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AUBURN, MA 01501
508-832-6022
FAX: 508-832-4603
WWW.ECSCONSULT.COM

November 20, 2006
File No. 93-207346.00

United States Environmental
Protection Agency, Region 1
RPG-NOC Processing
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Attn: Mr. George Papadopolis

RE: Hi-Lo Gas Station
795 Main Street
Southbridge, Massachusetts
MADEP RTN 2-0016397

Dear Mr. Papadopolis :

Environmental Compliance Services, Inc. (ECS) is pleased to provide supporting documentation for the Notice of Intent (NOI) for the Remediation General Permit (RGP) on behalf of Hi-Lo Gas (d.b.a. RPR, Inc). This NOI is submitted in order to obtain a permit for the operation of a groundwater recovery and treatment system (GWTS) to be located at 790 Main Street in Southbridge, Massachusetts to abate a release of gasoline that occurred at the Hi-Lo facility located at 795 Main Street in Southbridge, Massachusetts. A Site Locus is provided as Figure 1. A copy of the NOI form is provided as Attachment I.

System Design

A proposed schematic is attached. The groundwater treatment system located on the 790 Main Street property will be comprised of a network of recovery wells in which are located submersible pneumatic pumps that collect liquids (groundwater and recovered gasoline). Recovered liquids will be pumped to an oil/water separator, low profile air stripper, particulate filters and two liquid phase granular activated carbon units (plumbed in series) prior to discharge to the Quinebaug River. Free phase gasoline is removed from the liquid stream by the oil water separator and collected in a recovery tank.

A Site plan detailing the location of the groundwater treatment system, the outfall location, and the location of the property where the release occurred is provided as Figure 5. Diagrams of the groundwater treatment system are provided as Figure numbers PID - 2 and PID- 3.

Average flow rate of discharge of treated groundwater from the system to the Quinebaug River is expected to be approximately 5 gallons per minute (gpm). The design capacity of the groundwater treatment system is 24 gpm based upon a design capacity of each of the three proposed submersible pumps of 8 gpm. As a conservative estimate, a maximum flow capacity for the groundwater treatment system was estimated at 25 gpm.

Mr. George Papadopolis
USEPA, Region 1
November 20, 2006

Page 2

Influent Sample Analysis

A sample was collected at the sump that is located in the basement of the 790 Main Street building on October 25, 2006. The sample was submitted to Spectrum Analytical, Inc. of Agawam, Massachusetts under standard chain of custody protocol for analysis of semivolatile organic compounds (SVOCs) by USEPA Method 625, volatile organic compounds (VOCs) by USEPA Method 8260B, polychlorinated biphenyls (PCBs) by USEPA Method 608, total petroleum hydrocarbons (TPH) by USEPA Method 1664, ethylene dibromide (EDB) by USEPA Method 504.1, total metals (silver, arsenic, cadmium, chromium, copper, iron, nickel, lead, antimony, selenium, and zinc) by USEPA Method 6010B, mercury by USEPA Method 245.1/7470A, cyanide by USEPA Method 9012A, total residual chloride by Hach 8167, and total suspended solids by SM2540D. A copy of the laboratory report and chain of custody record are provided as Attachment II.

Comparison to the Appendix III effluent limitations (<http://www.epa.gov/region1/npdes/remediation/Appendix-III.pdf>, accessed November 14, 2006) indicates that the untreated influent sample contained iron at a concentration that exceeds the effluent limitations for zero dilution. No other metals exceeded the effluent limitations listed in Appendix III. A calculation dilution factor to evaluate the potential concentration of iron is provided below.

Receiving Waters Information

The receiving water for the treated groundwater discharge is the Quinebaug River. The Quinebaug River abuts the 790 Main Street property to the north. Flow direction of the Quinebaug River at the proposed discharge location is approximately easterly.

ECS consulted the online United States Geological Survey (USGS) Streamstats program to determine the 7Q10 flow rate at the discharge location (<http://ma.water.usgs.gov>, accessed November 8, 2006). Data obtained from the online resource indicated that the 7Q10 flow rate for the Quinebaug at the outfall location is 0.99 cubic feet per second (cfs).

Based upon an estimated maximum flow rate of the discharge from the groundwater treatment system of 25 gpm, the dilution factor was calculated as:

$$\text{Equation 1: } DF = (Q_d + Q_s)/Q_d$$

Where: DF = DilutionFactor
Q_d = Maximum flow rate of the discharge in cfs
Q_s = Receiving water 7Q10 flow (cfs), where,
7Q10 = The minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years

$$Q_d = 25 \text{ gpm} \times 0.00223 \text{ cfs/gpm} = 0.05575 \text{ cfs}$$

$$DF = (0.05575 + 0.99)/(0.05575)$$

Mr. George Papadopolis
USEPA, Region 1
November 20, 2006

Page 3

$$DF = 18.758$$

The concentration of iron reported present in the untreated sample (2,580 micrograms per liter (µg/L)) was compared to the column corresponding to a dilution factor of 18.758 (between 10 and 50) in Appendix IV table. The discharge limit listed in the Appendix IV table is 5,000 µg/L; therefore, iron should not be subject to permit limitations or monitoring requirements for this discharge.

Receiving Water Classification

ECS consulted the Massachusetts Department of Environmental Protection (MADEP) Division of Watershed Management Integrated List of Waters (<http://www.mass.gov/dep/water/resources/2004il4.pdf>) to determine the classification for the receiving waters. The list indicates that the section of the Quinebaug from the Sturbridge wastewater treatment plant (west of the proposed discharge location) to the confluence with Cady Brook (located approximately 1,000 feet downstream of the proposed discharge location) is classified as Category 2. The use attained at this section of the river according to the list is “aquatic habitat”. The receiving water at this location is not listed as water quality impaired or limited water. A Total Maximum Daily Load (TMDL) is not listed for this portion of the Quinebaug River.

Evaluation of Threatened or Endangered Species or Critical Habitat Located within Receiving Waters

According to Massachusetts Geographic Information Systems (MassGIS) online maps for the Natural Heritage Endangered Species Program (NHESP) (2006), there are no Estimated Habitats for Rare Wildlife or Priority Habitats for State-protected Rare Species within a ½-mile radius of the proposed discharge area. A copy of the NHESP Map is provided as Attachment III

Review of National Register of Historic Places

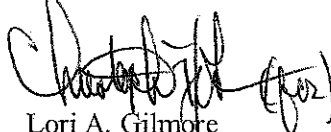
A listing of all Historic Places within the town of Southbridge was obtained from the online database at www.nr.nps.gov/nrloc1.htm (accessed November 14, 2006). The list indicated that a historic place is located in close proximity to the discharge location. The area described as the “Hamilton Woolen Company Historic District”, described as located in an area “roughly bounded by McKinstry Brook, Quinebaug River, and Mill Street” is visible on Figure 1 as the large building located northeast of the proposed discharge location across the Quinebaug River.

Mr. George Papadopolis
USEPA, Region 1
November 20, 2006

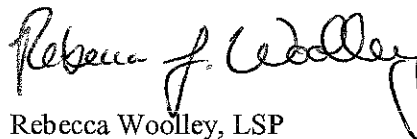
Page 4

A copy of this letter and supporting documentation has been forwarded to the Central Regional Office of the MADEP. Should you have any questions or concerns regarding the contents of this letter or the NOI for the RGP, please do not hesitate to contact the undersigned.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.



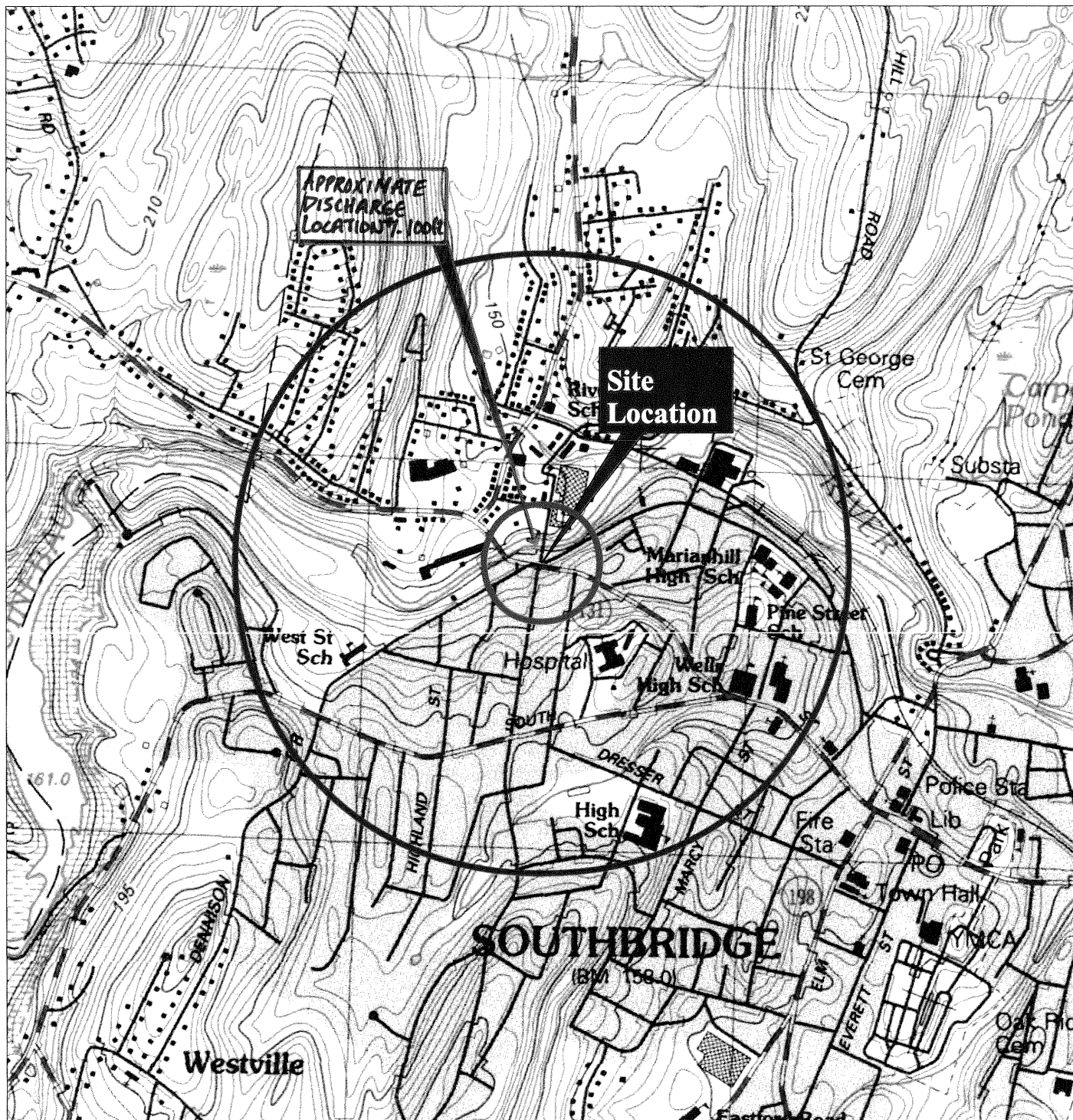
Lori A. Gilmore
Project Manager



Rebecca Woolley, LSP
Senior Project Manager

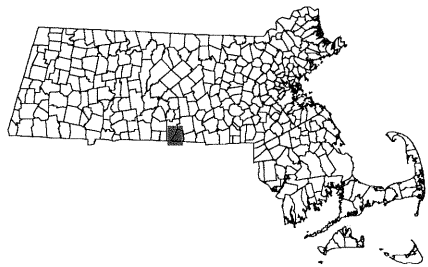
LAG/RW
Attachments

Cc: W. Phillips, MADEP-CERO
R. Rizk; RPR, Inc.
R. Cox, Bowditch & Dewey



Site Location Map

790 Main Street
Southbridge, MA 01550



Map taken from the 7.5 minute USGS Southbridge
Quadrangle, 1981.

- ⊕ Site Location
- 500 foot radius
- 0.5 mile radius

Figure 1

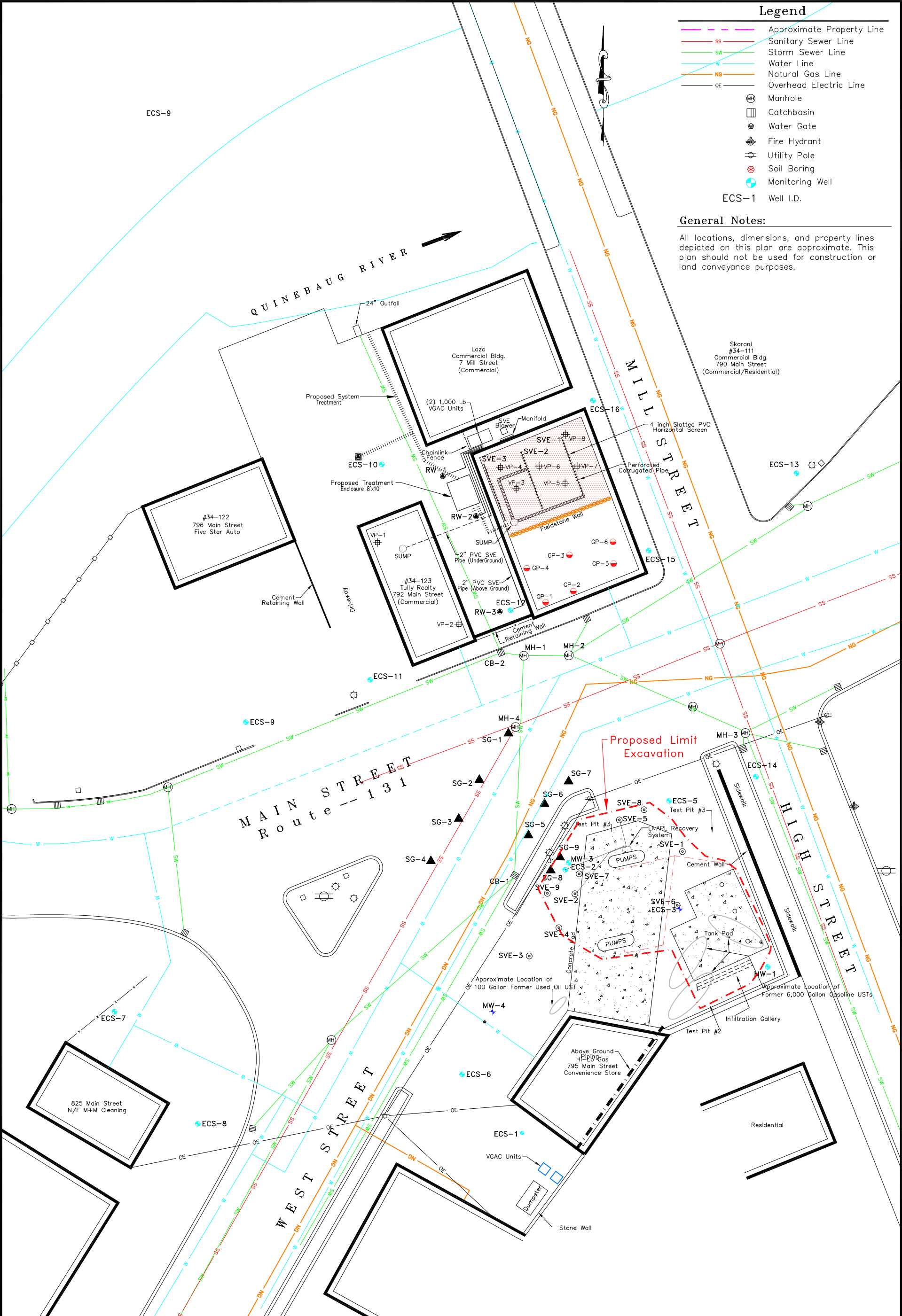
500 0 500 1000 Feet

1 in. = 1250 ft.



