND	ND	ND	ND	ND	ND	ND	ND	ND								
	24-Jul-01	371	1,130	2,230	<5	<5	192	341	9.2	193								
	05-Jun-06	98.4	306	765	<2.0	<2.0	88.2	252.6	73.0	51.3								
MW-5 GW-2/GW-3	14-Jul-95				ND	ND	ND	ND	ND									
	18-Oct-95				ND	ND	ND	ND	ND									
	05-Feb-96				ND	ND	ND	ND	ND		ND	0.5	4.4		1.5	0.46	5.5	6.56
	06-Dec-99	ND	ND	ND	ND	ND	ND	ND	ND	ND								
	06-Mar-00	ND	ND	ND	ND	ND	ND	ND	ND	ND								
	05-Jun-06	<50	<50	<50	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0								
MW-6 GW-2/GW-3	30-Aug-94				1,700	1,700	1,700	9,800	580									
	14-Jul-95				840	800	1,200	4,900	120									
	18-Oct-95				1,100	2,600	1,300	7,400	120									
	05-Feb-96				1,700	4,700	1,400	7,200	230		24	34	ND		35	9.4	2.1	6.54
	14-Mar-96				570	1,300	1,100	6,300	150		25		ND		95	12	0.1	6.63
	23-Apr-96				630	2,100	740	3,800	95		22		ND		43	5.6	0.9	6.32
	28-May-96				670	2,500	1,100	7,600	140		38		ND	0.058	23	5.1	1.2	6.52
	27-Aug-96				1,400	2,100	2,800	6,600	500		23		ND	ND	170	22	0.9	6.28
	26-Nov-96				430	2,200	690	4,200	240		14		ND	0.021	32	8.1	0.8	7.1
	27-Mar-97				408	1,280	580	3,270	78.5								2.2	11
	31-Jul-97				478	1,360	727	4,090	28.8								2.6	
	22-Jul-98																1.8	
	31-Jul-00	3,700	1,900	7,900	750	1,900	2,100	8,300	540	550								
	2-Feb-01	4,790	21,100	6,680	434	1,120	1,260	6,200	666	483								
	24-Jul-01	3,090	10,800	9,480	486	1,880	1,830	8,730	498	820								
	5-Jun-06	1,660	3,450	5,650	254	453	1,250	4,284	3,590	669								
Method 1 Groundwater Standards																		
GW-2		1,000	1,000	5,000	2,000	6,000	30,000	6,000	50,000	6,000	1	*	*	*	*	*	*	*
GW-3		4,000	20,000	4,000	7,000	50,000	4,000	50,000	50,000	6,000	20	*	*	*	*	*	*	*
Method 2 Groundwater Standards																		
GW-2 (post 4/3/06)		1,000	1,000	5,000	2,000	8,000	30,000	9,000	50,000	1,000	1	*	*	*	*	*	*	*
GW-3 (post 4/3/06)		4,000	20,000	4,000	10,000	4,000	4,000	500	50,000	20,000	20	*	*	*	*	*	*	*

Notes: ND - Indicates not detected.
Blank entry indicates not analyzed.
* - Indicates standards not established.
ug/l - Micrograms per liter or parts per billion (ppb).
BTEX & MTBE analyzed via modified EPA Method 624 or MADEP VPH Method.
mg/l - Milligrams per liter or parts per million (ppm).
VPH and target analytes - Sample analyzed via MA DEP VPH Method
Nitrite Nitrogen - Sample analyzed via EPA Method 353.2.
Nitrate Nitrogen - Sample analyzed via EPA Method 353.2.
Total Kjeldahl Nitrogen - Sample analyzed via EPA Method 351.2.
Total Phosphorus - Sample analyzed via EPA Method 365.3.
Bold values exceed GW-2 Standards
Shaded values exceed GW-3 Standards

Table 1
Groundwater Sampling Analytical Results
Mutual Station No. 63
724 Washington Street
Stoughton, MA

Sample I.D.	Sample Date	VPH			Benzene (ug/l)	Toluene (ug/l)	Ethyl- Benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)	TPH (mg/l)	Ammonia Nitrogen (mg/l)	Nitrate Nitrogen (mg/l)	Nitrite Nitrogen (mg/l)	Total Kjeldahl Nitrogen (mg/l)	Total Phosphorus (mg/l)	Dissolved Oxygen (mg/l)	pH
		C5-C8 Aliphatics (ug/l)	C9-C12 Aliphatics (ug/l)	C9-C10 Aromatics (ug/l)														
MW-9 GW-3	14-Jul-95				ND	ND	ND	ND	ND									
	18-Oct-95				1.1	ND	42	120	ND									
	05-Feb-96				2.3	ND	43	110	3.4		2	9	2		10	1	1.5	6.1
	31-Jul-97				ND	ND	ND	ND	ND								1.7	7.9
	11-Nov-97				ND	ND	8.2	28.3	ND								2.8	7.2
	02-Mar-98				ND	ND	1.8	7	ND								1.6	8.6
	22-Jul-98				2.6	ND	3.1	6.9	1,650									
	10-Sep-98				ND	ND	2.8	7.8	182									
	16-Nov-98				ND	ND	ND	1.7	26.2									
	18-Mar-99				ND	ND	ND	1.1	2.5								2.2	8.2
	14-Dec-99	164	ND	249	ND	ND	ND	8.9	ND	6.7								8
	06-Mar-00	ND	ND	ND	ND	ND	ND	5.7	ND	ND								
	05-Jun-06	120	78	186	2.1	<2.0	3.4	<2.0	44.9	3.5								
MW-10 GW-2/GW-3	14-Jul-95				1,800	400	2,400	9,000	150									
	18-Oct-95				1,500	570	2,400	9,300	110									
	05-Feb-96				1,500	4,500	2,500	16,000	230		28	6.4	ND		8.9	4.7	3.8	6.29
	08-Jul-99				321	317	1,380	9,120	2,000									
	06-Dec-99	3,860	509	11,900	286	180	1,690	11,110	867	567								
	06-Mar-00	1,210	ND	8,690	233	236	1,200	7,450	1,100	429								
	31-Jul-00	2,800	2,000	13,000	440	720	2,300	11,700	840	960								
	02-Feb-01	1,770	7,850	8,610	314	238	1,360	5,822	1,020	439								
	24-Jul-01	397	2,540	2,320	36.9	62.6	393	1,925	55.3	196								
	05-Jun-06	1,150	5,080	9,350	96.4	138	1,020	5,450	947	840								
	30-Aug-94				1	ND	ND	1.8	54									
MW-11 GW-2/GW-3	14-Jul-95				ND	ND	ND	ND	58									
	18-Oct-95				ND	2.7	ND	ND	39									
	14-Jul-95				1.4	ND	4.3	1.3	2.9									
MW-15 GW-2/GW-3	18-Oct-95				ND	ND	ND	2.7	ND									
	22-Jul-98																	
	31-Jul-00	<75	<25	200	<5	14	17	117	<5	20							1.5	
	24-Jul-01	<50	<50	<50	<5	<5	<5	<5	<5	<5								
	05-Jun-06	<50	<50	<50	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0								
MW-16 GW-2/GW-3	14-Jul-95				2.2	73	11	1.3	ND									
	18-Oct-95				1.5	16	5.4	ND	1.6									
	10-Jan-96				ND	7.6	ND	ND	1.7		ND				10	5.3	4.2	9
	14-Mar-96				ND	ND	ND	ND	1.5		ND				3	1.2	1.7	6.14
	23-Apr-96				ND	ND	ND	ND	1.6		ND		0.16		1.5	0.41	4.7	6.85
	28-May-96				2.9	7.9	11	15	3.4		ND		0.35	0.05	2.2	0.47	6.7	2.2
	27-Aug-96												0.2	ND				
	26-Nov-96				ND	ND	ND	ND	3.9									
	27-Mar-97				ND	ND	ND	ND	ND		ND		0.25	ND	4	2.5	3.8	6.5
																	3.8	11
CEA-1 GW-3	24-Jul-01	142	75.4	81.1	<5	<5	<5	<5	<5	<5								
	05-Jun-06	<50	<50	<50	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0								
CEA-2 GW-2/GW-3	24-Jul-01	<50	<50	<50	<5	<5	<5	<5	106	<5								
CEA-3 GW-2/GW-3	24-Jul-01	<50	<50	<50	<5	<5	<5	<5	<5	7.1								
Method 1 Groundwater Standards																		
GW-2		1,000	1,000	5,000	2,000	6,000	30,000	6,000	50,000	6,000	1	*	*	*	*	*	*	*
GW-3		4,000	20,000	4,000	7,000	50,000	4,000	50,000	50,000	6,000	20	*	*	*	*	*	*	*
GW-2 (post 4/3/06)		1,000	1,000	5,000	2,000	8,000	30,000	9,000	50,000	1,000	1	*	*	*	*	*	*	*
GW-3 (post 4/3/06)		4,000	20,000	4,000	10,000	4,000	4,000	500	50,000	20,000	20	*	*	*	*	*	*	*