203746
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ecs
MARIN



Legend

- Approximate Property Line
- Sanitary Sewer Line
- Storm Sewer Line
- Water Line
- Natural Gas Line
- Overhead Electric Line
- Manhole
- Catchbasin
- Water Gate
- Fire Hydrant
- Utility Pole
- Soil Boring
- Monitoring Well

ECS-1 Well I.D.

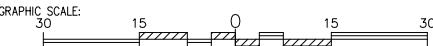
General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.



27 Midstate Drive Suite 218 * Auburn MA 01501
Phone: 508-832-6022 Fax: 508-832-4603

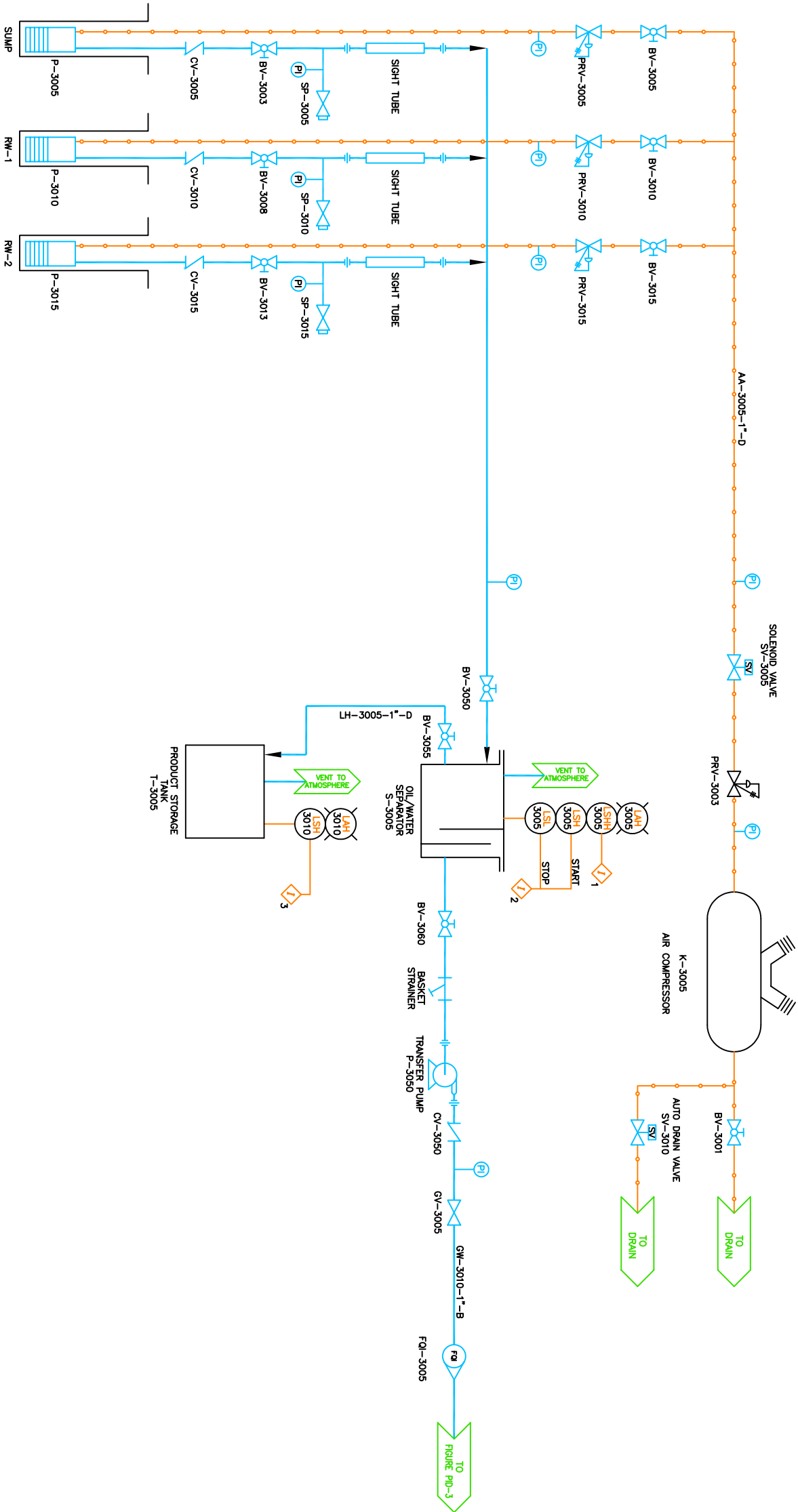
CLIENT: O'Connell Oil Associates, Inc. and Hi-Lo Gas



PROJECT: Hi-Lo Gas
795 Main Street
Southbridge, MA

TITLE: Proposed System Layout & Soil Excavation

COMPUTER CADFILE : CADFILE			
DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
RW	CK	CTJ	SS
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"= 30'	Oct. 2006	93-207346	5



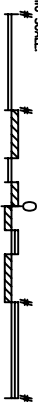
I.D.	DESCRIPTION
K-3005	AIR COMPRESSOR
P-3005	PNEUMATIC SUBMERSIBLE PUMP, 0-8 GPM
P-3010	PNEUMATIC SUBMERSIBLE PUMP, 0-8 GPM
P-3015	PNEUMATIC SUBMERSIBLE PUMP, 0-8 GPM
P-3050	TRANSFER PUMP, 1HP, 15 GPM, 50 TDH
S-3005	OIL WATER SEPARATOR, 15 GPM FLOW CAPACITY
T-3005	PRODUCT STORAGE TANK

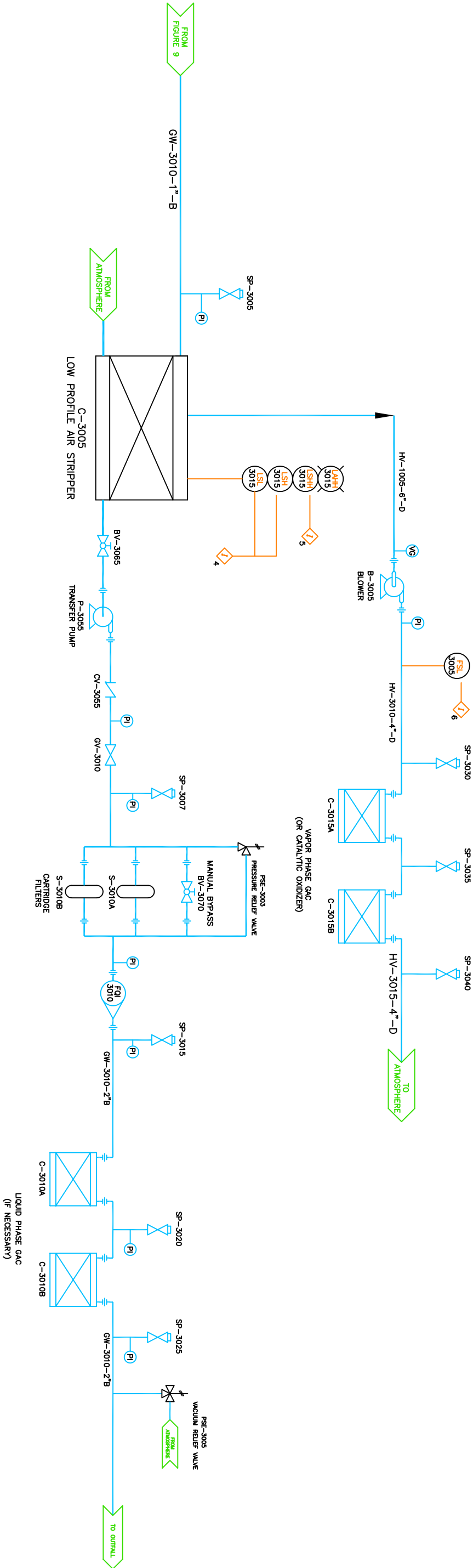
EQUIPMENT SCHEDULE

I.D.	DESCRIPTION
1	LSHH-3005 CLOSES SV-3005 ON HIGH LIQUID LEVEL
2	LSH-3005 TURNS P-3050 ON, LSL-3005 TURNS P-3050 OFF
3	LSH-3010 CLOSES SV-3005 ON HIGH LIQUID LEVEL

INTERLOCKS SCHEDULE

GROUNDWATER RECOVERY SYSTEM

CLIENT:		PROJECT:	
 568 Silver Street • Agawam, MA 01001 Phone: 1-800-786-8530 Fax: 413-786-2776		Hi Lo Gas Station 795 Main Street SOUTHRIDGE, MASSACHUSETTS	
GRAPHIC SCALE:		TITLE:	
		PIPING & INSTRUMENTATION DIAGRAM	
DRAWN BY: RRW		DESIGNED BY: NJB	
SCALE:		DATE:	
N.T.S.		Nov, 2006	
CHECKED BY:		JOB NO.:	
		91-201517	
APPROVED BY:		FIGURE NO.:	
		PID-2	



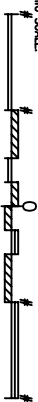
EQUIPMENT SCHEDULE

I.D.	DESCRIPTION
C-3005	LOW PROFILE AIR STRIPPER
C-3010	LIQUID PHASE GAC
C-3015	VAPOR PHASE GAC
B-3005	AIR STRIPPER BLOWER, 3HP, 150 CFM, 18" WC
P-3005	TRANSFER PUMP, 1HP, 15 GPM, 50 TDH
S-3010	A/B PARTICULATE FILTERS 75 PSI MAX

GROUNDWATER TREATMENT SYSTEM

INTERLOCKS SCHEDULE

I.D.	DESCRIPTION
4	LSH-3015 TURNS P-3005 ON, LSL-3015 TURNS P-3005 OFF
5	LSHH-3015 TURNS P-3050 OFF, CLOSES SY-3005 ON HIGH LIQUID LEVEL
6	FSL-1005 TURNS B-3005 OFF, TURNS P-3050 OFF, CLOSES SY-3005 ON LOW FLOW

 568 Silver Street • Agawam, MA 01001 Phone: 1-800-786-8590 Fax: 413-786-2776	CLIENT:	PROJECT:	COMPUTER DATE : 201517.DWG	
	GRAPHIC SCALE: 	Hi Lo Gas Station 795 Main Street SOUTHBIDGE, MASSACHUSETTS		DRAWN BY: RRW SCALE: N.T.S.
TITLE: PIPING & INSTRUMENTATION DIAGRAM			CHECKED BY: NJB	APPROVED BY: DWF
			JOB NO.: 91-201517	FIGURE NO.: PID-3

ATTACHMENT I
NOI FOR THE RGP

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: Hi-Lo Gas Station		Facility/site address:	
Location of facility/site: longitude: <u>-72°02'40"</u> latitude: <u>42°04'50"</u>	Facility SIC code(s): 5541	Street: 795 Main Street	
b) Name of facility/site owner: Hi-Lo Gas, D.B.A. RPR, Inc.		Town: Southbridge	
Email address of owner:		State: MA	Zip: 01550
Telephone no. of facility/site owner: 774-696-3429		County: Worcester	
Fax no. of facility/site owner:		Owner is (check one): 1. Federal ____ 2. State/Tribal ____ 3. Private <u>X</u> 4. other, if so, describe:	
Address of owner (if different from site):			
Street: 6 Rice Lane			
Town: Worcester	State: MA	Zip: 01604	County: Worcester
c) Legal name of operator: Environmental Compliance Services, Inc.	Operator telephone no: 413-789-3530/508-832-6022		
	Operator fax no.: 413-789-2776/508-832-4603		Operator email: rwoolley@ecsconsult.com cklingler@ecsconsult.com
Operator contact name and title: Rebecca Woolley, Senior Project Manager; Chuck Klingler, Branch Manager (Auburn)			

Address of operator (if different from owner):		Street: 588 Silver Street	
Town: Agawam	State: MA	Zip: 01001	County: Hampden
d) Check "yes" or "no" for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ___ No <u>X</u> , if "yes," number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ___ No <u>X</u> , if "yes," date and tracking #: 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes <u>X</u> No ___ 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ___ No <u>X</u>			
e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <u>X</u> No ___ If "yes," please list: 1. site identification # assigned by the state of NH or MA: 2-16397 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number: MADEP CERO, William Phillips, 627 Main Street, Worcester, MA 01608 508-792-7650		f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y ___ N <u>X</u> , if Y, number: 2. phase I or II construction storm water general permit? Y ___ N <u>X</u> , if Y, number: 3. individual NPDES permit? Y ___ N <u>X</u> , if Y, number: 4. any other water quality related permit? Y ___ N <u>X</u> , if Y, number:	
2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:			
a) Describe the discharge activities for which the owner/applicant is seeking coverage: A proposed schematic is attached. The groundwater treatment system located on the 790 Main Street property will be comprised of a network of recovery wells in which are located submersible pneumatic pumps that collect liquids (groundwater and recovered gasoline). Recovered liquids will be pumped to an oil/water separator, low profile air stripper, particulate filters and two liquid phase granular activated carbon units (plumbed in series) prior to discharge to the Quinebaug River. Free phase gasoline is removed from the liquid stream by the oil water separator and collected in a recovery tank.			
b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow 0.045 ft ³ /s Average flow 0.011 ft ³ /s Is maximum flow a design value ? Y <u>X</u> 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. -72°02'40" lat. 42°04'52"; 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 <u>X</u> or seasonal _____? Is discharge ongoing Yes <u>X</u> No _____?	
c) Expected dates of discharge (mm/dd/yy): start 12/15/2006 end 12/15/2012			
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		Average Daily Value	
							Concentration (ug/L)	mass (kg)	Concentration (ug/L)	mass (kg)
1 Total Suspended Solids	X		1	grab	SM2540D	5,000	11,000			
2 Total Residual Chlorine	X		1	grab	Hach 8167	20	ND			
3 Total Petroleum Hydrocarbons	X		1	grab	USEPA 1664	1000	ND			
4 Cyanide	X		1	grab	SW846 9012A	10	ND			
5 Benzene		X	1	grab	USEPA 8260B	20	313			
6 Toluene		X	1	grab	USEPA 8260B	20	1,110			
7 Ethylbenzene		X	1	grab	USEPA 8260B	20	94			
8 (m,p,o) Xylenes		X	1	grab	USEPA 8260B	20	441			
9 Total BTEX		X	1	grab	USEPA 8260B	20	1,958			

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	Concentration (ug/L)	mass (kg)	Concentration (ug/L)	mass (kg)
10 Ethylene Di bromide (1,2-dibromomethane)	X		1	grab	USEPA 8260B	20	ND			
11 Methyl-tert-Butyl Ether (MtBE)	X		1	grab	USEPA 8260B	20	ND			
12 tert-Butyl Alcohol	X		1	grab	USEPA 8260B	20	ND			
13 tert-Amyl Methyl Ether (TAME)		X	1	grab	USEPA 8260B	20	490			
14 Naphthalene	X		1	grab	USEPA 8260B	20	ND			
15 Carbon Tetrachloride	X		1	grab	USEPA 8260B	20	ND			
16 1,4 Dichlorobenzene	X		1	grab	USEPA 8260B	20	ND			
17 1,2 Dichlorobenzene	X		1	grab	USEPA 8260B	20	ND			
18 1,3 Dichlorobenzene	X		1	grab	USEPA 8260B	20	ND			
19 1,1 Dichloroethane	X		1	grab	USEPA 8260B	20	ND			
20 1,2 Dichloroethane	X		1	grab	USEPA 8260B	20	ND			
21 1,1 Dichloroethylene	X		1	grab	USEPA 8260B	20	ND			
22 cis-1,2-dichloroethylene	X		1	grab	USEPA 8260B	20	ND			
23 Dichloromethane (Methylene Chloride)	X		1	grab	USEPA 8260B	200	ND			
24 Tetrachloroethylene	X		1	grab	USEPA 8260B	20	ND			