Table 2
Groundwater Analytical Results - EPA RGP NOI Sampling Requirements
Former Mutual Station #63
724 Washington Street, Stoughton, MA
RTN 4-0480

Parameter	Effluent Limit	Influent Composite (MW-1/MW-10) (ug/l - mg/l)	Influent Composite (MW-1/MW-10) Mass (Kg)	Site Average* (ug/l - mg/l)	Site Average* Mass (Kg)
		09/27/06	09/27/06	06/06/06	06/06/06
1. Total Suspended Solids (TSS)	30 miligrams/liter (mg/l) 50 mg/l for hydrostatic testing only	253.0	13.81		
2. Total Residual Chlorine (TRC)	FW1 = 11 ug/l2 SW3 = 7.5 ug/l2	<5.0			
3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/l	<4.3			
4. Cyanide (CN)4	SW = 1.0 ug/l5 FW = 5.2 ug/l5	<10.0			
5. Benzene (B)	5.0 ug/l 50.0 ug/l -hydrostatic testing only	290	0.016	44.31	0.002
6. Toluene (T)	(limited as ug/L total BTEX)	1,220	0.067	124.0	0.007
7. Ethylbenzene (E) - 100414	(limited as ug/L total BTEX)	854.0	0.047	239.8	0.013
8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX)	5,290	0.289	1,499	0.082
9. Total BTEX6	100 ug/l	7,654	0.418	1,907	0.104
10. Ethylene Dibromide (EDB) (1,2- Dibromo-methane)	0.05 ug/l	<2.0			
11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l	5,460	0.298	554.2	0.030
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	Monitor Only (ug/L)	655	0.036		
13. tert-Amyl Methyl Ether (TAME)	Monitor Only (ug/L)	68.4	0.004		
14. Naphthalene	20 ug/l	435.0	0.024	186.1	0.010
15. Carbon Tetrachloride	4.4 ug/l	<1.0			
16. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/l	<1.0			
17. 1,2 Dichlorobenzene (o-DCB)	600 ug/l	<1.0			
18. 1,3 Dichlorobenzene (m-DCB)	320 ug/l	<1.0			
19. Total dichlorobenzene	763 ug/l in NH only	<3.0			
20. 1,1 Dichloroethane (DCA)	70 ug/l	<1.0			
21. 1,2 Dichloroethane (DCA)	5.0 ug/l	<1.0			
22. 1,1 Dichloroethylene (DCE)	3.2 ug/l	<1.0			
23. cis-1,2 Dichloro-ethylene (DCE)	70 ug/l	<1.0			
24. Dichloromethane (Methylene Chloride)	4.6 ug/l	<2.0			
25. Tetrachloroethylene (PCE)	5.0 ug/l	<1.0			
26. 1,1,1 Trichloro-ethane (TCA)	200 ug/l	<1.0			
27. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/l	<1.0			
28. Trichloroethylene (TCE)	5.0 ug/l	<1.0			
29. Vinyl Chloride (Chloroethene)	2.0 ug/l	<1.0			
30. Acetone	Monitor Only (ug/L)	<5.0			
31. 1,4 Dioxane	Monitor Only (ug/L)	<25			
32. Total Phenols	300 ug/l	<100			
33. Pentachlorophenol (PCP)	1.0 ug/l	<10			
34. Total Phthalates 8 (Phthalate esters)	3.0 ug/L	<50			
35. Bis (2-Ethylhexyl) Phthalate [Di(ethylhexyl) Phthalate]	6.0 ug/l	<10			
36. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/l	<35.0			
a. Benzo(a) Anthracene	0.0038 ug/l 9	<5.0			
b. Benzo(a) Pyrene	0.0038 ug/l 9	<5.0			
c. Benzo(b) Fluoranthene	0.0038 ug/l 9	<5.0			
d. Benzo(k) Fluoranthene	0.0038 ug/l 9	<5.0			
e. Chrysene	0.0038 ug/l 9	<5.0			
f. Dibenzo(a,h)anthracene	0.0038 ug/l 9	<5.0			
g. Indeno(1,2,3-cd) Pyrene	0.0038 ug/l 9	<5.0			
37. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/l	129.0	0.007	186.1	0.010
h. Acenaphthene	(limited as total ug/L Group II PAHs)	<0.1			
i. Acenaphthylene	(limited as ug/L total Group II PAHs)	<0.1			
j. Anthracene	(limited as ug/L total Group II PAHs)	<0.1			
k. Benzo(ghi) Perylene	(limited as ug/L total Group II PAHs)	<0.1			
l. Fluoranthene	(limited as ug/L total Group II PAHs)	<0.1			
m. Fluorene	(limited as ug/L total Group II PAHs)	<0.1			
n. Naphthalene	20 ug/l	129.0	0.007	186.1	0.010
o. Phenanthrene	(limited as ug/L total Group II PAHs)	0.2	1.03719E-05		
p. Pyrene	(limited as ug/L total Group II PAHs)	<0.1			
38. Total Polychlorinated Biphenyls (PCBs)10	0.000064 ug/L11	<0.5			
Metal parameters	Total Recoverable Metal Limit @ H = 50 mg/l CaCO312 for discharges in Massachusetts (ug/l)				
39. Antimony	5.6	<6.0			
40. Arsenic	10	<10.0			
41. Cadmium	0.2	<4.0			
42. Chromium III (trivalent)	48.8	<10.0			
43. Chromium VI (hexavalent)	11.4	<10.0			
44. Copper	5.2	<25.0			
45. Lead	1.3	10.3	0.562		
46. Mercury	0.9	<0.20			
47. Nickel	29	<40.0			
48. Selenium	5	<10.0			
49. Silver	1.2	<5.0			
50. Zinc	66.6	<20.0			
51. Iron	1,000	30,600	1,670		

ATTACHMENTS

Dilution Factor Calculations and Backup

Dillution Factor Calculation

Former Mutual Station #63

724 Washington Street

Stoughton, MA

$$DF = (Q_d + Q_s) / Q_d$$

DF = Dillution factor **6.545455**

Qd = Max flow rate of discharge in cubic feet per second 0.11

Qs = receiving water flow in cubic feet per seconds 7Q10 flow rate 0.61

7Q10 = min flow for seven consecutive days with a recurrence interval of 10 years 0.61 *

* 7Q10 flow based on data obtained from USGS Gauging Station Number 01102500

Data attached

APPENDIX IV
TOTAL RECOVERABLE METALS LIMITATIONS (ug/L) AT SELECTED DILUTION
RANGES AND TECHNOLOGY BASED CEILING LIMITATIONS FOR
FACILITIES LOCATED IN MASSACHUSETTS
(for discharges to freshwater at H = 50 mg/L CaCO₃)¹

PARAMETER	DILUTION RANGE CONCENTRATION					CEILING VALUE
	0 - 5	5 -10	10 - 50	50 - 100	>100	
1. Antimony	5.6	30	60	141	141	141 ²
2. Arsenic	10	50	100	500	540	540 ³
3. Cadmium	0.2	1.0	2.0	10.0	20.0	260
4. Chromium ^{III} (Trivalent)	48.8	244	489	1,710	1,710	1,710
5. Chromium ^{VI} (Hexavalent)	11.4	57	114	570	1,140	1,710 ⁴
6. Copper	5.2	26	52	260	520	2,070
7. Lead	1.3	6.5	13	66	132	430
8. Mercury	0.9	2.3	2.3	2.3	2.3	2.3 ⁵
9. Nickel	29.0	145	290	1,451	2,380	2,380
10. Selenium	5.0	25	50	250	408	408 ⁶
11. Silver	1.2	6	12	57	115	240
12. Zinc	66.6	333	666	1,480	1,480	1,480
13. Iron	1,000	5,000	5,000	5,000	5,000	5,000

1. Based on 7Q10 Flow.

2. Based on 40 CFR 437.42, "The Centralized Waste Treatment Point Source Category - Subpart D - Multiple Wastestreams - Best Practicable Control Technology" (BPT) daily maximum for Antimony

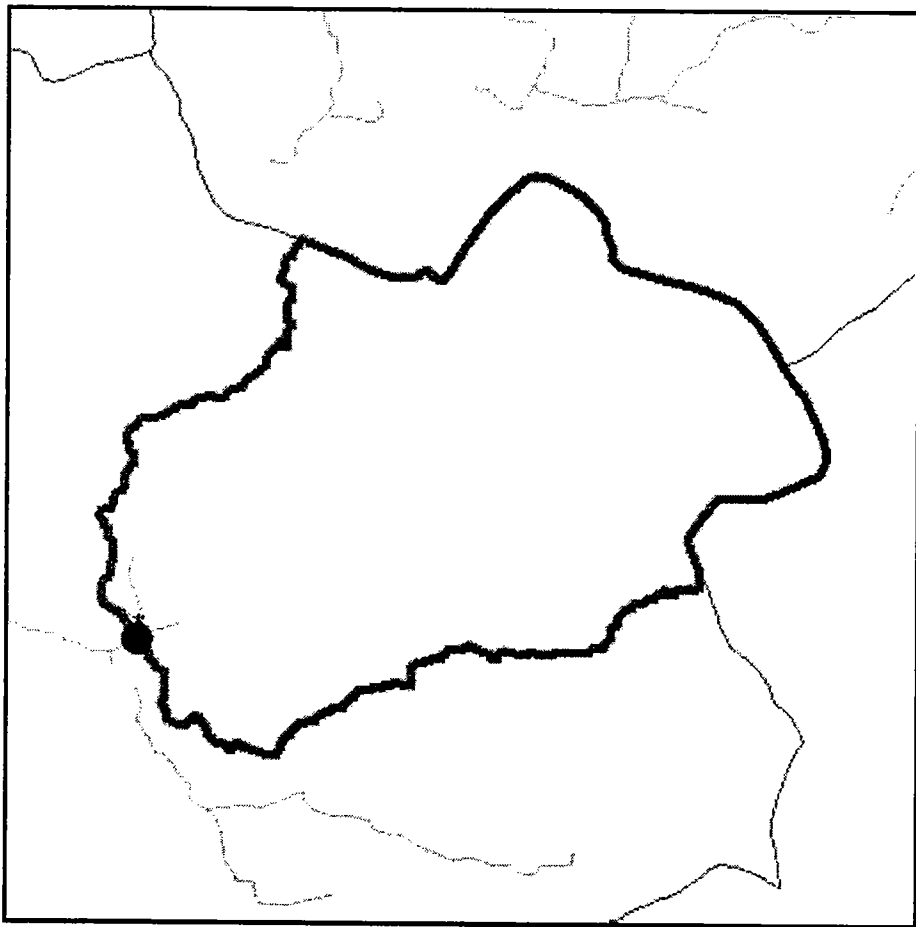
3. Based on 40 CFR 445.11, "RCRA Subtitle C Landfill Best Practicable Control Technology" (BPT) for Arsenic.