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	Concentration (ug/L)	mass (kg)	Concentration (ug/L)	mass (kg)
25 1,1,1-Trichloroethane	X		1	grab	USEPA 8260B	20	ND			
26 1,1,2-Trichloroethane	X		1	grab	USEPA 8260B	20	ND			
27 Trichloroethylene	X		1	grab	USEPA 8260B	20	ND			
28 Vinyl Chloride	X		1	grab	USEPA 8260B	20	ND			
29 Acetone	X		1	grab	USEPA 8260B	200	ND			
30 1,4-Dioxane	X		1	grab	USEPA 8260B	400	ND			
31 Total Phenols	X		1	grab	USEPA 625	5	ND			
32 Pentachlorophenol	X		1	grab	USEPA 625	5	ND			
33 Total Phthalates (Phthalate esthers)	X		1	grab	USEPA 625	5	ND			
34 Bis (2-Ethylhexyl Phthalate[Di-(ethylhexyl) Phthalate]	X		1	grab	USEPA 625	5	ND			
35 Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	X		1	grab	USEPA 625	5	ND			
a Benzo(a) Anthracene	X		1	grab	USEPA 625	5	ND			
b Benzo(b) Pyrene	X		1	grab	USEPA 625	5	ND			
c Benzo(b) Fluoranthene	X		1	grab	USEPA 625	5	ND			
d Benzo(k) Fluoranthene	X		1	grab	USEPA 625	5	ND			
e Chrysene	X		1	grab	USEPA 625	5	ND			

	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	Concentration (ug/L)	mass (kg)	Concentration (ug/L)	mass (kg)
f	Dibenzo(a,h) anthracene	X		1	grab	USEPA 625	5	ND			
g	Indeno (1,2,3-cd) Pyrene	X		1	grab	USEPA 625	5	ND			
36	Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	X		1	grab	USEPA 625	5	ND			
h	Acenaphthene	X		1	grab	USEPA 625	5	ND			
i	Acenaphthylene	X		1	grab	USEPA 625	5	ND			
j	Anthracene	X		1	grab	USEPA 625	5	ND			
k	Benzo(g,h,i) Perylene	X		1	grab	USEPA 625	5	ND			
l	Fluoranthene	X		1	grab	USEPA 625	5	ND			
m	Fluorene	X		1	grab	USEPA 625	5	ND			
n	Naphthalene	X		1	grab	USEPA 625	5	ND			
o	Phenanthrene	X		1	grab	USEPA 625	5	ND			
p	Pyrene	X		1	grab	USEPA 625	5	ND			
37	Total Polychlorinated Biphenyls (PCBs)	X		1	grab	USEPA 608	0.229	ND			
38	Antimony	X		1	grab	USEPA 6010B	15	ND			
39	Arsenic	X		1	grab	USEPA 6010B	4	ND			
40	Cadmium	X		1	grab	USEPA 6010B	2.5	ND			
41	Chromium III		X	1	grab	USEPA 6010B	5	5.6			
42	Chromium VI	X		1	grab	SM3500CrD7196A	5	ND			

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	Concentration (ug/L)	mass (kg)	Concentration (ug/L)	mass (kg)
43 Copper	X		1	grab	USEPA 6010B	7.5	ND			
44 Lead	X		1	grab	USEPA 6010B	7.5	ND			
45 Mercury	X		1	grab	USEPA245.1/7470A	0.2	ND			
46 Nickel	X		1	grab	USEPA 6010B	5	ND			
47 Selenium	X		1	grab	USEPA 6010B	15	ND			
48 Silver	X		1	grab	USEPA 6010B	5	ND			
49 Zinc	X		1	grab	USEPA 6010B	12.5	ND			
50 Iron		X	1	grab	USEPA 6010B	5	2,580			
Other (describe):										
51 1,2,4 trimethylbenzene		X	1	grab	USEPA 8260B	20	52.8			
52 1,3,5 trimethylbenzene		X	1	grab	USEPA 8260B	20	22			
53 Ethyl tert-butyl ether		X	1	grab	USEPA 8260B	20	31.2			

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>X</u> N <u> </u>	If yes, which metals? 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: <u>Iron</u> DF: <u>18.758</u> = (0.05575 cfs x 0.99 cfs)/0.05575 cfs	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>X</u> If "Yes," list which metals:

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

A proposed schematic is attached. The groundwater treatment system will be comprised of a network of recovery wells in which are located submersible pneumatic pumps that collect liquids (groundwater and recovered gasoline) and transport them through a number of particulate filters (plumbed in series), through an air stripper, and to an oil/water separator. Free phase gasoline is removed from the liquid stream and collected in a recovery tank. Remaining liquids are passed through two liquid phase granular activated carbon units (plumbed in series) prior to discharge to the Quinebaug River.

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): Particulate filters			

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 5 Maximum flow rate of treatment system 25 Design flow rate of treatment system 24

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

None anticipated at this time.

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

a) Identify the discharge pathway:	Direct <u>X</u>	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 liquids will be discharged directly from the treatment system to the Quinebaug River.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:

1. For multiple discharges, number the discharges sequentially.

2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water

The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water Category 2 – Use attained: Aquatic Life

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.99 cfs

Please attach any calculation sheets used to support stream flow and dilution calculations. Streamflow calculations obtained from USGS Streamstats, accessed 11/08/06.

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

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

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes No X

Has any consultation with the federal services been completed? No X or is consultation underway? Yes No X

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 X No Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes No X

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.

Additional supplemental information is provided in a letter submitted with this application. Maps, analytical data, line diagrams, and an explanation of resources utilized for the completion of this application are provided in the attached letter.

8. Signature Requirements: The Notice of Incent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.12, 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: Hi-Lo Gas Station

Operator signature: 

Title: owner RPR inc

Date: 12/8/06

ATTACHMENT II

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

Report Date:
31-Oct-06 12:35



- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
27 Midstate Drive, Suite 218
Auburn, MA 01501
Attn: Christopher Johnson

Project: Former O'Connell - Hi-Lo - Southbridge, MA
Project 91-201517.02

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SA53133-01	SUMP	Ground Water	25-Oct-06 10:00	25-Oct-06 15:23

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Please note that this report contains 27 pages of analytical data plus Chain of Custody document(s).

This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Massachusetts Certification # M-MA138/MA1110

Connecticut # PH-0777

Florida # E87600/E87936

Maine # MA138

New Hampshire # 2538/2972

New Jersey # MA011/MA012

New York # 11393/11840

Rhode Island # 98

USDA # S-51435

Vermont # VT-11393



Authorized by:

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

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

Sample Identification

SUMP

SA53133-01

Client Project #

91-201517.02

Matrix

Ground Water

Collection Date/Time

25-Oct-06 10:00

Received

25-Oct-06

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Volatile Organic Compounds											
<u>Volatile Organic Compounds</u>											
Prepared by method SW846 5030 Water MS											
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL		µg/l	20.0	20	SW 846 8260B	27-Oct-06	27-Oct-06	6102074	jro
67-64-1	Acetone	BRL		µg/l	200	20	"	"	"	"	"
107-13-1	Acrylonitrile	BRL		µg/l	20.0	20	"	"	"	"	"
71-43-2	Benzene	313		µg/l	20.0	20	"	"	"	"	"
108-86-1	Bromobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
74-97-5	Bromochloromethane	BRL		µg/l	20.0	20	"	"	"	"	"
75-27-4	Bromodichloromethane	BRL		µg/l	20.0	20	"	"	"	"	"
75-25-2	Bromoform	BRL		µg/l	20.0	20	"	"	"	"	"
74-83-9	Bromomethane	BRL		µg/l	40.0	20	"	"	"	"	"
78-93-3	2-Butanone (MEK)	BRL		µg/l	200	20	"	"	"	"	"
104-51-8	n-Butylbenzene	BRL		µg/l	20.0	20	"	"	"	"	"
135-98-8	sec-Butylbenzene	BRL		µg/l	20.0	20	"	"	"	"	"
98-06-6	tert-Butylbenzene	BRL		µg/l	20.0	20	"	"	"	"	"
75-15-0	Carbon disulfide	BRL		µg/l	100	20	"	"	"	"	"
56-23-5	Carbon tetrachloride	BRL		µg/l	20.0	20	"	"	"	"	"
108-90-7	Chlorobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
75-00-3	Chloroethane	BRL		µg/l	40.0	20	"	"	"	"	"
67-66-3	Chloroform	BRL		µg/l	20.0	20	"	"	"	"	"
74-87-3	Chloromethane	BRL		µg/l	40.0	20	"	"	"	"	"
95-49-8	2-Chlorotoluene	BRL		µg/l	20.0	20	"	"	"	"	"
106-43-4	4-Chlorotoluene	BRL		µg/l	20.0	20	"	"	"	"	"
96-12-8	1,2-Dibromo-3-chloropropane	BRL		µg/l	40.0	20	"	"	"	"	"
124-48-1	Dibromochloromethane	BRL		µg/l	20.0	20	"	"	"	"	"
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	20.0	20	"	"	"	"	"
74-95-3	Dibromomethane	BRL		µg/l	20.0	20	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	BRL		µg/l	40.0	20	"	"	"	"	"
75-34-3	1,1-Dichloroethane	BRL		µg/l	20.0	20	"	"	"	"	"
107-06-2	1,2-Dichloroethane	BRL		µg/l	20.0	20	"	"	"	"	"
75-35-4	1,1-Dichloroethene	BRL		µg/l	20.0	20	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	20.0	20	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	20.0	20	"	"	"	"	"
78-87-5	1,2-Dichloropropane	BRL		µg/l	20.0	20	"	"	"	"	"
142-28-9	1,3-Dichloropropane	BRL		µg/l	20.0	20	"	"	"	"	"
594-20-7	2,2-Dichloropropane	BRL		µg/l	20.0	20	"	"	"	"	"
563-58-6	1,1-Dichloropropene	BRL		µg/l	20.0	20	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	20.0	20	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	20.0	20	"	"	"	"	"
100-41-4	Ethylbenzene	94.0		µg/l	20.0	20	"	"	"	"	"
87-68-3	Hexachlorobutadiene	BRL		µg/l	20.0	20	"	"	"	"	"
591-78-6	2-Hexanone (MBK)	BRL		µg/l	200	20	"	"	"	"	"
98-82-8	Isopropylbenzene	BRL		µg/l	20.0	20	"	"	"	"	"
99-87-6	4-Isopropyltoluene	BRL		µg/l	20.0	20	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	4,850	E	µg/l	20.0	20	"	"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL		µg/l	200	20	"	"	"	"	"
75-09-2	Methylene chloride	BRL		µg/l	200	20	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/l	20.0	20	"	"	"	"	"

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Page 2 of 27

Sample Identification**SUMP**

SA53133-01

Client Project #

91-201517.02

Matrix

Ground Water

Collection Date/Time

25-Oct-06 10:00

Received

25-Oct-06

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds											
Volatile Organic Compounds											
Prepared by method SW846 5030 Water MS											
103-65-1	n-Propylbenzene	BRL		µg/l	20.0	20	SW 846 8260B	27-Oct-06	27-Oct-06	6102074	jro
100-42-5	Styrene	BRL		µg/l	20.0	20	"	"	"	"	"
630-20-6	1,1,1,2-Tetrachloroethane	BRL		µg/l	20.0	20	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL		µg/l	20.0	20	"	"	"	"	"
127-18-4	Tetrachloroethene	BRL		µg/l	20.0	20	"	"	"	"	"
108-88-3	Toluene	1,110		µg/l	20.0	20	"	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	20.0	20	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	20.0	20	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	20.0	20	"	"	"	"	"
79-01-6	Trichloroethene	BRL		µg/l	20.0	20	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/l	20.0	20	"	"	"	"	"
96-18-4	1,2,3-Trichloropropane	BRL		µg/l	20.0	20	"	"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	52.8		µg/l	20.0	20	"	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	22.0		µg/l	20.0	20	"	"	"	"	"
75-01-4	Vinyl chloride	BRL		µg/l	20.0	20	"	"	"	"	"
1330-20-7	m,p-Xylene	286		µg/l	40.0	20	"	"	"	"	"
95-47-6	o-Xylene	155		µg/l	20.0	20	"	"	"	"	"
109-99-9	Tetrahydrofuran	BRL		µg/l	200	20	"	"	"	"	"
60-29-7	Ethyl ether	BRL		µg/l	20.0	20	"	"	"	"	"
994-05-8	Tert-amyl methyl ether	490		µg/l	20.0	20	"	"	"	"	"
637-92-3	Ethyl tert-butyl ether	31.2		µg/l	20.0	20	"	"	"	"	"
108-20-3	Di-isopropyl ether	BRL		µg/l	20.0	20	"	"	"	"	"
75-65-0	Tert-Butanol / butyl alcohol	BRL		µg/l	200	20	"	"	"	"	"
123-91-1	1,4-Dioxane	BRL		µg/l	400	20	"	"	"	"	"
Surrogate recoveries:											
460-00-4	4-Bromofluorobenzene	108		70-130 %			"	"	"	"	"
2037-26-5	Toluene-d8	100		70-130 %			"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	118		70-130 %			"	"	"	"	"
1868-53-7	Dibromofluoromethane	101		70-130 %			"	"	"	"	"
Volatile Organic Compounds										SA53133-01RE1	
Prepared by method SW846 5030 Water MS											
1634-04-4	Methyl tert-butyl ether	4,810		µg/l	50.0	50	SW 846 8260B	28-Oct-06	28-Oct-06	6102181	mar
Surrogate recoveries:											
460-00-4	4-Bromofluorobenzene	106		70-130 %			"	"	"	"	"
2037-26-5	Toluene-d8	98.0		70-130 %			"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	104		70-130 %			"	"	"	"	"
1868-53-7	Dibromofluoromethane	92.0		70-130 %			"	"	"	"	"
Microextractable Organic Compounds											
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100	1	EPA 504.1	26-Oct-06	27-Oct-06	6101938	SM
Extractable Petroleum Hydrocarbons											
	Non-polar material (SGT-HEM)	BRL		mg/l	1.0	1	EPA 1664	27-Oct-06	28-Oct-06	6102038	JK
Semivolatile Organic Compounds by GC											
Polychlorinated Biphenyls by EPA 608											
Prepared by method SW846 3510C											
12674-11-2	PCB 1016	BRL		µg/l	0.229	1	EPA 608	26-Oct-06	28-Oct-06	6101940	SM
11104-28-2	PCB 1221	BRL		µg/l	0.229	1	"	"	"	"	"
11141-16-5	PCB 1232	BRL		µg/l	0.229	1	"	"	"	"	"

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Page 3 of 27

Sample Identification**SUMP**

SA53133-01

Client Project #

91-201517.02

Matrix

Ground Water

Collection Date/Time

25-Oct-06 10:00

Received

25-Oct-06

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Semivolatile Organic Compounds by GC											
<u>Polychlorinated Biphenyls by EPA 608</u>											
Prepared by method SW846 3510C											
53469-21-9	PCB 1242	BRL		µg/l	0.229	1	EPA 608	26-Oct-06	28-Oct-06	6101940	SM
12672-29-6	PCB 1248	BRL		µg/l	0.229	1	"	"	"	"	"
11097-69-1	PCB 1254	BRL		µg/l	0.229	1	"	"	"	"	"
11096-82-5	PCB 1260	BRL		µg/l	0.229	1	"	"	"	"	"
37324-23-5	PCB 1262	BRL		µg/l	0.229	1	"	"	"	"	"
11100-14-4	PCB 1268	BRL		µg/l	0.229	1	"	"	"	"	"
<i>Surrogate recoveries:</i>											
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	94.8			30-150 %		"	"	"	"	"
2051-24-3	Decachlorobiphenyl (Sr)	140			30-150 %		"	"	"	"	"
Semivolatile Organic Compounds by GCMS											
<u>Semivolatile Organic Compounds by EPA 625</u>											
Prepared by method SW846 3510C											
83-32-9	Acenaphthene	BRL		µg/l	5.00	1	EPA 625	27-Oct-06	28-Oct-06	6101941	M.B
208-96-8	Acenaphthylene	BRL		µg/l	5.00	1	"	"	"	"	"
62-53-3	Aniline	BRL		µg/l	5.00	1	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/l	5.00	1	"	"	"	"	"
103-33-3	Azobenzene/Diphenyldiazine	BRL		µg/l	5.00	1	"	"	"	"	"
92-87-5	Benzidine	BRL		µg/l	5.00	1	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/l	5.00	1	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/l	5.00	1	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/l	5.00	1	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/l	5.00	1	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/l	5.00	1	"	"	"	"	"
65-85-0	Benzoic acid	BRL		µg/l	5.00	1	"	"	"	"	"
100-51-6	Benzyl alcohol	BRL		µg/l	5.00	1	"	"	"	"	"
111-91-1	Bis(2-chloroethoxy)methane	BRL		µg/l	5.00	1	"	"	"	"	"
111-44-4	Bis(2-chloroethyl)ether	BRL		µg/l	5.00	1	"	"	"	"	"
39638-32-9	Bis(2-chloroisopropyl)ether	BRL		µg/l	5.00	1	"	"	"	"	"
117-81-7	Bis(2-ethylhexyl)phthalate	BRL		µg/l	5.00	1	"	"	"	"	"
101-55-3	4-Bromophenyl phenyl ether	BRL		µg/l	5.00	1	"	"	"	"	"
85-68-7	Butyl benzyl phthalate	BRL		µg/l	5.00	1	"	"	"	"	"
86-74-8	Carbazole	BRL		µg/l	5.00	1	"	"	"	"	"
59-50-7	4-Chloro-3-methylphenol	BRL		µg/l	5.00	1	"	"	"	"	"
106-47-8	4-Chloroaniline	BRL		µg/l	5.00	1	"	"	"	"	"
91-58-7	2-Chloronaphthalene	BRL		µg/l	5.00	1	"	"	"	"	"
95-57-8	2-Chlorophenol	BRL		µg/l	5.00	1	"	"	"	"	"
7005-72-3	4-Chlorophenyl phenyl ether	BRL		µg/l	5.00	1	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/l	5.00	1	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/l	5.00	1	"	"	"	"	"
132-64-9	Dibenzofuran	BRL		µg/l	5.00	1	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	5.00	1	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	5.00	1	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	5.00	1	"	"	"	"	"
91-94-1	3,3'-Dichlorobenzidine	BRL		µg/l	5.00	1	"	"	"	"	"
120-83-2	2,4-Dichlorophenol	BRL		µg/l	5.00	1	"	"	"	"	"
84-66-2	Diethyl phthalate	BRL		µg/l	5.00	1	"	"	"	"	"
131-11-3	Dimethyl phthalate	BRL		µg/l	5.00	1	"	"	"	"	"
105-67-9	2,4-Dimethylphenol	BRL		µg/l	5.00	1	"	"	"	"	"
84-74-2	Di-n-butyl phthalate	BRL		µg/l	5.00	1	"	"	"	"	"

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 4 of 27

Sample Identification

SUMP

SA53133-01

Client Project #

91-201517.02

Matrix

Ground Water

Collection Date/Time

25-Oct-06 10:00

Received

25-Oct-06

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Semivolatile Organic Compounds by GCMS											
<u>Semivolatile Organic Compounds by EPA 625</u>											
Prepared by method SW846 3510C											
534-52-1	4,6-Dinitro-2-methylphenol	BRL		µg/l	5.00	1	EPA 625	27-Oct-06	28-Oct-06	6101941	M.B
51-28-5	2,4-Dinitrophenol	BRL		µg/l	5.00	1	"	"	"	"	"
121-14-2	2,4-Dinitrotoluene	BRL		µg/l	5.00	1	"	"	"	"	"
606-20-2	2,6-Dinitrotoluene	BRL		µg/l	5.00	1	"	"	"	"	"
117-84-0	Di-n-octyl phthalate	BRL		µg/l	5.00	1	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/l	5.00	1	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/l	5.00	1	"	"	"	"	"
118-74-1	Hexachlorobenzene	BRL		µg/l	5.00	1	"	"	"	"	"
87-68-3	Hexachlorobutadiene	BRL		µg/l	5.00	1	"	"	"	"	"
77-47-4	Hexachlorocyclopentadiene	BRL		µg/l	5.00	1	"	"	"	"	"
67-72-1	Hexachloroethane	BRL		µg/l	5.00	1	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/l	5.00	1	"	"	"	"	"
78-59-1	Isophorone	BRL		µg/l	5.00	1	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/l	5.00	1	"	"	"	"	"
95-48-7	2-Methylphenol	BRL		µg/l	5.00	1	"	"	"	"	"
108-39-4, 106-44-5	3,4-Methylphenol	BRL		µg/l	10.0	1	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/l	5.00	1	"	"	"	"	"
88-74-4	2-Nitroaniline	BRL		µg/l	5.00	1	"	"	"	"	"
99-09-2	3-Nitroaniline	BRL		µg/l	5.00	1	"	"	"	"	"
100-01-6	4-Nitroaniline	BRL		µg/l	5.00	1	"	"	"	"	"
98-95-3	Nitrobenzene	BRL		µg/l	5.00	1	"	"	"	"	"
88-75-5	2-Nitrophenol	BRL		µg/l	5.00	1	"	"	"	"	"
100-02-7	4-Nitrophenol	BRL		µg/l	5.00	1	"	"	"	"	"
62-75-9	N-Nitrosodimethylamine	BRL		µg/l	5.00	1	"	"	"	"	"
621-64-7	N-Nitrosodi-n-propylamine	BRL		µg/l	5.00	1	"	"	"	"	"
86-30-6	N-Nitrosodiphenylamine	BRL		µg/l	5.00	1	"	"	"	"	"
87-86-5	Pentachlorophenol	BRL		µg/l	5.00	1	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/l	5.00	1	"	"	"	"	"
108-95-2	Phenol	BRL		µg/l	5.00	1	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/l	5.00	1	"	"	"	"	"
110-86-1	Pyridine	BRL		µg/l	5.00	1	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	5.00	1	"	"	"	"	"
95-95-4	2,4,5-Trichlorophenol	BRL		µg/l	5.00	1	"	"	"	"	"
88-06-2	2,4,6-Trichlorophenol	BRL		µg/l	5.00	1	"	"	"	"	"
<i>Surrogate recoveries:</i>											
321-60-8	2-Fluorobiphenyl	72.4		30-130 %			"	"	"	"	"
367-12-4	2-Fluorophenol	78.2		15-110 %			"	"	"	"	"
4165-60-0	Nitrobenzene-d5	78.5		30-130 %			"	"	"	"	"
4165-62-2	Phenol-d5	75.1		15-110 %			"	"	"	"	"
1718-51-0	Terphenyl-d14	77.9		30-130 %			"	"	"	"	"
118-79-6	2,4,6-Tribromophenol	71.3		15-110 %			"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods											
7440-22-4	Silver	BRL		mg/l	0.0050	1	SW846 6010B	27-Oct-06	27-Oct-06	6102003	LR
7440-38-2	Arsenic	BRL		mg/l	0.0040	1	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/l	0.0025	1	"	"	"	"	"
7440-47-3	Chromium	0.0056		mg/l	0.0050	1	"	"	"	"	"
7440-50-8	Copper	BRL		mg/l	0.0050	1	"	"	"	"	"
7439-89-6	Iron	2.58		mg/l	0.0050	1	"	"	"	"	"
7440-02-0	Nickel	BRL		mg/l	0.0050	1	"	"	"	"	"

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Page 5 of 27

Sample Identification**SUMP**

SA53133-01

Client Project #

91-201517.02

Matrix

Ground Water

Collection Date/Time

25-Oct-06 10:00

Received

25-Oct-06

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Total Metals by EPA 6000/7000 Series Methods											
7439-92-1	Lead	BRL		mg/l	0.0075	1	SW846 6010B	27-Oct-06	27-Oct-06	6102003	LR
7440-36-0	Antimony	BRL		mg/l	0.0150	1	"	"	"	"	"
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"
7440-66-6	Zinc	BRL		mg/l	0.0125	1	"	"	"	"	"
Total Metals by EPA 200 Series Methods											
7439-97-6	Mercury	BRL		mg/l	0.00020	1	EPA 245.1/7470A	27-Oct-06	30-Oct-06	6102004	YP
General Chemistry Parameters											
	Trivalent Chromium	0.0056		mg/l	0.0050	1	Calculation	27-Oct-06	27-Oct-06	6102003	LR
1854-029-9	Hexavalent Chromium	BRL		mg/l	0.005	1	SM3500CrD/7196A	26-Oct-06 10:00	26-Oct-06	6101996	ES
57-12-5	Cyanide (total)	BRL		mg/l	0.0100	1	10-204-00-1-A / SW846 9012A	30-Oct-06	30-Oct-06	6102304	"
7782-50-5	Total Residual Chlorine	BRL		mg/l	0.020	1	Hach 8167	25-Oct-06 18:30	25-Oct-06	6101998	"
	Total Suspended Solids	11.0		mg/l	5.00	1	SM2540D	26-Oct-06	27-Oct-06	6101990	SS

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Page 6 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102074 - SW846 5030 Water MS										
Blank (6102074-BLK1)										
Prepared & Analyzed: 27-Oct-06										
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL		µg/l	1.0						
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	1.0						
Benzene	BRL		µg/l	1.0						
Bromobenzene	BRL		µg/l	1.0						
Bromochloromethane	BRL		µg/l	1.0						
Bromodichloromethane	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromomethane	BRL		µg/l	2.0						
2-Butanone (MEK)	BRL		µg/l	10.0						
n-Butylbenzene	BRL		µg/l	1.0						
sec-Butylbenzene	BRL		µg/l	1.0						
tert-Butylbenzene	BRL		µg/l	1.0						
Carbon disulfide	BRL		µg/l	5.0						
Carbon tetrachloride	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
Chloroethane	BRL		µg/l	2.0						
Chloroform	BRL		µg/l	1.0						
Chloromethane	BRL		µg/l	2.0						
2-Chlorotoluene	BRL		µg/l	1.0						
4-Chlorotoluene	BRL		µg/l	1.0						
1,2-Dibromo-3-chloropropane	BRL		µg/l	2.0						
Dibromochloromethane	BRL		µg/l	1.0						
1,2-Dibromoethane (EDB)	BRL		µg/l	1.0						
Dibromomethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	1.0						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						
trans-1,2-Dichloroethene	BRL		µg/l	1.0						
1,2-Dichloropropane	BRL		µg/l	1.0						
1,3-Dichloropropane	BRL		µg/l	1.0						
2,2-Dichloropropane	BRL		µg/l	1.0						
1,1-Dichloropropene	BRL		µg/l	1.0						
cis-1,3-Dichloropropene	BRL		µg/l	1.0						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	1.0						
Hexachlorobutadiene	BRL		µg/l	1.0						
2-Hexanone (MBK)	BRL		µg/l	10.0						
Isopropylbenzene	BRL		µg/l	1.0						
4-Isopropyltoluene	BRL		µg/l	1.0						
Methyl tert-butyl ether	BRL		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	10.0						
Naphthalene	BRL		µg/l	1.0						
n-Propylbenzene	BRL		µg/l	1.0						
Styrene	BRL		µg/l	1.0						
1,1,1,2-Tetrachloroethane	BRL		µg/l	1.0						
1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0						

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* Reportable Detection Limit

BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102074 - SW846 5030 Water MS										
Blank (6102074-BLK1)										
Prepared & Analyzed: 27-Oct-06										
Tetrachloroethene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						
1,2,3-Trichlorobenzene	BRL		µg/l	1.0						
1,2,4-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
1,2,3-Trichloropropane	BRL		µg/l	1.0						
1,2,4-Trimethylbenzene	BRL		µg/l	1.0						
1,3,5-Trimethylbenzene	BRL		µg/l	1.0						
Vinyl chloride	BRL		µg/l	1.0						
m,p-Xylene	BRL		µg/l	2.0						
o-Xylene	BRL		µg/l	1.0						
Tetrahydrofuran	BRL		µg/l	10.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	1.0						
Ethyl tert-butyl ether	BRL		µg/l	1.0						
Di-isopropyl ether	BRL		µg/l	1.0						
Tert-Butanol / butyl alcohol	BRL		µg/l	10.0						
1,4-Dioxane	BRL		µg/l	20.0						
Surrogate: 4-Bromofluorobenzene	31.9		µg/l		30.0		106	70-130		
Surrogate: Toluene-d8	29.8		µg/l		30.0		99.3	70-130		
Surrogate: 1,2-Dichloroethane-d4	34.6		µg/l		30.0		115	70-130		
Surrogate: Dibromofluoromethane	31.1		µg/l		30.0		104	70-130		
LCS (6102074-BS1)										
Prepared & Analyzed: 27-Oct-06										
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.9		µg/l		20.0		89.5	70-130		
Acetone	19.8		µg/l		20.0		99.0	28.5-162		
Acrylonitrile	20.4		µg/l		20.0		102	70-130		
Benzene	17.9		µg/l		20.0		89.5	70-130		
Bromobenzene	21.4		µg/l		20.0		107	70-130		
Bromochloromethane	18.3		µg/l		20.0		91.5	70-130		
Bromodichloromethane	22.6		µg/l		20.0		113	70-130		
Bromoform	20.3		µg/l		20.0		102	70-130		
Bromomethane	16.8		µg/l		20.0		84.0	43.9-144		
2-Butanone (MEK)	20.5		µg/l		20.0		102	46.8-144		
n-Butylbenzene	15.8		µg/l		20.0		79.0	70-130		
sec-Butylbenzene	19.3		µg/l		20.0		96.5	70-130		
tert-Butylbenzene	19.6		µg/l		20.0		98.0	70-130		
Carbon disulfide	15.6		µg/l		20.0		78.0	70-130		
Carbon tetrachloride	19.9		µg/l		20.0		99.5	70-130		
Chlorobenzene	19.6		µg/l		20.0		98.0	70-130		
Chloroethane	17.3		µg/l		20.0		86.5	55.2-136		
Chloroform	20.2		µg/l		20.0		101	70-130		
Chloromethane	18.2		µg/l		20.0		91.0	70-130		
2-Chlorotoluene	20.5		µg/l		20.0		102	70-130		
4-Chlorotoluene	20.7		µg/l		20.0		104	70-130		
1,2-Dibromo-3-chloropropane	18.4		µg/l		20.0		92.0	70-130		
Dibromochloromethane	21.0		µg/l		20.0		105	67.9-128		
1,2-Dibromoethane (EDB)	22.0		µg/l		20.0		110	70-130		
Dibromomethane	21.8		µg/l		20.0		109	70-130		
1,2-Dichlorobenzene	18.7		µg/l		20.0		93.5	70-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102074 - SW846 5030 Water MS										
<u>LCS (6102074-BS1)</u>										
Prepared & Analyzed: 27-Oct-06										
1,3-Dichlorobenzene	20.4		µg/l		20.0		102	70-130		
1,4-Dichlorobenzene	17.9		µg/l		20.0		89.5	70-130		
Dichlorodifluoromethane (Freon12)	17.0		µg/l		20.0		85.0	40.8-172		
1,1-Dichloroethane	18.8		µg/l		20.0		94.0	70-130		
1,2-Dichloroethane	23.5		µg/l		20.0		118	70-130		
1,1-Dichloroethene	15.6		µg/l		20.0		78.0	70-130		
cis-1,2-Dichloroethene	18.0		µg/l		20.0		90.0	70-130		
trans-1,2-Dichloroethene	17.3		µg/l		20.0		86.5	70-130		
1,2-Dichloropropane	20.9		µg/l		20.0		104	70-130		
1,3-Dichloropropane	22.1		µg/l		20.0		110	70-130		
2,2-Dichloropropane	19.5		µg/l		20.0		97.5	70-130		
1,1-Dichloropropene	19.8		µg/l		20.0		99.0	70-130		
cis-1,3-Dichloropropene	21.0		µg/l		20.0		105	70-130		
trans-1,3-Dichloropropene	22.2		µg/l		20.0		111	70-130		
Ethylbenzene	19.1		µg/l		20.0		95.5	70-130		
Hexachlorobutadiene	17.2		µg/l		20.0		86.0	66.3-135		
2-Hexanone (MBK)	20.8		µg/l		20.0		104	70-130		
Isopropylbenzene	18.1		µg/l		20.0		90.5	70-130		
4-Isopropyltoluene	17.2		µg/l		20.0		86.0	70-130		
Methyl tert-butyl ether	21.3		µg/l		20.0		106	70-130		
4-Methyl-2-pentanone (MIBK)	22.7		µg/l		20.0		114	48.6-137		
Methylene chloride	18.1		µg/l		20.0		90.5	70-130		
Naphthalene	13.3	QC1	µg/l		20.0		66.5	70-130		
n-Propylbenzene	18.7		µg/l		20.0		93.5	70-130		
Styrene	19.7		µg/l		20.0		98.5	70-130		
1,1,1,2-Tetrachloroethane	21.6		µg/l		20.0		108	70-130		
1,1,2,2-Tetrachloroethane	21.2		µg/l		20.0		106	70-130		
Tetrachloroethene	19.3		µg/l		20.0		96.5	70-130		
Toluene	18.2		µg/l		20.0		91.0	70-130		
1,2,3-Trichlorobenzene	17.9		µg/l		20.0		89.5	70-130		
1,2,4-Trichlorobenzene	17.8		µg/l		20.0		89.0	70-130		
1,1,1-Trichloroethane	20.6		µg/l		20.0		103	70-130		
1,1,2-Trichloroethane	22.4		µg/l		20.0		112	70-130		
Trichloroethene	18.9		µg/l		20.0		94.5	70-130		
Trichlorofluoromethane (Freon 11)	17.7		µg/l		20.0		88.5	57.3-141		
1,2,3-Trichloropropane	25.0		µg/l		20.0		125	70-130		
1,2,4-Trimethylbenzene	18.1		µg/l		20.0		90.5	70-130		
1,3,5-Trimethylbenzene	19.6		µg/l		20.0		98.0	70-130		
Vinyl chloride	18.7		µg/l		20.0		93.5	70-130		
m,p-Xylene	37.1		µg/l		40.0		92.8	70-130		
o-Xylene	19.4		µg/l		20.0		97.0	70-130		
Tetrahydrofuran	19.4		µg/l		20.0		97.0	70-130		
Ethyl ether	19.0		µg/l		20.0		95.0	61.2-127		
Tert-amyl methyl ether	21.2		µg/l		20.0		106	70-130		
Ethyl tert-butyl ether	21.7		µg/l		20.0		108	70-130		
Di-isopropyl ether	20.5		µg/l		20.0		102	70-130		
Tert-Butanol / butyl alcohol	220		µg/l		200		110	70-130		
1,4-Dioxane	165		µg/l		200		82.5	43.3-143		
Surrogate: 4-Bromofluorobenzene	32.7		µg/l		30.0		109	70-130		
Surrogate: Toluene-d8	29.9		µg/l		30.0		99.7	70-130		
Surrogate: 1,2-Dichloroethane-d4	34.8		µg/l		30.0		116	70-130		
Surrogate: Dibromofluoromethane	30.8		µg/l		30.0		103	70-130		
<u>LCS Dup (6102074-BSD1)</u>										