4. Assumes Hexavalent Chromium reduced to Tri-valent Chromium in treatment.

5. Based on 40 CFR 437.42, "The Centralized Waste Treatment Point Source Category - Subpart D - Multiple Wastestreams - Best Practicable Control Technology" (BPT) daily maximum for Mercury

6. Based on 40 CFR 437.42, "The Centralized Waste Treatment Point Source Category - Subpart D - Multiple Wastestreams - Best Practicable Control Technology" (BPT) daily maximum for Selenium

Streamflow Statistics Report



Date: Thu Nov 02 10:56:08 2006

Warning! Drainage Area outside allowable range. Prediction intervals not calculated.

Latitude: 42.1253

Longitude: -71.119

Measured Basin Characteristics:**Drainage Area (square miles): 1.24****Stratified Drift Area (square miles): 1.08****Stream Length (miles): 0.29****Slope (percent): 1.47****Region: 0**

Statistic	Estimated streamflow, ft ³ /s	90% Prediction interval	
		Minimum	Maximum
99-percent duration flow	0.49		
98-percent duration flow	0.69		
95-percent duration flow	0.98		
90-percent duration flow	1.80		
85-percent duration flow	1.37		
80-percent duration flow	1.73		
75-percent duration flow	1.14		
70-percent duration flow	1.23		
60-percent duration flow	1.12		
50-percent duration flow	1.19		
7-day, 2-year low flow	0.77		
7-day, 10-year low flow	0.61		
August median flow	1.52		

U.S. Department of the Interior, U.S. Geological Survey
10 Bearfoot Road
Northborough, MA 01532
(508) 490-5000

Maintainer: webmaster@mass1.er.usgs.gov

Laboratory Analytical Report
(September 27, 2006 Groundwater Sampling)





IT'S ALL IN THE CHEMISTRY

10/11/06

Technical Report for

Mutual Oil Company

CEA: Mutual Station 724 Washington St. Stoughton Ma
4312-00

Accutest Job Number: M59512

Sampling Date: 09/27/06

Report to:

Corporate Environmental Advisors, Inc.
127 Hartwell Street
West Boylston, MA 01583
dazukauskas@cea-inc.com

ATTN: Debbie Zukauskas

Total number of pages in report: 27



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Fand
Reza Fand
Lab Director

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579)
NY (23346) NJ (MA926) NAVY USACE

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Sample Summary

Mutual Oil Company

Job No: M59512

CEA: Mutual Station 724 Washington St. Stoughton Ma
Project No: 4312-00

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
M59512-1	09/27/06	11:30 MB	09/27/06	AQ Ground Water	MW-1/MW-10 COMPOSITE
M59512-1A	09/27/06	11:30 MB	09/27/06	AQ Ground Water	MW-1/MW-10 COMPOSITE



Sample Results

Report of Analysis

Report of Analysis

Page 1 of 3

2.1
2

Client Sample ID:	MW-1/MW-10 COMPOSITE	Date Sampled:	09/27/06
Lab Sample ID:	M59512-1	Date Received:	09/27/06
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	CEA: Mutual Station 724 Washington St. Stoughton Ma		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N14178.D	1	10/06/06	CH	n/a	n/a	MSN522
Run #2	N14234.D	25	10/09/06	CH	n/a	n/a	MSN524

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	290	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	19.3	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1/MW-10 COMPOSITE

Lab Sample ID: M59512-1

Date Sampled: 09/27/06

Matrix: AQ - Ground Water

Date Received: 09/27/06

Method: SW846 8260B

Percent Solids: n/a

Project: CEA: Mutual Station 724 Washington St. Stoughton Ma

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
100-41-4	Ethylbenzene	854 ^a	25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
74-88-4	Iodomethane	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	95.4	5.0	ug/l	
99-87-6	p-Isopropyltoluene	14.5	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5460 ^a	25	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	435 ^a	130	ug/l	
103-65-1	n-Propylbenzene	200	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	68.4	2.0	ug/l	
75-65-0	Tert Butyl Alcohol	655	100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	1220 ^a	25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	2340 ^a	130	ug/l	
108-67-8	1,3,5-Trimethylbenzene	776 ^a	130	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	5290 ^a	25	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 3 of 3

2.1
2

Client Sample ID: MW-1/MW-10 COMPOSITE	
Lab Sample ID: M59512-1	Date Sampled: 09/27/06
Matrix: AQ - Ground Water	Date Received: 09/27/06
Method: SW846 8260B	Percent Solids: n/a
Project: CEA: Mutual Station 724 Washington St. Stoughton Ma	

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	83-127%
2037-26-5	Toluene-D8	103%	100%	89-112%
460-00-4	4-Bromofluorobenzene	101%	101%	81-119%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1/MW-10 COMPOSITE
Lab Sample ID: M59512-1
Matrix: AQ - Ground Water
Method: SW846 8270C SW846 3510C
Project: CEA: Mutual Station 724 Washington St. Stoughton Ma

Date Sampled: 09/27/06

Date Received: 09/27/06

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I40913.D	1	09/30/06	AT	09/29/06	OP11993	MSI1241
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.2	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	21	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
83-32-9	Acenaphthene	ND	5.2	ug/l	
208-96-8	Acenaphthylene	ND	5.2	ug/l	
120-12-7	Anthracene	ND	5.2	ug/l	
92-87-5	Benzidine	ND	21	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	ug/l	
85-68-7	Butyl benzyl phthalate	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
218-01-9	Chrysene	ND	5.2	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.2	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.2	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1/MW-10 COMPOSITE		
Lab Sample ID:	M59512-1	Date Sampled:	09/27/06
Matrix:	AQ - Ground Water	Date Received:	09/27/06
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	CEA: Mutual Station 724 Washington St. Stoughton Ma		