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Page 9 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102074 - SW846 5030 Water MS										
Prepared & Analyzed: 27-Oct-06										
1,1,2-Trichlorotrifluoroethane (Freon 113)	16.6		µg/l		20.0		83.0	70-130	7.54	25
Acetone	22.7		µg/l		20.0		114	28.5-162	14.1	50
Acrylonitrile	22.6		µg/l		20.0		113	70-130	10.2	25
Benzene	17.7		µg/l		20.0		88.5	70-130	1.12	25
Bromobenzene	20.7		µg/l		20.0		104	70-130	2.84	25
Bromochloromethane	20.0		µg/l		20.0		100	70-130	8.88	25
Bromodichloromethane	23.3		µg/l		20.0		116	70-130	2.62	25
Bromoform	20.5		µg/l		20.0		102	70-130	0.00	25
Bromomethane	16.6		µg/l		20.0		83.0	43.9-144	1.20	50
2-Butanone (MEK)	21.4		µg/l		20.0		107	46.8-144	4.78	50
n-Butylbenzene	15.3		µg/l		20.0		76.5	70-130	3.22	25
sec-Butylbenzene	18.0		µg/l		20.0		90.0	70-130	6.97	25
tert-Butylbenzene	18.8		µg/l		20.0		94.0	70-130	4.17	25
Carbon disulfide	15.7		µg/l		20.0		78.5	70-130	0.639	25
Carbon tetrachloride	20.0		µg/l		20.0		100	70-130	0.501	25
Chlorobenzene	18.7		µg/l		20.0		93.5	70-130	4.70	25
Chloroethane	18.2		µg/l		20.0		91.0	55.2-136	5.07	50
Chloroform	21.2		µg/l		20.0		106	70-130	4.83	25
Chloromethane	18.0		µg/l		20.0		90.0	70-130	1.10	25
2-Chlorotoluene	20.1		µg/l		20.0		100	70-130	1.98	25
4-Chlorotoluene	19.9		µg/l		20.0		99.5	70-130	4.42	25
1,2-Dibromo-3-chloropropane	19.8		µg/l		20.0		99.0	70-130	7.33	25
Dibromochloromethane	21.4		µg/l		20.0		107	67.9-128	1.89	50
1,2-Dibromoethane (EDB)	23.2		µg/l		20.0		116	70-130	5.31	25
Dibromomethane	23.0		µg/l		20.0		115	70-130	5.36	25
1,2-Dichlorobenzene	18.6		µg/l		20.0		93.0	70-130	0.536	25
1,3-Dichlorobenzene	19.6		µg/l		20.0		98.0	70-130	4.00	25
1,4-Dichlorobenzene	17.9		µg/l		20.0		89.5	70-130	0.00	25
Dichlorodifluoromethane (Freon12)	16.2		µg/l		20.0		81.0	40.8-172	4.82	50
1,1-Dichloroethane	19.7		µg/l		20.0		98.5	70-130	4.68	25
1,2-Dichloroethane	25.5		µg/l		20.0		128	70-130	8.13	25
1,1-Dichloroethene	15.9		µg/l		20.0		79.5	70-130	1.90	25
cis-1,2-Dichloroethene	18.7		µg/l		20.0		93.5	70-130	3.81	25
trans-1,2-Dichloroethene	18.0		µg/l		20.0		90.0	70-130	3.97	25
1,2-Dichloropropane	20.6		µg/l		20.0		103	70-130	0.966	25
1,3-Dichloropropane	23.5		µg/l		20.0		118	70-130	7.02	25
2,2-Dichloropropane	18.9		µg/l		20.0		94.5	70-130	3.12	25
1,1-Dichloropropene	19.2		µg/l		20.0		96.0	70-130	3.08	25
cis-1,3-Dichloropropene	21.6		µg/l		20.0		108	70-130	2.82	25
trans-1,3-Dichloropropene	23.1		µg/l		20.0		116	70-130	4.41	25
Ethylbenzene	18.0		µg/l		20.0		90.0	70-130	5.93	25
Hexachlorobutadiene	16.9		µg/l		20.0		84.5	66.3-135	1.76	50
2-Hexanone (MBK)	23.8		µg/l		20.0		119	70-130	13.5	25
Isopropylbenzene	17.1		µg/l		20.0		85.5	70-130	5.68	25
4-Isopropyltoluene	16.4		µg/l		20.0		82.0	70-130	4.76	25
Methyl tert-butyl ether	24.1		µg/l		20.0		120	70-130	12.4	25
4-Methyl-2-pentanone (MIBK)	25.4		µg/l		20.0		127	48.6-137	10.8	50
Methylene chloride	18.9		µg/l		20.0		94.5	70-130	4.32	25
Naphthalene	14.3		µg/l		20.0		71.5	70-130	7.25	25
n-Propylbenzene	17.3		µg/l		20.0		86.5	70-130	7.78	25
Styrene	19.4		µg/l		20.0		97.0	70-130	1.53	25
1,1,1,2-Tetrachloroethane	20.6		µg/l		20.0		103	70-130	4.74	25
1,1,2,2-Tetrachloroethane	22.7		µg/l		20.0		114	70-130	7.27	25
Tetrachloroethene	18.6		µg/l		20.0		93.0	70-130	3.69	25
Toluene	18.0		µg/l		20.0		90.0	70-130	1.10	25

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 10 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102074 - SW846 5030 Water MS										
<u>LCS Dup (6102074-BSD1)</u>										
Prepared & Analyzed: 27-Oct-06										
1,2,3-Trichlorobenzene	18.4		µg/l		20.0		92.0	70-130	2.75	25
1,2,4-Trichlorobenzene	17.9		µg/l		20.0		89.5	70-130	0.560	25
1,1,1-Trichloroethane	20.5		µg/l		20.0		102	70-130	0.976	25
1,1,2-Trichloroethane	23.4		µg/l		20.0		117	70-130	4.37	25
Trichloroethene	18.9		µg/l		20.0		94.5	70-130	0.00	25
Trichlorofluoromethane (Freon 11)	17.3		µg/l		20.0		86.5	57.3-141	2.29	50
1,2,3-Trichloropropane	26.5	QC1	µg/l		20.0		132	70-130	5.45	25
1,2,4-Trimethylbenzene	18.0		µg/l		20.0		90.0	70-130	0.554	25
1,3,5-Trimethylbenzene	18.8		µg/l		20.0		94.0	70-130	4.17	25
Vinyl chloride	19.4		µg/l		20.0		97.0	70-130	3.67	25
m,p-Xylene	34.5		µg/l		40.0		86.2	70-130	7.37	25
o-Xylene	18.6		µg/l		20.0		93.0	70-130	4.21	25
Tetrahydrofuran	24.6		µg/l		20.0		123	70-130	23.6	25
Ethyl ether	21.5		µg/l		20.0		108	61.2-127	12.8	50
Tert-amyl methyl ether	23.0		µg/l		20.0		115	70-130	8.14	25
Ethyl tert-butyl ether	23.7		µg/l		20.0		118	70-130	8.85	25
Di-isopropyl ether	22.1		µg/l		20.0		110	70-130	7.55	25
Tert-Butanol / butyl alcohol	246		µg/l		200		123	70-130	11.2	25
1,4-Dioxane	200		µg/l		200		100	43.3-143	19.2	25
Surrogate: 4-Bromofluorobenzene	32.7		µg/l		30.0		109	70-130		
Surrogate: Toluene-d8	30.0		µg/l		30.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	37.4		µg/l		30.0		125	70-130		
Surrogate: Dibromofluoromethane	32.5		µg/l		30.0		108	70-130		
Batch 6102181 - SW846 5030 Water MS										
<u>Blank (6102181-BLK1)</u>										
Prepared & Analyzed: 28-Oct-06										
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	1.0						
Benzene	BRL		µg/l	1.0						
Bromobenzene	BRL		µg/l	1.0						
Bromochloromethane	BRL		µg/l	1.0						
Bromodichloromethane	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromomethane	BRL		µg/l	2.0						
2-Butanone (MEK)	BRL		µg/l	10.0						
n-Butylbenzene	BRL		µg/l	1.0						
sec-Butylbenzene	BRL		µg/l	1.0						
tert-Butylbenzene	BRL		µg/l	1.0						
Carbon disulfide	BRL		µg/l	5.0						
Carbon tetrachloride	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
Chloroethane	BRL		µg/l	2.0						
Chloroform	BRL		µg/l	1.0						
Chloromethane	BRL		µg/l	2.0						
2-Chlorotoluene	BRL		µg/l	1.0						
4-Chlorotoluene	BRL		µg/l	1.0						
1,2-Dibromo-3-chloropropane	BRL		µg/l	2.0						
Dibromochloromethane	BRL		µg/l	1.0						
1,2-Dibromoethane (EDB)	BRL		µg/l	1.0						
Dibromomethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	1.0						

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 11 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102181 - SW846 5030 Water MS										
Blank (6102181-BLK1)										
Prepared & Analyzed: 28-Oct-06										
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						
trans-1,2-Dichloroethene	BRL		µg/l	1.0						
1,2-Dichloropropane	BRL		µg/l	1.0						
1,3-Dichloropropane	BRL		µg/l	1.0						
2,2-Dichloropropane	BRL		µg/l	1.0						
1,1-Dichloropropene	BRL		µg/l	1.0						
cis-1,3-Dichloropropene	BRL		µg/l	1.0						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	1.0						
Hexachlorobutadiene	BRL		µg/l	1.0						
2-Hexanone (MBK)	BRL		µg/l	10.0						
Isopropylbenzene	BRL		µg/l	1.0						
4-Isopropyltoluene	BRL		µg/l	1.0						
Methyl tert-butyl ether	BRL		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	10.0						
Naphthalene	BRL		µg/l	1.0						
n-Propylbenzene	BRL		µg/l	1.0						
Styrene	BRL		µg/l	1.0						
1,1,1,2-Tetrachloroethane	BRL		µg/l	1.0						
1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0						
Tetrachloroethene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						
1,2,3-Trichlorobenzene	BRL		µg/l	1.0						
1,2,4-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
1,2,3-Trichloropropane	BRL		µg/l	1.0						
1,2,4-Trimethylbenzene	BRL		µg/l	1.0						
1,3,5-Trimethylbenzene	BRL		µg/l	1.0						
Vinyl chloride	BRL		µg/l	1.0						
m,p-Xylene	BRL		µg/l	2.0						
o-Xylene	BRL		µg/l	1.0						
Tetrahydrofuran	BRL		µg/l	10.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	1.0						
Ethyl tert-butyl ether	BRL		µg/l	1.0						
Di-isopropyl ether	BRL		µg/l	1.0						
Tert-Butanol / butyl alcohol	BRL		µg/l	10.0						
1,4-Dioxane	BRL		µg/l	20.0						
Surrogate: 4-Bromofluorobenzene	32.2		µg/l		30.0		107	70-130		
Surrogate: Toluene-d8	29.2		µg/l		30.0		97.3	70-130		
Surrogate: 1,2-Dichloroethane-d4	31.7		µg/l		30.0		106	70-130		
Surrogate: Dibromofluoromethane	27.3		µg/l		30.0		91.0	70-130		
LCS (6102181-BS1)										
Prepared & Analyzed: 28-Oct-06										
Acetone	23.4		µg/l		20.0		117	2.17-194		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102181 - SW846 5030 Water MS										
<u>LCS (6102181-BS1)</u>										
Prepared & Analyzed: 28-Oct-06										
Acrylonitrile	21.1		µg/l		20.0		106	70-130		
Benzene	21.4		µg/l		20.0		107	70-130		
Bromobenzene	22.1		µg/l		20.0		110	70-130		
Bromochloromethane	19.7		µg/l		20.0		98.5	70-130		
Bromodichloromethane	20.3		µg/l		20.0		102	70-130		
Bromoform	19.5		µg/l		20.0		97.5	70-130		
Bromomethane	17.5		µg/l		20.0		87.5	61.9-145		
2-Butanone (MEK)	22.0		µg/l		20.0		110	14.9-165		
n-Butylbenzene	13.9	QC1	µg/l		20.0		69.5	70-130		
sec-Butylbenzene	19.9		µg/l		20.0		99.5	70-130		
tert-Butylbenzene	20.8		µg/l		20.0		104	70-130		
Carbon disulfide	16.6		µg/l		20.0		83.0	70-130		
Carbon tetrachloride	22.6		µg/l		20.0		113	70-130		
Chlorobenzene	20.9		µg/l		20.0		104	70-130		
Chloroethane	16.8		µg/l		20.0		84.0	64.4-134		
Chloroform	19.6		µg/l		20.0		98.0	70-130		
Chloromethane	17.5		µg/l		20.0		87.5	70-130		
2-Chlorotoluene	21.3		µg/l		20.0		106	70-130		
4-Chlorotoluene	21.2		µg/l		20.0		106	70-130		
1,2-Dibromo-3-chloropropane	17.1		µg/l		20.0		85.5	70-130		
Dibromochloromethane	21.1		µg/l		20.0		106	45.3-146		
1,2-Dibromoethane (EDB)	21.9		µg/l		20.0		110	70-130		
Dibromomethane	21.3		µg/l		20.0		106	70-130		
1,2-Dichlorobenzene	20.4		µg/l		20.0		102	70-130		
1,3-Dichlorobenzene	22.1		µg/l		20.0		110	70-130		
1,4-Dichlorobenzene	19.3		µg/l		20.0		96.5	70-130		
Dichlorodifluoromethane (Freon12)	20.1		µg/l		20.0		100	49.6-201		
1,1-Dichloroethane	19.3		µg/l		20.0		96.5	70-130		
1,2-Dichloroethane	20.8		µg/l		20.0		104	70-130		
1,1-Dichloroethene	18.0		µg/l		20.0		90.0	70-130		
cis-1,2-Dichloroethene	19.6		µg/l		20.0		98.0	70-130		
trans-1,2-Dichloroethene	18.4		µg/l		20.0		92.0	70-130		
1,2-Dichloropropane	19.8		µg/l		20.0		99.0	70-130		
1,3-Dichloropropane	21.6		µg/l		20.0		108	70-130		
2,2-Dichloropropane	18.2		µg/l		20.0		91.0	70-130		
1,1-Dichloropropene	20.0		µg/l		20.0		100	70-130		
cis-1,3-Dichloropropene	19.9		µg/l		20.0		99.5	70-130		
trans-1,3-Dichloropropene	20.3		µg/l		20.0		102	70-130		
Ethylbenzene	22.2		µg/l		20.0		111	70-130		
Hexachlorobutadiene	19.3		µg/l		20.0		96.5	68.6-137		
2-Hexanone (MBK)	22.5		µg/l		20.0		112	70-130		
Isopropylbenzene	21.5		µg/l		20.0		108	70-130		
4-Isopropyltoluene	19.8		µg/l		20.0		99.0	70-130		
Methyl tert-butyl ether	22.5		µg/l		20.0		112	70-130		
4-Methyl-2-pentanone (MIBK)	23.2		µg/l		20.0		116	48.6-137		
Methylene chloride	17.6		µg/l		20.0		88.0	70-130		
Naphthalene	15.7		µg/l		20.0		78.5	70-130		
n-Propylbenzene	14.9		µg/l		20.0		74.5	70-130		
Styrene	22.5		µg/l		20.0		112	70-130		
1,1,1,2-Tetrachloroethane	21.1		µg/l		20.0		106	70-130		
1,1,2,2-Tetrachloroethane	23.1		µg/l		20.0		116	70-130		
Tetrachloroethene	22.4		µg/l		20.0		112	70-130		
Toluene	21.0		µg/l		20.0		105	70-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 13 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102181 - SW846 5030 Water MS										
<u>LCS (6102181-BS1)</u>										
Prepared & Analyzed: 28-Oct-06										
1,2,3-Trichlorobenzene	21.0		µg/l		20.0		105	70-130		
1,2,4-Trichlorobenzene	20.3		µg/l		20.0		102	70-130		
1,1,1-Trichloroethane	20.1		µg/l		20.0		100	70-130		
1,1,2-Trichloroethane	22.3		µg/l		20.0		112	70-130		
Trichloroethene	20.6		µg/l		20.0		103	70-130		
Trichlorofluoromethane (Freon 11)	19.0		µg/l		20.0		95.0	67.9-143		
1,2,3-Trichloropropane	25.4		µg/l		20.0		127	70-130		
1,2,4-Trimethylbenzene	22.4		µg/l		20.0		112	70-130		
1,3,5-Trimethylbenzene	21.6		µg/l		20.0		108	70-130		
Vinyl chloride	18.8		µg/l		20.0		94.0	70-130		
m,p-Xylene	46.8		µg/l		40.0		117	70-130		
o-Xylene	23.1		µg/l		20.0		116	70-130		
Tetrahydrofuran	20.3		µg/l		20.0		102	70-130		
Ethyl ether	19.4		µg/l		20.0		97.0	70-136		
Tert-amyl methyl ether	19.1		µg/l		20.0		95.5	70-130		
Ethyl tert-butyl ether	21.8		µg/l		20.0		109	70-130		
Di-isopropyl ether	19.6		µg/l		20.0		98.0	70-130		
Tert-Butanol / butyl alcohol	239		µg/l		200		120	70-130		
1,4-Dioxane	201		µg/l		200		100	36.5-156		
Surrogate: 4-Bromofluorobenzene	32.5		µg/l		30.0		108	70-130		
Surrogate: Toluene-d8	29.7		µg/l		30.0		99.0	70-130		
Surrogate: 1,2-Dichloroethane-d4	30.9		µg/l		30.0		103	70-130		
Surrogate: Dibromofluoromethane	28.3		µg/l		30.0		94.3	70-130		
<u>LCS Dup (6102181-BS1)</u>										
Prepared & Analyzed: 28-Oct-06										
Acetone	21.8		µg/l		20.0		109	2.17-194	7.08	50
Acrylonitrile	21.5		µg/l		20.0		108	70-130	1.87	25
Benzene	20.6		µg/l		20.0		103	70-130	3.81	25
Bromobenzene	22.5		µg/l		20.0		112	70-130	1.80	25
Bromochloromethane	20.1		µg/l		20.0		100	70-130	1.51	25
Bromodichloromethane	21.1		µg/l		20.0		106	70-130	3.85	25
Bromoform	20.1		µg/l		20.0		100	70-130	2.53	25
Bromomethane	16.8		µg/l		20.0		84.0	61.9-145	4.08	50
2-Butanone (MEK)	21.6		µg/l		20.0		108	14.9-165	1.83	50
n-Butylbenzene	15.0		µg/l		20.0		75.0	70-130	7.61	25
sec-Butylbenzene	20.0		µg/l		20.0		100	70-130	0.501	25
tert-Butylbenzene	21.2		µg/l		20.0		106	70-130	1.90	25
Carbon disulfide	16.8		µg/l		20.0		84.0	70-130	1.20	25
Carbon tetrachloride	23.1		µg/l		20.0		116	70-130	2.62	25
Chlorobenzene	21.3		µg/l		20.0		106	70-130	1.90	25
Chloroethane	17.1		µg/l		20.0		85.5	64.4-134	1.77	50
Chloroform	19.6		µg/l		20.0		98.0	70-130	0.00	25
Chloromethane	18.2		µg/l		20.0		91.0	70-130	3.92	25
2-Chlorotoluene	21.4		µg/l		20.0		107	70-130	0.939	25
4-Chlorotoluene	21.7		µg/l		20.0		108	70-130	1.87	25
1,2-Dibromo-3-chloropropane	18.4		µg/l		20.0		92.0	70-130	7.32	25
Dibromochloromethane	21.6		µg/l		20.0		108	45.3-146	1.87	50
1,2-Dibromoethane (EDB)	22.3		µg/l		20.0		112	70-130	1.80	25
Dibromomethane	22.0		µg/l		20.0		110	70-130	3.70	25
1,2-Dichlorobenzene	21.6		µg/l		20.0		108	70-130	5.71	25
1,3-Dichlorobenzene	22.7		µg/l		20.0		114	70-130	3.57	25
1,4-Dichlorobenzene	20.3		µg/l		20.0		102	70-130	5.54	25
Dichlorodifluoromethane (Freon12)	20.4		µg/l		20.0		102	49.6-201	1.98	50

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* Reportable Detection Limit

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Page 14 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102181 - SW846 5030 Water MS										
LCS Dup (6102181-BSD1)										
Prepared & Analyzed: 28-Oct-06										
1,1-Dichloroethane	19.9		µg/l		20.0		99.5	70-130	3.06	25
1,2-Dichloroethane	21.1		µg/l		20.0		106	70-130	1.90	25
1,1-Dichloroethene	18.2		µg/l		20.0		91.0	70-130	1.10	25
cis-1,2-Dichloroethene	19.7		µg/l		20.0		98.5	70-130	0.509	25
trans-1,2-Dichloroethene	18.8		µg/l		20.0		94.0	70-130	2.15	25
1,2-Dichloropropane	20.1		µg/l		20.0		100	70-130	1.01	25
1,3-Dichloropropane	21.4		µg/l		20.0		107	70-130	0.930	25
2,2-Dichloropropane	18.2		µg/l		20.0		91.0	70-130	0.00	25
1,1-Dichloropropene	20.2		µg/l		20.0		101	70-130	0.995	25
cis-1,3-Dichloropropene	20.6		µg/l		20.0		103	70-130	3.46	25
trans-1,3-Dichloropropene	20.8		µg/l		20.0		104	70-130	1.94	25
Ethylbenzene	22.2		µg/l		20.0		111	70-130	0.00	25
Hexachlorobutadiene	20.6		µg/l		20.0		103	68.6-137	6.52	50
2-Hexanone (MBK)	22.4		µg/l		20.0		112	70-130	0.00	25
Isopropylbenzene	21.7		µg/l		20.0		108	70-130	0.00	25
4-Isopropyltoluene	21.1		µg/l		20.0		106	70-130	6.83	25
Methyl tert-butyl ether	22.3		µg/l		20.0		112	70-130	0.00	25
4-Methyl-2-pentanone (MIBK)	23.6		µg/l		20.0		118	48.6-137	1.71	50
Methylene chloride	18.0		µg/l		20.0		90.0	70-130	2.25	25
Naphthalene	24.0	QR5	µg/l		20.0		120	70-130	41.8	25
n-Propylbenzene	15.8		µg/l		20.0		79.0	70-130	5.86	25
Styrene	22.9		µg/l		20.0		114	70-130	1.77	25
1,1,1,2-Tetrachloroethane	22.1		µg/l		20.0		110	70-130	3.70	25
1,1,2,2-Tetrachloroethane	23.2		µg/l		20.0		116	70-130	0.00	25
Tetrachloroethene	21.7		µg/l		20.0		108	70-130	3.64	25
Toluene	20.7		µg/l		20.0		104	70-130	0.957	25
1,2,3-Trichlorobenzene	22.5		µg/l		20.0		112	70-130	6.45	25
1,2,4-Trichlorobenzene	21.9		µg/l		20.0		110	70-130	7.55	25
1,1,1-Trichloroethane	20.4		µg/l		20.0		102	70-130	1.98	25
1,1,2-Trichloroethane	21.8		µg/l		20.0		109	70-130	2.71	25
Trichloroethene	21.2		µg/l		20.0		106	70-130	2.87	25
Trichlorofluoromethane (Freon 11)	19.6		µg/l		20.0		98.0	67.9-143	3.11	50
1,2,3-Trichloropropane	25.0		µg/l		20.0		125	70-130	1.59	25
1,2,4-Trimethylbenzene	22.9		µg/l		20.0		114	70-130	1.77	25
1,3,5-Trimethylbenzene	21.8		µg/l		20.0		109	70-130	0.922	25
Vinyl chloride	20.2		µg/l		20.0		101	70-130	7.18	25
m,p-Xylene	46.8		µg/l		40.0		117	70-130	0.00	25
o-Xylene	23.0		µg/l		20.0		115	70-130	0.866	25
Tetrahydrofuran	20.3		µg/l		20.0		102	70-130	0.00	25
Ethyl ether	20.1		µg/l		20.0		100	70-136	3.05	50
Tert-amyl methyl ether	19.0		µg/l		20.0		95.0	70-130	0.525	25
Ethyl tert-butyl ether	22.0		µg/l		20.0		110	70-130	0.913	25
Di-isopropyl ether	20.0		µg/l		20.0		100	70-130	2.02	25
Tert-Butanol / butyl alcohol	227		µg/l		200		114	70-130	5.13	25
1,4-Dioxane	235		µg/l		200		118	36.5-156	16.5	25
Surrogate: 4-Bromofluorobenzene	31.8		µg/l		30.0		106	70-130		
Surrogate: Toluene-d8	29.6		µg/l		30.0		98.7	70-130		
Surrogate: 1,2-Dichloroethane-d4	30.8		µg/l		30.0		103	70-130		
Surrogate: Dibromofluoromethane	28.8		µg/l		30.0		96.0	70-130		
Matrix Spike (6102181-MS1) Source: SA53251-06										
Prepared & Analyzed: 28-Oct-06										
Benzene	17.2		µg/l		20.0	BRL	86.0	70-130		
Chlorobenzene	19.7		µg/l		20.0	BRL	98.5	70-130		

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* Reportable Detection Limit

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Page 15 of 27

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102181 - SW846 5030 Water MS										
Matrix Spike (6102181-MS1)		Source: SA53251-06								
Prepared & Analyzed: 28-Oct-06										
1,1-Dichloroethene	14.3		µg/l		20.0	BRL	71.5	70-130		
Toluene	18.0		µg/l		20.0	BRL	90.0	70-130		
Trichloroethene	18.4		µg/l		20.0	BRL	92.0	70-130		
Surrogate: 4-Bromofluorobenzene	30.8		µg/l		30.0		103	70-130		
Surrogate: Toluene-d8	29.2		µg/l		30.0		97.3	70-130		
Surrogate: 1,2-Dichloroethane-d4	30.9		µg/l		30.0		103	70-130		
Surrogate: Dibromofluoromethane	28.6		µg/l		30.0		95.3	70-130		
Matrix Spike Dup (6102181-MSD1)		Source: SA53251-06								
Prepared & Analyzed: 28-Oct-06										
Benzene	16.8		µg/l		20.0	BRL	84.0	70-130	2.35	30
Chlorobenzene	19.5		µg/l		20.0	BRL	97.5	70-130	1.02	30
1,1-Dichloroethene	13.2	QM7	µg/l		20.0	BRL	66.0	70-130	8.00	30
Toluene	17.2		µg/l		20.0	BRL	86.0	70-130	4.55	30
Trichloroethene	17.7		µg/l		20.0	BRL	88.5	70-130	3.88	30
Surrogate: 4-Bromofluorobenzene	30.9		µg/l		30.0		103	70-130		
Surrogate: Toluene-d8	29.5		µg/l		30.0		98.3	70-130		
Surrogate: 1,2-Dichloroethane-d4	30.9		µg/l		30.0		103	70-130		
Surrogate: Dibromofluoromethane	28.7		µg/l		30.0		95.7	70-130		

Microextractable Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6101938 - Microextr. by 504.1										
Blank (6101938-BLK1)										
Prepared: 26-Oct-06 Analyzed: 27-Oct-06										
1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100						
LCS (6101938-BS1)										
Prepared: 26-Oct-06 Analyzed: 27-Oct-06										
1,2-Dibromoethane (EDB)	0.211		µg/l	0.0100	0.200		106	50-150		
Duplicate (6101938-DUP1) Source: SA53133-01										
Prepared: 26-Oct-06 Analyzed: 27-Oct-06										
1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100		BRL				30

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit
Batch 6102038 - SW846 3510C										
Blank (6102038-BLK1)										
Prepared: 27-Oct-06 Analyzed: 28-Oct-06										
Non-polar material (SGT-HEM)	BRL		mg/l	1.0						
LCS (6102038-BS1)										
Prepared: 27-Oct-06 Analyzed: 28-Oct-06										
Non-polar material (SGT-HEM)	9.2		mg/l		10.5		87.6	83-101		

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Page 16 of 27

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6101940 - SW846 3510C										
Blank (6101940-BLK1)										
Prepared: 26-Oct-06 Analyzed: 28-Oct-06										
PCB 1016	BRL		µg/l	0.200						
PCB 1221	BRL		µg/l	0.200						
PCB 1232	BRL		µg/l	0.200						
PCB 1242	BRL		µg/l	0.200						
PCB 1248	BRL		µg/l	0.200						
PCB 1254	BRL		µg/l	0.200						
PCB 1260	BRL		µg/l	0.200						
PCB 1262	BRL		µg/l	0.200						
PCB 1268	BRL		µg/l	0.200						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.140		µg/l		0.200		70.0	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.230		µg/l		0.200		115	30-150		
LCS (6101940-BS1)										
Prepared: 26-Oct-06 Analyzed: 28-Oct-06										
PCB 1016	2.69		µg/l	0.200	2.50		108	50-114		
PCB 1260	3.13		µg/l	0.200	2.50		125	40-127		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.140		µg/l		0.200		70.0	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.220		µg/l		0.200		110	30-150		
LCS Dup (6101940-BSD1)										
Prepared: 26-Oct-06 Analyzed: 28-Oct-06										
PCB 1016	2.73		µg/l	0.200	2.50		109	50-114	0.922	20
PCB 1260	2.85		µg/l	0.200	2.50		114	40-127	9.21	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.140		µg/l		0.200		70.0	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.230		µg/l		0.200		115	30-150		