ABN PPL List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.2	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	10	ug/l	
117-84-0	Di-n-octyl phthalate	ND	10	ug/l	
84-66-2	Diethyl phthalate	ND	10	ug/l	
131-11-3	Dimethyl phthalate	ND	10	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	10	ug/l	
206-44-0	Fluoranthene	ND	5.2	ug/l	
86-73-7	Fluorene	ND	5.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.2	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	ug/l	
78-59-1	Isophorone	ND	5.2	ug/l	
91-20-3	Naphthalene	129	5.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	ug/l	
85-01-8	Phenanthrene	ND	5.2	ug/l	
129-00-0	Pyrene	ND	5.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	27%		15-110%
4165-62-2	Phenol-d5	17%		15-110%
118-79-6	2,4,6-Tribromophenol	67%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	68%		31-116%
1718-51-0	Terphenyl-d14	64%		30-124%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: MW-1/MW-10 COMPOSITE

Lab Sample ID: M59512-1

Date Sampled: 09/27/06

Matrix: AQ - Ground Water

Date Received: 09/27/06

Method: EPA 504 EPA 504

Percent Solids: n/a

Project: CEA: Mutual Station 724 Washington St. Stoughton Ma

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB9866.D	1	10/03/06	SL	10/02/06	OP12011	GBB422
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
460-00-4	Bromofluorobenzene (S)	120%		26-158%	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1/MW-10 COMPOSITE	Date Sampled:	09/27/06
Lab Sample ID:	M59512-1	Date Received:	09/27/06
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 608 EPA 608		
Project:	CEA: Mutual Station 724 Washington St. Stoughton Ma		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ37761.D	1	10/09/06	CZ	09/29/06	OP12002	GYZ1574
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		44-132%
877-09-8	Tetrachloro-m-xylene	95%		44-132%
2051-24-3	Decachlorobiphenyl	74%		12-151%
2051-24-3	Decachlorobiphenyl	88%		12-151%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1/MW-10 COMPOSITE

Lab Sample ID: M59512-1

Date Sampled: 09/27/06

Matrix: AQ - Ground Water

Date Received: 09/27/06

Percent Solids: n/a

Project: CEA: Mutual Station 724 Washington St. Stoughton Ma

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Arsenic	< 10	10	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Cadmium	< 4.0	4.0	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Chromium	< 10	10	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Copper	< 25	25	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Iron	30600	100	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Lead	10.3	5.0	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Mercury	< 0.20	0.20	ug/l	1	09/30/06	10/02/06 MA	EPA 245.1 ²	EPA 245.1 ⁴
Nickel	< 40	40	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Selenium	< 10	10	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Silver	< 5.0	5.0	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³
Zinc	< 20	20	ug/l	1	09/28/06	10/01/06 OP	EPA 200.7 ¹	EPA 200.7 ³

(1) Instrument QC Batch: MA7357

(2) Instrument QC Batch: MA7359

(3) Prep QC Batch: MP9228

(4) Prep QC Batch: MP9238

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID: MW-1/MW-10 COMPOSITE	Date Sampled: 09/27/06
Lab Sample ID: M59512-1	Date Received: 09/27/06
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: CEA: Mutual Station 724 Washington St. Stoughton Ma	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	09/27/06 17:40	CF	SW846 7196A
Cyanide	< 0.010	0.010	mg/l	1	09/29/06 15:24	MA	EPA 335.3
Oil And Grease, Gravimetric	< 4.3	4.3	mg/l	1	10/06/06	BF	EPA 1664
Phenols	0.085	0.050	mg/l	1	09/28/06	BF	EPA 420.1
Solids, Total Suspended	253	4.0	mg/l	1	09/29/06	BF	EPA 160.2
Total Residual Chlorine	< 0.050	0.050	mg/l	1	09/27/06 15:20	CF	EPA 330.4

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID: MW-1/MW-10 COMPOSITE

Lab Sample ID: M59512-1A

Date Sampled: 09/27/06

Matrix: AQ - Ground Water

Date Received: 09/27/06

Method: SW846 8270C BY SIM SW846 3510C

Percent Solids: n/a

Project: CEA: Mutual Station 724 Washington St. Stoughton Ma

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F23255.D	1	10/11/06	PN	09/29/06	OP12027	MSF1144
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	21.1	0.21	ug/l	
91-20-3	Naphthalene	117	0.10	ug/l	
85-01-8	Phenanthrene	0.19	0.052	ug/l	B
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	29%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	76%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	74%		23-130%

ND = Not detected

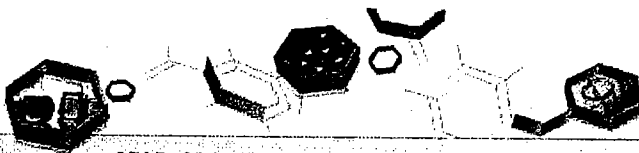
RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



IT'S ALL IN THE CHEMISTRY

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



NPDES Analyses & Containers (ALL - NOI)

11:30

Analysis	#	Container	ACCUTEST Method	Preservative	NOTES
Volatiles/VOCs (BTEX, MtBE, Naphthalene)	3	40ml VOA Vials	8260 or 624	HCl	
EDB	2	40ml VOA Vials	504.1	Na ₂ S ₂ O ₃	
Semi-volatiles <i>field filter</i>	1	Amber Glass Liter	8270 or 625	Cool to 4°C	
PCB	1	Amber Glass Liter	608	UNPRES...but	Sample needs to be neutral (pH 5-9)...Preserve if sample w/NaOH if acidic (<5) or w/H ₂ SO ₄ if basic (>9). <i>PH=7</i>
TPH <i>field filter</i>	1	Amber Glass Liter	1664	HCl	HCl will work...but Method 1664 requires H ₂ SO ₄ as preservative
Total Metals (Sb, As, Cd, Cr(III), Cr(VI), Cu, Fe, Pb, Hg, Ni, Se, Ag & Zn)	1	500ml Plastic	200.7	HNO ₃	Note on Chain "EFF sample MDL for Lead must be 3 ppb or less to meet Effluent limit"
TSS / TRC / Cr+6	1	Plastic Liter	160.2 / 330.5 / 218	UNPRES.	TRC must be analyzed immediately...(aka w/in 12 hrs) Hex Chromium (Cr+6 must be analyzed w/in 24 hrs)
Cyanide	1	500ml Plastic	335.4	NaOH	

Na₂S₂O₃ = sodium thiosulfate

NaOH = sodium hydroxide

H₂SO₄ = sulfuric acidHNO₃ = Nitric Acid

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M59512: Chain of Custody
Page 2 of 12

CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 1 of 2

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML	
Total Suspended Solids	180.2	5 mg/l	30 mg/l
Total Petroleum Hydrocarbons	1654	5 mg/l	5.0 mg/l
Total Polychlorinated Biphenyls (PCBs)	608 4863.4 ^a	0.5 ug/l 0.00005-ug/l	0.000064 ug/l (compliance limit = ML of test method used)
Total Chromium	Flame-AA (200.7)	none specified	Chromium III: MA = FW = 48.8 ug/l, MA = SW = 100 ug/l, NH = FW = 27.7 ug/l, NH = SW = 100 ug/l
	ICP (200.7 ¹)	10 ug/l	
	ICP (200.8)	10-ug/l	
	ICP (200.16)	10-ug/l	
	ICP (1620)	10-ug/l	
Total Copper (Cu)	Furnace-AA (200.9)	5-ug/l	MA = FW = 5.2 ug/l, MA = SW = 3.7 ug/l, NH = FW = 2.5 ug/l, NH = SW = 3.7 ug/l
	Other	50-ug/l	
	Flame-AA	20-ug/l	
	ICP	5 ug/l	
	Furnace-AA	3-ug/l	
Total Mercury (Hg)	Other	0.2 ug/l	MA & NH = FW = 0.8 ug/l, MA & NH = SW = 1.1 ug/l
Total Iron (Fe)	6410b	see footnote	MA & NH = 1,000 ug/l
	200.7 ²	see footnote	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS

PART 1 of 2

PARAMETER	Minimum Levels and Test Methods METHOD	ML*	Discharge Effluent Limit
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LEGEND:

RGP = Remediation General Permit
 Flame AA = Flame Atomic Absorption
 ICP = Inductively Coupled Plasma
 Furnace AA = Furnace Atomic Absorption
 FW = Freshwater
 SW = Saltwater
 MA = State of Massachusetts
 NH = State of New Hampshire

FOOTNOTES:

1. Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B) Where a minimum level (ML) is listed but a test method is not specified, permittees may use any of the available methods approved for use under 40 CFR 136, including alternatives approved by this permit, that meets ML. See EPA's "Methods and Guidance for the Analysis of Water" at www.epa.gov/water/cwa/cwa136.html. Where a test method is specified but ML is not listed for that method, the lowest ML for listed methods must be used before concentration can be considered as "non-detect".
2. For measuring volatile organic compounds, Method 8260C (or the latest version) may be used as a substitute for CWA Methods 824.2, 802, 824, or 1624. Method 8260C must be preceded by Method 5030 as the preparation method. However, any method changes must be accompanied by documented quality assurance quality control (QA/QC) test to prove that the analytical process can achieve the lower detection limits of Method 8260C. For TBA and TAME the EPA advises no acid as a preservative.
3. For measuring semi-volatile organic compounds, Method 8270D may be used as a substitute for Methods 810, 625, or 1625. Method 8270D must be preceded by Method 3520C as the sample preparation method. In either case, the quality control requirements of Method 3500B must be taken into account. The sample preparation method must be specified with data analysis records. Method 8270D may be modified to provide lower detection and quantitation limits using Selected Ion Monitoring (SIM). Any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8270D.
4. GC - gas chromatography.
5. GC/MS - gas chromatography/mass spectrometry
6. LC-high pressure liquid chromatography.
7. Flame Atomic Absorption.
8. For measuring fuel oxygenates, Method 602 must be modified to include a heated purge.
9. The sum of individual phthalate compounds.
10. In the November 2002 WQC, EPA has revised the definition of total PCBs for aquatic life as "Total PCBs is the sum of all homologues, all isomers, all congeners, or all Aroclor analyses."
11. Method 1668a (HRGC/HRMS) has been proposed by EPA and is currently being validated. When approval of the method is finalized, it will be approved for use with this general permit
12. Methods 8010b and 200.7 for metals may only be used when sample prepared with SW-846 digestion method, Method 3010.
13. Any value below the ML shall be reported as zero.
14. Analysis of the influent samples shall use the test methods with the MLs at or below limits where practicable.

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 2 of 2 (ACCUTEST)

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML	
MISCELLANEOUS COMPOUNDS			
Cyanide (total)	335.4	10 ug/l	MA & NH = SW = 1.0 ug/l, MA & NH = FW = 6.2 ug/l (compliance limit = ML = 10 ug/l)
BTEX			
Benzene	602	0.5 ug/l	5.0 ug/l
	624	2 ug/l	
	8280C ²	see footnote	
Toluene	602	0.5 ug/l	Limited as Total BTEX
	624	2 ug/l	
	8280C ²	see footnote	
Ethylbenzene	602	0.5 ug/l	Limited as Total BTEX
	624	2 ug/l	
	8280C ²	see footnote	
Xylenes (total)	602	0.5 ug/l	Limited as Total BTEX
	4624	40 ug/l	
	8280C ²	see footnote	
Total BTEX	602	0.5 ug/l	100 ug/l
	624	2 ug/l	
	8280C ²	see footnote	
Ethylene Dibromide (EDB), 1,2-Dibromomethane	618	4.0 ug/l	0.05 ug/l (must use method 504.1 for sites certifying this compound is 'not present')
	504.1	0.01 ug/l	
	624.2	0.1 ug/l	
	8280C ²	see footnote	
Methyl tert-butyl ether (MTBE)	602 ¹	0.5 ug/l	70 ug/l
	624.2	5.0 ug/l	
	8280C ²	see footnote	
tert-Butyl Alcohol (TBA)	602 ¹	0.5 ug/l	Monitor Only
	4666	400 ug/l	
	8280C ²	see footnote	
tert-Amyl Methyl Ether (TAME)	602 ¹	0.5 ug/l	Monitor Only
	8280C ²	see footnote	
	610 (GC/MS)	40 ug/l	
Naphthalene	626	2 ug/l	20 ug/l
	624.2	5 ug/l	
	610 (HPLC)	0.2 ug/l	
	8270D ¹	see footnote	
Carbon Tetrachloride	601	0.5 ug/l	4.4 ug/l
	624	2 ug/l	
	4624	2 ug/l	
	8280C ²	see footnote	
	601	0.5 ug/l	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 2 of 2 (ACCUTEST)