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Page 17 of 27

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6101941 - SW846 3510C										
Blank (6101941-BLK1)										
Prepared: 27-Oct-06 Analyzed: 28-Oct-06										
Acenaphthene	BRL		µg/l	5.00						
Acenaphthylene	BRL		µg/l	5.00						
Aniline	BRL		µg/l	5.00						
Anthracene	BRL		µg/l	5.00						
Azobenzene/Diphenyldiazine	BRL		µg/l	5.00						
Benzidine	BRL		µg/l	5.00						
Benzo (a) anthracene	BRL		µg/l	5.00						
Benzo (a) pyrene	BRL		µg/l	5.00						
Benzo (b) fluoranthene	BRL		µg/l	5.00						
Benzo (g,h,i) perylene	BRL		µg/l	5.00						
Benzo (k) fluoranthene	BRL		µg/l	5.00						
Benzoic acid	BRL		µg/l	5.00						
Benzyl alcohol	BRL		µg/l	5.00						
Bis(2-chloroethoxy)methane	BRL		µg/l	5.00						
Bis(2-chloroethyl)ether	BRL		µg/l	5.00						
Bis(2-chloroisopropyl)ether	BRL		µg/l	5.00						
Bis(2-ethylhexyl)phthalate	BRL		µg/l	5.00						
4-Bromophenyl phenyl ether	BRL		µg/l	5.00						
Butyl benzyl phthalate	BRL		µg/l	5.00						
Carbazole	BRL		µg/l	5.00						
4-Chloro-3-methylphenol	BRL		µg/l	5.00						
4-Chloroaniline	BRL		µg/l	5.00						
2-Chloronaphthalene	BRL		µg/l	5.00						
2-Chlorophenol	BRL		µg/l	5.00						
4-Chlorophenyl phenyl ether	BRL		µg/l	5.00						
Chrysene	BRL		µg/l	5.00						
Dibenzo (a,h) anthracene	BRL		µg/l	5.00						
Dibenzofuran	BRL		µg/l	5.00						
1,2-Dichlorobenzene	BRL		µg/l	5.00						
1,3-Dichlorobenzene	BRL		µg/l	5.00						
1,4-Dichlorobenzene	BRL		µg/l	5.00						
3,3'-Dichlorobenzidine	BRL		µg/l	5.00						
2,4-Dichlorophenol	BRL		µg/l	5.00						
Diethyl phthalate	BRL		µg/l	5.00						
Dimethyl phthalate	BRL		µg/l	5.00						
2,4-Dimethylphenol	BRL		µg/l	5.00						
Di-n-butyl phthalate	BRL		µg/l	5.00						
4,6-Dinitro-2-methylphenol	BRL		µg/l	5.00						
2,4-Dinitrophenol	BRL		µg/l	5.00						
2,4-Dinitrotoluene	BRL		µg/l	5.00						
2,6-Dinitrotoluene	BRL		µg/l	5.00						
Di-n-octyl phthalate	BRL		µg/l	5.00						
Fluoranthene	BRL		µg/l	5.00						
Fluorene	BRL		µg/l	5.00						
Hexachlorobenzene	BRL		µg/l	5.00						
Hexachlorobutadiene	BRL		µg/l	5.00						
Hexachlorocyclopentadiene	BRL		µg/l	5.00						
Hexachloroethane	BRL		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	BRL		µg/l	5.00						
Isophorone	BRL		µg/l	5.00						
2-Methylnaphthalene	BRL		µg/l	5.00						
2-Methylphenol	BRL		µg/l	5.00						
3,4-Methylphenol	BRL		µg/l	10.0						

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Page 18 of 27

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6101941 - SW846 3510C										
Blank (6101941-BLK1)										
Prepared: 27-Oct-06 Analyzed: 28-Oct-06										
Naphthalene	BRL		µg/l	5.00						
2-Nitroaniline	BRL		µg/l	5.00						
3-Nitroaniline	BRL		µg/l	5.00						
4-Nitroaniline	BRL		µg/l	5.00						
Nitrobenzene	BRL		µg/l	5.00						
2-Nitrophenol	BRL		µg/l	5.00						
4-Nitrophenol	BRL		µg/l	5.00						
N-Nitrosodimethylamine	BRL		µg/l	5.00						
N-Nitrosodi-n-propylamine	BRL		µg/l	5.00						
N-Nitrosodiphenylamine	BRL		µg/l	5.00						
Pentachlorophenol	BRL		µg/l	5.00						
Phenanthrene	BRL		µg/l	5.00						
Phenol	BRL		µg/l	5.00						
Pyrene	BRL		µg/l	5.00						
Pyridine	BRL		µg/l	5.00						
1,2,4-Trichlorobenzene	BRL		µg/l	5.00						
2,4,5-Trichlorophenol	BRL		µg/l	5.00						
2,4,6-Trichlorophenol	BRL		µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	75.6		µg/l		100		75.6	30-130		
Surrogate: 2-Fluorophenol	85.6		µg/l		100		85.6	15-110		
Surrogate: Nitrobenzene-d5	84.8		µg/l		100		84.8	30-130		
Surrogate: Phenol-d5	78.8		µg/l		100		78.8	15-110		
Surrogate: Terphenyl-d14	85.3		µg/l		100		85.3	30-130		
Surrogate: 2,4,6-Tribromophenol	83.1		µg/l		100		83.1	15-110		
LCS (6101941-BS1)										
Prepared: 27-Oct-06 Analyzed: 28-Oct-06										
Acenaphthene	74.4		µg/l	5.00	100		74.4	40-140		
Acenaphthylene	73.4		µg/l	5.00	100		73.4	40-140		
Aniline	78.5		µg/l	5.00	100		78.5	40-140		
Anthracene	80.0		µg/l	5.00	100		80.0	40-140		
Azobenzene/Diphenyldiazine	82.8		µg/l	5.00	100		82.8	40-140		
Benzidine	56.7		µg/l	5.00	100		56.7	40-140		
Benzo (a) anthracene	81.4		µg/l	5.00	100		81.4	40-140		
Benzo (a) pyrene	83.3		µg/l	5.00	100		83.3	40-140		
Benzo (b) fluoranthene	83.2		µg/l	5.00	100		83.2	40-140		
Benzo (g,h,i) perylene	79.8		µg/l	5.00	100		79.8	40-140		
Benzo (k) fluoranthene	80.0		µg/l	5.00	100		80.0	40-140		
Benzoic acid	64.8		µg/l	5.00	100		64.8	30-130		
Benzyl alcohol	94.9		µg/l	5.00	100		94.9	40-140		
Bis(2-chloroethoxy)methane	74.2		µg/l	5.00	100		74.2	40-140		
Bis(2-chloroethyl)ether	81.2		µg/l	5.00	100		81.2	40-140		
Bis(2-chloroisopropyl)ether	78.7		µg/l	5.00	100		78.7	40-140		
Bis(2-ethylhexyl)phthalate	84.9		µg/l	5.00	100		84.9	40-140		
4-Bromophenyl phenyl ether	84.1		µg/l	5.00	100		84.1	40-140		
Butyl benzyl phthalate	82.2		µg/l	5.00	100		82.2	40-140		
Carbazole	91.3		µg/l	5.00	100		91.3	0-200		
4-Chloro-3-methylphenol	79.8		µg/l	5.00	100		79.8	30-130		
4-Chloroaniline	65.2		µg/l	5.00	100		65.2	40-140		
2-Chloronaphthalene	66.7		µg/l	5.00	100		66.7	40-140		
2-Chlorophenol	69.5		µg/l	5.00	100		69.5	30-130		
4-Chlorophenyl phenyl ether	80.0		µg/l	5.00	100		80.0	40-140		
Chrysene	81.9		µg/l	5.00	100		81.9	40-140		
Dibenzo (a,h) anthracene	80.7		µg/l	5.00	100		80.7	40-140		

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Page 19 of 27

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6101941 - SW846 3510C										
<u>LCS (6101941-BS1)</u>										
Prepared: 27-Oct-06 Analyzed: 28-Oct-06										
Dibenzofuran	68.9		µg/l	5.00	100		68.9	40-140		
1,2-Dichlorobenzene	68.6		µg/l	5.00	100		68.6	40-140		
1,3-Dichlorobenzene	69.8		µg/l	5.00	100		69.8	40-140		
1,4-Dichlorobenzene	70.3		µg/l	5.00	100		70.3	40-140		
3,3'-Dichlorobenzidine	79.2		µg/l	5.00	100		79.2	40-140		
2,4-Dichlorophenol	74.9		µg/l	5.00	100		74.9	30-130		
Diethyl phthalate	77.7		µg/l	5.00	100		77.7	40-140		
Dimethyl phthalate	75.8		µg/l	5.00	100		75.8	40-140		
2,4-Dimethylphenol	74.7		µg/l	5.00	100		74.7	30-130		
Di-n-butyl phthalate	81.8		µg/l	5.00	100		81.8	40-140		
4,6-Dinitro-2-methylphenol	100		µg/l	5.00	100		100	30-130		
2,4-Dinitrophenol	102		µg/l	5.00	100		102	30-130		
2,4-Dinitrotoluene	78.8		µg/l	5.00	100		78.8	40-140		
2,6-Dinitrotoluene	90.5		µg/l	5.00	100		90.5	40-140		
Di-n-octyl phthalate	88.6		µg/l	5.00	100		88.6	40-140		
Fluoranthene	82.6		µg/l	5.00	100		82.6	40-140		
Fluorene	75.0		µg/l	5.00	100		75.0	40-140		
Hexachlorobenzene	76.2		µg/l	5.00	100		76.2	40-140		
Hexachlorobutadiene	66.1		µg/l	5.00	100		66.1	40-140		
Hexachlorocyclopentadiene	77.1		µg/l	5.00	100		77.1	40-140		
Hexachloroethane	66.6		µg/l	5.00	100		66.6	40-140		
Indeno (1,2,3-cd) pyrene	82.8		µg/l	5.00	100		82.8	40-140		
Isophorone	72.6		µg/l	5.00	100		72.6	40-140		
2-Methylnaphthalene	64.2		µg/l	5.00	100		64.2	40-140		
2-Methylphenol	77.3		µg/l	5.00	100		77.3	40-140		
3,4-Methylphenol	83.7		µg/l	10.0	100		83.7	40-140		
Naphthalene	68.2		µg/l	5.00	100		68.2	40-140		
2-Nitroaniline	92.6		µg/l	5.00	100		92.6	40-140		
3-Nitroaniline	73.9		µg/l	5.00	100		73.9	40-140		
4-Nitroaniline	83.8		µg/l	5.00	100		83.8	40-140		
Nitrobenzene	72.5		µg/l	5.00	100		72.5	40-140		
2-Nitrophenol	90.8		µg/l	5.00	100		90.8	30-130		
4-Nitrophenol	86.5		µg/l	5.00	100		86.5	30-130		
N-Nitrosodimethylamine	63.0		µg/l	5.00	100		63.0	40-140		
N-Nitrosodi-n-propylamine	52.8		µg/l	5.00	100		52.8	40-140		
N-Nitrosodiphenylamine	85.4		µg/l	5.00	100		85.4	40-140		
Pentachlorophenol	107		µg/l	5.00	100		107	30-130		
Phenanthrene	78.5		µg/l	5.00	100		78.5	40-140		
Phenol	70.7		µg/l	5.00	100		70.7	30-130		
Pyrene	77.7		µg/l	5.00	100		77.7	40-140		
Pyridine	71.9		µg/l	5.00	100		71.9	40-140		
1,2,4-Trichlorobenzene	64.4		µg/l	5.00	100		64.4	40-140		
2,4,5-Trichlorophenol	82.3		µg/l	5.00	100		82.3	30-130		
2,4,6-Trichlorophenol	78.4		µg/l	5.00	100		78.4	30-130		
Surrogate: 2-Fluorobiphenyl	76.5		µg/l		100		76.5	30-130		
Surrogate: 2-Fluorophenol	72.1		µg/l		100		72.1	15-110		
Surrogate: Nitrobenzene-d5	87.1		µg/l		100		87.1	30-130		
Surrogate: Phenol-d5	66.4		µg/l		100		66.4	15-110		
Surrogate: Terphenyl-d14	83.0		µg/l		100		83.0	30-130		
Surrogate: 2,4,6-Tribromophenol	102		µg/l		100		102	15-110		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 20 of 27

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 6102003 - SW846 3005A									
Blank (6102003-BLK1)									
Prepared & Analyzed: 27-Oct-06									
Zinc	BRL		mg/l	0.0125					
Lead	BRL		mg/l	0.0075					
Selenium	BRL		mg/l	0.0150					
Nickel	BRL		mg/l	0.0050					
Antimony	BRL		mg/l	0.0150					
Iron	0.0092	QB1	mg/l	0.0050					
Silver	BRL		mg/l	0.0050					
Copper	BRL		mg/l	0.0050					
Chromium	BRL		mg/l	0.0050					
Cadmium	BRL		mg/l	0.0025					
Arsenic	BRL		mg/l	0.0040					
LCS (6102003-BS1)									
Prepared & Analyzed: 27-Oct-06									
Selenium	0.473		mg/l	0.0150	0.500		94.6	85-115	
Antimony	0.562		mg/l	0.0150	0.500		112	85-115	
Lead	0.483		mg/l	0.0075	0.500		96.6	85-115	
Nickel	0.476		mg/l	0.0050	0.500		95.2	85-115	
Iron	0.510		mg/l	0.0050	0.500		102	85-115	
Zinc	0.497		mg/l	0.0125	0.500		99.4	85-115	
Arsenic	0.469		mg/l	0.0040	0.500		93.8	85-115	
Silver	0.436		mg/l	0.0050	0.500		87.2	85-115	
Copper	0.524		mg/l	0.0050	0.500		105	85-115	
Chromium	0.487		mg/l	0.0050	0.500		97.4	85-115	
Cadmium	0.500		mg/l	0.0025	0.500		100	85-115	
LCS Dup (6102003-BSD1)									
Prepared & Analyzed: 27-Oct-06									
Iron	0.510		mg/l	0.0050	0.500		102	85-115	0.00 20
Antimony	0.553		mg/l	0.0150	0.500		111	85-115	1.61 20
Nickel	0.479		mg/l	0.0050	0.500		95.8	85-115	0.628 20
Zinc	0.499		mg/l	0.0125	0.500		99.8	85-115	0.402 20
Selenium	0.479		mg/l	0.0150	0.500		95.8	85-115	1.26 20
Lead	0.488		mg/l	0.0075	0.500		97.6	85-115	1.03 20
Cadmium	0.505		mg/l	0.0025	0.500		101	85-115	0.995 20
Chromium	0.493		mg/l	0.0050	0.500		98.6	85-115	1.22 20
Arsenic	0.475		mg/l	0.0040	0.500		95.0	85-115	1.27 20
Copper	0.525		mg/l	0.0050	0.500		105	85-115	0.191 20
Silver	0.440		mg/l	0.0050	0.500		88.0	85-115	0.913 20
Duplicate (6102003-DUP1) Source: SA53133-01									
Prepared & Analyzed: 27-Oct-06									
Antimony	0.0016	J	mg/l	0.0150		0.0015		6.45	20
Selenium	0.0088	J,QR1	mg/l	0.0150		0.0116		27.5	20
Zinc	0.0091	J	mg/l	0.0125		0.0100		9.42	20
Lead	0.0054	J	mg/l	0.0075		0.0057		5.41	20
Nickel	BRL		mg/l	0.0050		BRL			20
Iron	2.51		mg/l	0.0050		2.58		2.75	20
Cadmium	0.0002	J	mg/l	0.0025		BRL			20
Chromium	0.0054		mg/l	0.0050		0.0056		3.64	20
Copper	0.0018	J,QR1	mg/l	0.0050		0.0012		40.0	20
Silver	0.0032	J,QR1	mg/l	0.0050		0.0026		20.7	20
Arsenic	BRL		mg/l	0.0040		BRL			20
Matrix Spike (6102003-MS1) Source: SA53133-01									