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML*	
1,4-Dichlorobenzene (p-DCB)	603	0.5 ug/l	5.0 ug/l
	624	2 ug/l	
	625	2 ug/l	
	8260C ²	see footnote	
1,2-Dichlorobenzene (o-DCB)	604	0.5 ug/l	600 ug/l
	603	0.5 ug/l	
	624	2 ug/l	
	625	2 ug/l	
1,3-Dichlorobenzene (m-DCB)	8260C ²	see footnote	320 ug/l
	604	0.5 ug/l	
	603	0.5 ug/l	
	624	2 ug/l	
1,1 Dichloroethane (DCA)	8260C ²	see footnote	70 ug/l
	604	0.5 ug/l	
	624	2 ug/l	
	8260C ²	see footnote	
1,2 Dichloroethane (DCA)	604	0.5 ug/l	5.0 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	
1,1 Dichloroethylene (DCE)	604	0.5 ug/l	3.2 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	
cis-1,2 Dichloroethylene (DCE)	604	0.5 ug/l	70 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	
Dichloromethane (Methylene Chloride)	604	0.5 ug/l	4.6 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	
Tetrachloroethylene (PCE)	604	0.5 ug/l	5.0 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	
1,1,1 Trichloroethane (TCA)	604	0.5 ug/l	200 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	
1,1,2 Trichloroethane (TCA)	604	0.5 ug/l	5.0 ug/l
	624	2 ug/l	
	8260C ²	see footnote	
	604	0.5 ug/l	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 2 of 2 (ACCUTEST)

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML	
Trichloroethylene (TCE)	604	0.5-ug/l	5.0 ug/l
	624	2-ug/l	
	8280C ²	see footnote	
Vinyl Chloride (chloroethene)	604	0.5-ug/l	2.0 ug/l
	624	2-ug/l	
	8280C ²	see footnote	
Acetone	624-3	1.0-ug/l	Monitor Only
	624	60-ug/l	
	8280C ²	see footnote	
1,4 Dioxane	624	60-ug/l	Monitor Only
	8280C ²	see footnote	
Total Phenols	624	1.0-ug/l	300 ug/l
	8260 ³	see footnote	
	625	1.0-ug/l	
	1625	1.0-ug/l	
	8260C ³	see footnote	
Pentachlorophenol (PCP)	8270D ³	see footnote	1.0 ug/l
	604 (GC/ECD)	1.0-ug/l	
	625	5-ug/l	
	1625	5-ug/l	
	8270D ³ (SIM, ML=1.0)	see footnote	
Total Phthalates ⁴ (Phthalate esters)	625	5-ug/l	3.0 ug/l
	8270D ³ (SIM, ML<=3.0)	see footnote	
Bis (2-Ethylhexyl) Phthalate	606	10-ug/l	5.0 ug/l
	625	5-ug/l	
	8270D ³	see footnote	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS

PART 2 of 2 (ACCUTEST)

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML	
Total Group I Polynuclear Aromatic Hydrocarbons (PAH)	8270D ¹	see footnote	10.0 ug/l
Benzo (a) Anthracene	610-OC	40-ug/l	0.0038 ug/l (compliance limit = ML of test method used)
	626	6-ug/l	
	610-HPLC	0.06-ug/l	
	8270D ¹	see footnote	
Benzo(e)pyrene	626	40-ug/l	0.0038 ug/l (compliance limit = ML of test method used)
	610-HPLC	2-ug/l	
	8270D ¹	see footnote	
	626	40-ug/l	
Benzo(b)fluoranthene	610-HPLC	0.1-ug/l	0.0038 ug/l (compliance limit = ML of test method used)
	8270D ¹	see footnote	
	626	40-ug/l	
	610-HPLC	2-ug/l	
Benzo(k)fluoranthene	8270D ¹	see footnote	0.0038 ug/l (compliance limit = ML of test method used)
	626	40-ug/l	
	610-HPLC	2-ug/l	
	8270D ¹	see footnote	
Chrysene	626	40-ug/l	0.0038 ug/l (compliance limit = ML of test method used)
	610-HPLC	6-ug/l	
	8270D ¹	see footnote	
	626	40-ug/l	
Dibenzo(a,h)anthracene	626	40-ug/l	0.0038 ug/l (compliance limit = ML of test method used)
	610-HPLC	0.1-ug/l	
	8270D ¹	see footnote	
	626	40-ug/l	
Indeno(1,2,3-cd)pyrene	626	40-ug/l	0.0038 ug/l (compliance limit = ML of test method used)
	610-HPLC	0.15-ug/l	
	8270D ¹	see footnote	
	626	40-ug/l	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 2 of 2 (ACCUTEST)

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML	
Total Group II Polynuclear Aromatic Hydrocarbons	8270D ¹	see footnote	100 ug/l
Acenaphthene	840-GC/EID	1-ug/l	Limited as Total Group II PAHs
	635	1-ug/l	
	640-HPLC	0.6-ug/l	
	8270D ¹	see footnote	
Acenaphthylene	635	10-ug/l	Limited as Total Group II PAHs
	640-HPLC	0.2-ug/l	
	8270D ¹	see footnote	
	635	10-ug/l	
Anthracene	640-HPLC	2-ug/l	Limited as Total Group II PAHs
	8270D ¹	see footnote	
	635	6-ug/l	
	640-HPLC	0.1-ug/l	
Benzo(g,h,i)perylene	8270D ¹	see footnote	Limited as Total Group II PAHs
	635	6-ug/l	
	640-HPLC	0.1-ug/l	
	8270D ¹	see footnote	
Fluoranthene	840-GC/EID	10-ug/l	Limited as Total Group II PAHs
	635	1-ug/l	
	640-HPLC	0.5-ug/l	
	8270D ¹	see footnote	
Fluorene	635	10-ug/l	Limited as Total Group II PAHs
	640-HPLC	0.1-ug/l	
	8270D ¹	see footnote	
	635	6-ug/l	
Phenanthrene	640-HPLC	0.05-ug/l	Limited as Total Group II PAHs
	8270D ¹	see footnote	
	635	10-ug/l	
	640-HPLC	0.05-ug/l	
Pyrene	8270D ¹	see footnote	Limited as Total Group II PAHs
	635	10-ug/l	
Total Aroclor (As)	ICP	5 ug/l	MA & NH = FW = 10 ug/l MA & NH = SW = 36 ug/l
	Furnace-AA	2 ug/l	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 2 of 2 (NET)

Minimum Levels and Test Methods		Discharge Effluent Limit	
PARAMETER	METHOD	ML	
MISCELLANEOUS			
Total Residual Chlorine	330.5	20 ug/l	MA & NH = FW = 11 ug/l, MA & NH = SW = 7.5 ug/l (compliance limit = ML = 20 ug/l)
INORGANIC PARAMETERS			
Total Antimony (Sb)	Flame-AA	200 ug/l	MA & NH = 5.6 ug/l
	ICP	60 ug/l	
	Furnace AA	5 ug/l	
Total Cadmium (Cd)	Flame-AA	40 ug/l	MA = FW = 0.2 ug/l, MA = SW = 8.9 ug/l, NH = FW = 0.8 ug/l, NH = SW = 9.3 ug/l
	ICP	6 ug/l	
	Furnace AA	0.5 ug/l	
Chromium VI (Hexavalent)	248.6	40 ug/l	MA & NH = FW = 11.4 ug/l, MA & NH = SW = 50.3 ug/l
	1638	10 ug/l	
	Flame-AA	400 ug/l	
Total Lead (Pb)	ICP	40 ug/l	MA = FW = 1.3 ug/l, MA = SW = 8.5 ug/l, NH = FW = 0.5 ug/l, NH = SW = 8.5 ug/l
	Furnace AA	3 ug/l	
	Flame-AA	20 ug/l	
Total Nickel (Ni)	ICP	10 ug/l	MA = FW = 29.0 ug/l, MA = SW = 6.2 ug/l, NH = FW = 16.1 ug/l, NH = SW = 6.2 ug/l
	Furnace AA	6 ug/l	
	ICP	60 ug/l	
Total Selenium (Se)	Furnace AA	5 ug/l	MA & NH = FW = 5.0 ug/l, MA & NH = SW = 71.0 ug/l
	ICP	60 ug/l	
	Flame-AA	60 ug/l	
Total Silver (Ag)	ICP	40 ug/l	MA = FW = 1.2 ug/l, MA = SW = 2.2 ug/l, NH = FW = 0.4 ug/l, NH = SW = 2.2 ug/l
	Furnace AA	2 ug/l	
	Flame-AA	30 ug/l	
Total Zinc (Zn)	ICP	10 ug/l	MA = FW = 66.8 ug/l, MA = SW = 65.8 ug/l, NH = FW = 37 ug/l, NH = SW = 65.8 ug/l
	Flame-AA	30 ug/l	

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS
PART 2 of 2 (NET)

PARAMETER	Minimum Levels and Test Methods		Discharge Effluent Limit
	METHOD	ML ¹	

LEGEND:

RGP = Remediation General Permit
 Flame AA = Flame Atomic Absorption
 ICP = Inductively Coupled Plasma
 Furnace AA = Furnace Atomic Absorption
 FW = Freshwater
 SW = Saltwater
 MA = State of Massachusetts
 NH = State of New Hampshire

FOOTNOTES:

- Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B). Where a minimum level (ML) is listed but a test method is not specified, permittees may use any of the available methods approved for use under 40 CFR 136, including alternatives approved by this permit, that meets ML. See EPA's "Methods and Guidance for the Analysis of Water" at www.epa.gov/water/owrcatalog.nsf. Where a test method is specified but ML is not listed for that Method, the lowest ML for listed methods must be used before concentration can be considered as "non-detect".
- For measuring volatile organic compounds, Method 8260C (or the latest version) may be used as a substitute for CWA Methods 524.2, 602, 624, or 1624. Method 8260C must be preceded by Method 5030 as the preparation method. However, any method changes must be accompanied by documented quality assurance quality control (QA/QC) test to prove that the analytical process can achieve the lower detection limits of Method 8260C. For TBA and TAME the EPA advises no acid as a preservative.
- For measuring semi-volatile organic compounds, Method 8270D may be used as a substitute for Methods 610, 626, or 1625. Method 8270D must be preceded by Method 3520C as the sample preparation method. In either case, the quality control requirements of Method 3500B must be taken into account. The sample preparation method must be specified with data analysis records. Method 8270D may be modified to provide lower detection and quantization limits using Selected Ion Monitoring (SIM). Any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8270D.
- GC - gas chromatography.
- GC/MS - gas chromatography/mass spectrometry
- LC-high pressure liquid chromatography.
- Flame Atomic Absorption.
- For measuring fuel oxygenates, Method 602 must be modified to include a heated purge.
- The sum of individual phthalate compounds.
- In the November 2002 WQC, EPA has revised the definition of total PCBs for aquatic life as "total PCBs is the sum of all homologues, all isomers, all congeners, or all Aroclor analyses."
- Method 1699a (HPLC/HRMS) has been proposed by EPA and is currently being validated. When approval of the method is finalized, it will be approved for use with this general permit.
- Methods 6010b and 200.7 for metals may only be used when sample prepared with SW-846 digestion method, Method 3010.
- Any value below the ML shall be reported as zero.
- Analysis of the influent samples shall use the test methods with the MLs at or below limits where practicable.

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CHAIN OF CUSTODY ATTACHMENT - EPA NPDES RGP REQUIREMENTS PART 2 of 2 (ACCUTEST)

PARAMETER	Minimum Levels and Test Methods	ML	Discharge Effluent Limit
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LEGEND:

RGP = Remediation General Permit
Flame AA = Flame Atomic Absorption
ICP = Inductively Coupled Plasma
Furnace AA = Furnace Atomic Absorption
FW = Freshwater
SW = Saltwater
MA = State of Massachusetts
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FOOTNOTES:

1. Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B) where a minimum level (ML) is listed but a test method is not specified, permittees may use any of the available methods approved for use under 40 CFR 136, including alternatives approved by this permit, that meets ML. See EPA's "Methods and Guidance for the Analysis of Water" at www.epa.gov/water/owrcatalog.nsf. Where a test method is specified but ML is not listed for that Method, the lowest ML for listed methods must be used before concentration can be considered as "non-detect".
2. For measuring volatile organic compounds, Method 8260C (for the latest version) may be used as a substitute for CWA Methods 824.2, 602, 624, or 1624. Method 8260C must be preceded by Method 5030 as the preparation method. However, any method changes must be accompanied by documented quality assurance quality control (QA/QC) test to prove that the analytical process can achieve the lower detection limits of Method 8260C. For TBA and TAME the EPA advises no acid as a preservative.
3. For measuring semi-volatile organic compounds, Method 8270D may be used as a substitute for Methods 610, 625, or 1625. Method 8270D must be preceded by Method 3520C as the sample preparation method. In either case, the quality control requirements of Method 3500B must be taken into account. The sample preparation method must be specified with data analysis records. Method 8270D may be modified to provide lower detection and quantitation limits using Selected Ion Monitoring (SIM). Any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8270D.
4. GC - gas chromatography.
5. GC/MS - gas chromatography/ mass spectrometry
6. LC-High pressure liquid chromatography.
7. Flame Atomic Absorption.
8. For measuring fuel oxygenates, Method 602 must be modified to include a heated purge.
9. The sum of individual phthalate compounds.
10. In the November 2002 WQC, EPA has revised the definition of total PCBs for aquatic life as "total PCBs is the sum of all homologues, all isomer, all congener, or all Aroclor analyses.
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14. Analysis of the influent samples shall use the test methods with the MLs at or below limits where practicable.

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