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102003 - SW846 3005A										
Prepared & Analyzed: 27-Oct-06										
Lead	0.447		mg/l	0.0075	0.500	0.0057	88.3	75-125		
Iron	3.04		mg/l	0.0050	0.500	2.58	92.0	75-125		
Nickel	0.465		mg/l	0.0050	0.500	BRL	93.0	75-125		
Zinc	0.486		mg/l	0.0125	0.500	0.0100	95.2	75-125		
Selenium	0.478		mg/l	0.0150	0.500	0.0116	93.3	75-125		
Antimony	0.528		mg/l	0.0150	0.500	0.0015	105	75-125		
Cadmium	0.475		mg/l	0.0025	0.500	BRL	95.0	75-125		
Arsenic	0.470		mg/l	0.0040	0.500	BRL	94.0	75-125		
Chromium	0.491		mg/l	0.0050	0.500	0.0056	97.1	75-125		
Copper	0.550		mg/l	0.0050	0.500	0.0012	110	75-125		
Silver	0.455		mg/l	0.0050	0.500	0.0026	90.5	75-125		
Matrix Spike Dup (6102003-MSD1)										
Source: SA53133-01										
Prepared & Analyzed: 27-Oct-06										
Iron	3.10		mg/l	0.0050	0.500	2.58	104	75-125	1.95	20
Zinc	0.502		mg/l	0.0125	0.500	0.0100	98.4	75-125	3.24	20
Selenium	0.496		mg/l	0.0150	0.500	0.0116	96.9	75-125	3.70	20
Antimony	0.550		mg/l	0.0150	0.500	0.0015	110	75-125	4.08	20
Nickel	0.472		mg/l	0.0050	0.500	BRL	94.4	75-125	1.49	20
Lead	0.457		mg/l	0.0075	0.500	0.0057	90.3	75-125	2.21	20
Copper	0.565		mg/l	0.0050	0.500	0.0012	113	75-125	2.69	20
Chromium	0.504		mg/l	0.0050	0.500	0.0056	99.7	75-125	2.61	20
Cadmium	0.485		mg/l	0.0025	0.500	BRL	97.0	75-125	2.08	20
Arsenic	0.487		mg/l	0.0040	0.500	BRL	97.4	75-125	3.55	20
Silver	0.466		mg/l	0.0050	0.500	0.0026	92.7	75-125	2.39	20
Post Spike (6102003-PS1)										
Source: SA53133-01										
Prepared & Analyzed: 27-Oct-06										
Lead	0.449		mg/l	0.0075	0.500	0.0057	88.7	80-120		
Zinc	0.491		mg/l	0.0125	0.500	0.0100	96.2	80-120		
Nickel	0.457		mg/l	0.0050	0.500	BRL	91.4	80-120		
Antimony	0.436		mg/l	0.0150	0.500	0.0015	86.9	80-120		
Selenium	0.485		mg/l	0.0150	0.500	0.0116	94.7	80-120		
Iron	3.06		mg/l	0.0050	0.500	2.58	96.0	80-120		
Cadmium	0.472		mg/l	0.0025	0.500	BRL	94.4	80-120		
Arsenic	0.479		mg/l	0.0040	0.500	BRL	95.8	80-120		
Chromium	0.489		mg/l	0.0050	0.500	0.0056	96.7	80-120		
Copper	0.558		mg/l	0.0050	0.500	0.0012	111	80-120		
Silver	0.600		mg/l	0.0050	0.500	0.0026	119	80-120		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102004 - EPA200/SW7000 Series										
<u>Blank (6102004-BLK1)</u>										
Prepared: 27-Oct-06 Analyzed: 30-Oct-06										
Mercury	BRL		mg/l	0.00020						
<u>LCS (6102004-BS1)</u>										
Prepared: 27-Oct-06 Analyzed: 30-Oct-06										
Mercury	0.00180	QC3	mg/l	0.00020	0.00250		72.0	80-120		
<u>Duplicate (6102004-DUP1)</u> Source: SA53133-01										
Prepared: 27-Oct-06 Analyzed: 30-Oct-06										
Mercury	BRL		mg/l	0.00020		BRL				20
<u>Matrix Spike (6102004-MS1)</u> Source: SA53133-01										
Prepared: 27-Oct-06 Analyzed: 30-Oct-06										
Mercury	0.00220		mg/l	0.00020	0.00250	BRL	88.0	75-125		
<u>Matrix Spike Dup (6102004-MSD1)</u> Source: SA53133-01										
Prepared: 27-Oct-06 Analyzed: 30-Oct-06										
Mercury	0.00217		mg/l	0.00020	0.00250	BRL	86.8	75-125	1.37	20
<u>Post Spike (6102004-PS1)</u> Source: SA53133-01										
Prepared: 27-Oct-06 Analyzed: 30-Oct-06										
Mercury	0.00207		mg/l	0.00020	0.00250	BRL	82.8	75-125		

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* Reportable Detection Limit

BRL = Below Reporting Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6101990 - General Preparation										
<u>Blank (6101990-BLK1)</u>										
Prepared: 26-Oct-06 Analyzed: 27-Oct-06										
Total Suspended Solids	BRL		mg/l	5.00						
<u>Duplicate (6101990-DUP1)</u> Source: SA53123-13										
Prepared: 26-Oct-06 Analyzed: 27-Oct-06										
Total Suspended Solids	736		mg/l	20.0		872			16.9	20
<u>Reference (6101990-SRM1)</u>										
Prepared: 26-Oct-06 Analyzed: 27-Oct-06										
Total Suspended Solids	84.0		mg/l	10.0	86.0		97.7	90-110		
Batch 6101996 - General Preparation										
<u>Blank (6101996-BLK1)</u>										
Prepared & Analyzed: 26-Oct-06										
Hexavalent Chromium	BRL		mg/l	0.005						
<u>LCS (6101996-BS1)</u>										
Prepared & Analyzed: 26-Oct-06										
Hexavalent Chromium	0.051		mg/l	0.005	0.0500		102	90-110		
<u>Duplicate (6101996-DUP1)</u> Source: SA53133-01										
Prepared & Analyzed: 26-Oct-06										
Hexavalent Chromium	0.003	J,QR1	mg/l	0.005		0.002			40.0	20
<u>Matrix Spike (6101996-MS1)</u> Source: SA53133-01										
Prepared & Analyzed: 26-Oct-06										
Hexavalent Chromium	0.043		mg/l	0.005	0.0500	0.002	82.0	80-120		
<u>Reference (6101996-SRM1)</u>										
Prepared & Analyzed: 26-Oct-06										
Hexavalent Chromium	0.025		mg/l	0.005	0.0250		100	85-115		
Batch 6101998 - General Preparation										
<u>Blank (6101998-BLK1)</u>										
Prepared & Analyzed: 26-Oct-06										
Total Residual Chlorine	BRL		mg/l	0.020						
<u>LCS (6101998-BS1)</u>										
Prepared & Analyzed: 26-Oct-06										
Total Residual Chlorine	0.051		mg/l	0.020	0.0500		102	90-110		
<u>Duplicate (6101998-DUP1)</u> Source: SA53132-01										
Prepared & Analyzed: 26-Oct-06										
Total Residual Chlorine	0.023		mg/l	0.020		0.021			9.09	20
<u>Matrix Spike (6101998-MS1)</u> Source: SA53132-01										
Prepared & Analyzed: 26-Oct-06										
Total Residual Chlorine	0.074		mg/l	0.020	0.0500	0.021	106	80-120		
<u>Reference (6101998-SRM1)</u>										
Prepared & Analyzed: 26-Oct-06										
Total Residual Chlorine	0.103		mg/l	0.020	0.0996		103	85-115		
Batch 6102003 - SW846 3005A										
<u>Blank (6102003-BLK1)</u>										
Prepared & Analyzed: 27-Oct-06										
Trivalent Chromium	BRL		mg/l	0.0050						
<u>Duplicate (6102003-DUP1)</u> Source: SA53133-01										

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 24 of 27

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 6102003 - SW846 3005A										
Prepared & Analyzed: 27-Oct-06										
Trivalent Chromium	0.0054		mg/l	0.0050		0.0056			3.64	20
Post Spike (6102003-PS1) Source: SA53133-01										
Prepared & Analyzed: 27-Oct-06										
Trivalent Chromium	0.489		mg/l	0.0050		0.0056		0-200		
Batch 6102304 - General Preparation										
Blank (6102304-BLK1)										
Prepared & Analyzed: 30-Oct-06										
Cyanide (total)	BRL		mg/l	0.0100						
LCS (6102304-BS1)										
Prepared & Analyzed: 30-Oct-06										
Cyanide (total)	0.319		mg/l	0.0100	0.300		106	90-110		
Matrix Spike (6102304-MS1) Source: SA53133-01										
Prepared & Analyzed: 30-Oct-06										
Cyanide (total)	0.298		mg/l	0.0100	0.300	0.00540	97.5	75-125		
Matrix Spike Dup (6102304-MSD1) Source: SA53133-01										
Prepared & Analyzed: 30-Oct-06										
Cyanide (total)	0.317		mg/l	0.0100	0.300	0.00540	104	75-125	6.18	20
Reference (6102304-SRM1)										
Prepared & Analyzed: 30-Oct-06										
Cyanide (total)	0.421		mg/l	0.0100	0.429		98.1	75.1-124.9		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 25 of 27

Notes and Definitions

__RE	Reanalysis for data confirmation.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
FP	Field Preserved
QB1	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
QC1	Analyte out of acceptance range.
QC3	The spike recovery is outside acceptable limits for the LCS. The batch was accepted based upon the MS and/or MSD meeting the LCS limits criteria.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR1	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QR5	RPD out of acceptance range.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

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

Interpretation of Total Petroleum Hydrocarbon Report

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

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

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

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

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

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

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

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

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

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

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



SA 53133 Gm. Q

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 10/30
 All TATs subject to laboratory approval.
 Min. 24-hour notification needed for rushes.
 Samples disposed of after 60 days unless
 otherwise instructed. ⁴

Project No.: 71-201217, C2

Sampler(s): PI 13000 2010

QA Reporting Notes:
(check if needed)

State specific reporting standards.
If applicable, please list below:

OA Vials
amber Glass
clear Glass
plastic

Preservative
of VOA Vi
of Amber C
of Clear GL
of Plastic

⑥ Plutonium, Arsenic,
Cadmium, Chromium III

Chromium ~~III~~ ^{III} lapped

Lead, Mercury

Nickel Salze

Silber, Zinn

Box 1 (continued)

1850-1859

600 above 1000

see privacy

Cherut-fans in

Date:	Time:
-------	-------

114

10/25/06 / 1:45

11-1-1957

10/25/06 11x

ATTACHMENT III

NHESP 2006 ESTIMATED HABITAT FOR RARE WILDLIFE AND PRIORITY HABITATS FOR STATE-PROTECTED RARE SPECIES MAP

790-795 Main Street Southbridge

NHESP Data Layers

☒ NHESP Priority Habitats of Rare Species

NHESP MA Priority
Habitats for State-
Protected Rare Species

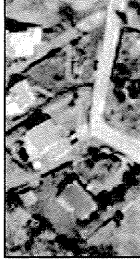
☒ NHESP Estimated Habitats of Rare Wildlife

NHESP MA Estimated
Habitats of Rare Wildlife

☒ NHESP Certified Vernal Pools

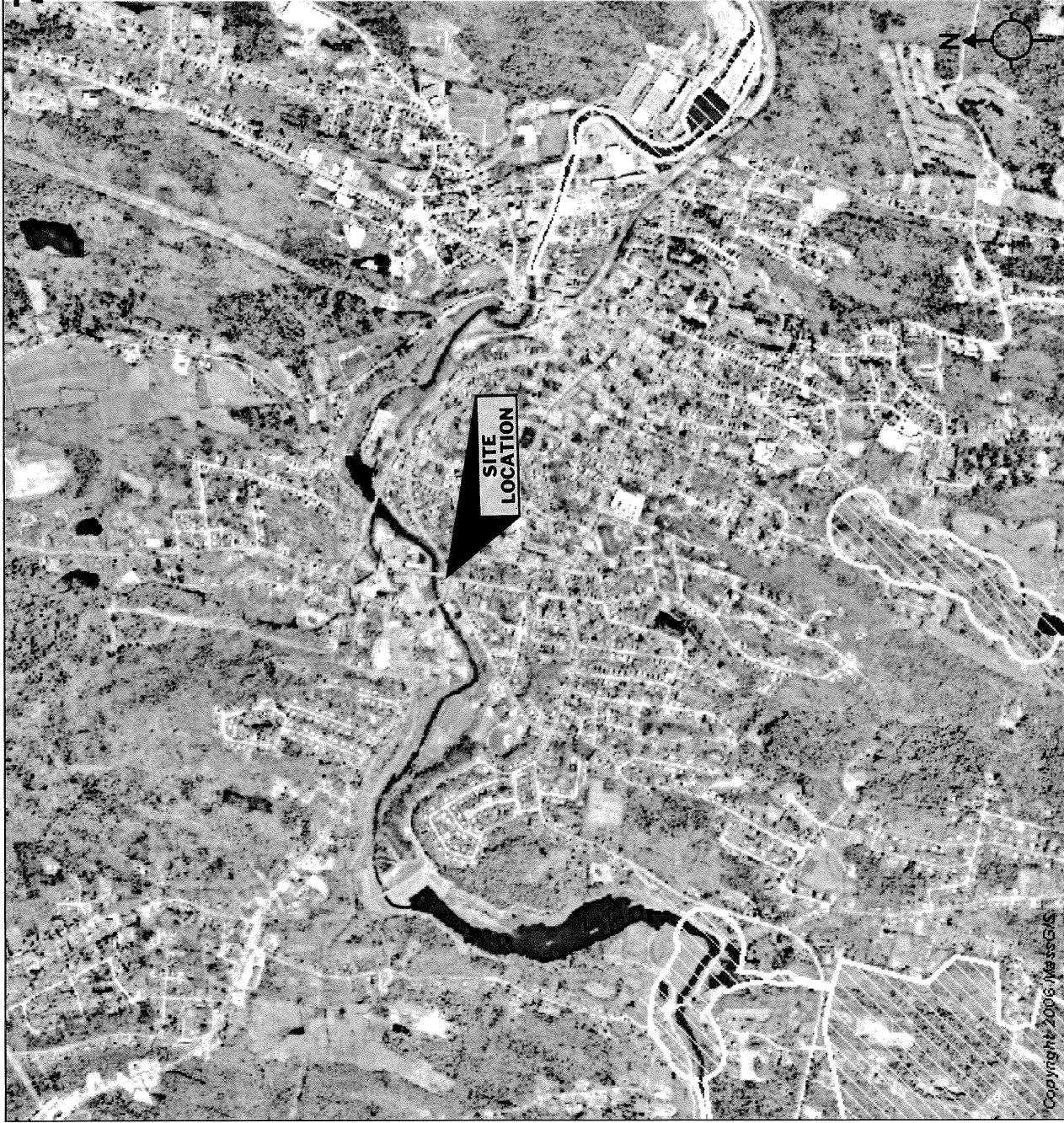
NHESP MA Certified
Vernal Pools

☒ Color Orthos 2001



☒ Massachusetts Towns

MA Town
Boundaries..Outlines



WARNING: This map does not meet national map accuracy standards, and cannot be used for engineering purposes. Please consult conditions of use at <http://www.state.ma.us/mgis/>

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