CORPORATE ENVIRONMENTAL ADVISORS, INC.

Consultants | Engineers | Contractors

6/12/09 received MAG 9/0422

June 9, 2009

US Environmental Protection Agency
Mail Code CMU
One Congress Street
Boston, MA 02114-2023
Attn: Shelly Puleo, Environmental Assistant

RE: NOI Submittal
200 Merrimac Street
Related to: Irving Station
185 Merrimac Street
Newburyport, Massachusetts 01950
MassDEP Release Tracking No. 3-1965

To Whom It May Concern:

On behalf of C.K. Smith Company, Inc. (CK Smith), Corporate Environmental Advisors, Inc. (CEA) is submitting this Notice of Intent (NOI) for the above-referenced site. The NOI is being submitted in accordance with the Provision for Contaminated Construction Dewatering under the Remediation General Permit (RGP). Construction-related dewatering is necessary at 200 Merrimac Street to facilitate the excavation of petroleum-impacted soil. On-site treatment of the extracted groundwater will be performed as outlined in the attached NOI prior to the proposed discharge.

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

Sincerely,
Corporate Environmental Advisors, Inc.

Michael J. Dziura, P.E.
Sr. Environmental Engineer

Pc: Ms. Clare Burhoe, Waldot Realty, LLC
Ms. Janine Perley, CK Smith
Bureau of Waste Site Cleanup, MassDEP NERO
CEA File No. 6744-08

ADDRESS Hartwell Business Park
127 Hartwell Street, West Boylston, MA 01583
TEL 508.835.8822 . 800.358.7960
FAX 508.835.8812
WEB www.cea-inc.com

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**: Apartment Complex			**Facility/site** address:	
Location of **facility/site**: longitude: 70° 52' 44" latitude: 42° 48' 56"	Facility SIC code (s):		Street: 200 Merrimac Street	
b) Name of facility/site **owner**: Waldot Realty, LLC			Town: Newburyport	
Email address of owner:			State: MA	Zip: 01950
Telephone no. of facility/site **owner**: 978-462-6543				
Fax no. of facility/site **owner**:			**Owner** is (check one) 1. Federal ☐ 2. State/Tribal ☐ 3 other, ☐ if so, describe:	
Address of **owner** (if different from site):				
Street: 98 Elm Street				
Town: Salisbury	State: MA	Zip: 01952	County: Essex	
c.) Legal name of **operator**: Corporate Environmental Advisors, Inc.	**Operator** telephone no.: 508-835-8822			
	Operator fax no.: 508-835-8812		**Operator** ema MDziura@cea	
Operator contact name and title: Michael Dziura, Sr. Env. Engineer				
Address of **operator** (if different from owner):	Street: 127 Hartwell Street			
Town: West Boylston	State: MA	Zip: 01583	County: Worcester	

d) Check "yes" or "no" for the following:

1. Has a prior NPDES permit exclusion been granted for the discharge? Yes No ☒ , if "yes," number:

2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ☐ No ☒, if "yes," date and tracking #:

3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ☒ No ☐

4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ☒ No ☐

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes ☒, No ☐ If "yes," please list: 1. site identification # assigned by the state of NH or MA: MassDEP 2. permit or license # assigned: Release Tracking Number 3-1965 3. state agency contact information: name, location, and telephone number: MassDEP Bureau of Waste Site Cleanup, 205B Lowell Street, Wilmington, MA. 978-694-3200	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Yes ☐ No ☒, if Y, number: 2. phase I or II construction storm water general permit? Yes ☐ No ☒, if Y, number: 3. individual NPDES permit? Yes ☐ No ☒, if Y, number: 4. any other water quality related permit? Yes ☐ No ☒, if Y, number:

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

Dewatering during excavation of approximately 500 cubic yards of petroleum-impacted soil. Groundwater will be extracted from the excavation and pumped into a 21,000-gallon frac tank for sediment removal. Water will be treated with granular activated carbon to remove petroleum compounds prior to discharge to the local stormwater drainage system. Approx. stormwater drainage outfall is depicted on Figure 1 attached.

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, W/s)? Max. flow 0.067 ft^3/sec Average flow 0.033 ft^3/sec Is maximum flow a **design value**? Yes ☒ No ☐, 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. 70° 52' 44" lat. 42° 48' 56" ; pt.2: long. ___ lat. ___ ; pt.3: long. ___ lat. ___ ;

pt.4:long. ___ lat. ___ ; pt.5: long. ___ lat. ___ ; pt.6:long. ___ lat. ___ ; pt.7: long. ___ lat. ___ ; pt.8:long. ___ lat. ___ ; etc.

4) If hydrostatic testing, total volume of the discharge (gals): N/A	5) Is the discharge intermittent ☒ Or seasonal ☐ ? Is discharge ongoing Yes No ☒ Discharge is temporary in nature and is only related to excavation activities (dewatering)

c) Expected dates of discharge (mm/dd/yy): start 09/01/09 end 10/01/09

d) Please attach a line drawing or flow schematic showing water flow through the facility including: See attached figures 1-4.

1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).

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

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

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

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

PARAMETER	Believe Absent	Believe Present	#of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
1. Total Suspended Solids		√	1	GRAB	SM 2540D	5,000	32,000	5.23		
2. Total Residual Chlorine	√		1	GRAB	Hatch 8167	20	< 200			
3. Total Petroleum Hydrocarbons	√		1	GRAB	1664	5,000	< 1,000			
4. Cyanide	√		1	GRAB	335.4	10	<10			
5. Benzene		√	1	GRAB	5030	2	29.2	0.005		
6. Toluene		√	1	GRAB	5030	2	32.6	0.005		
7. Ethylbenzene		√	1	GRAB	5030	2	918	0.15		
8. (m,p,o) Xylenes		√	1	GRAB	5030	3	1,821	0.3		
9. Total BTEX[4]		√	1	GRAB	5030	-----	2,800.8	0.46		

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
10. Ethylene Dibromide (1,2- Dibromo-methane)	√		1	GRAB	504.1	0.010	< 0.01			
11. Methyl-tert-Butyl Ether (MtBE)	√		1	GRAB	5030	2	<20			
12. tert-Butyl Alcohol (TBA)	√		1	GRAB	5030	20	<200			
13. tert-Amyl Methyl Ether (TAME)	√		1	GRAB	5030	2	<20			
14. Naphthalene		√	1	GRAB	5030	2	261	0.043		
15. Carbon Tetra-chloride	√		1	GRAB	5030	2	<20			
16. 1,4 Dichlorobenzene	√		1	GRAB	5030	2	<20			
17.1,2 Dichlorobenzene	√		1	GRAB	5030	2	<20			
18. 1,3 Dichlorobenzene	√		1	GRAB	5030	2	<20			
19. 1,1 Dichloroethane	√		1	GRAB	5030	1	<20			
20. 1,2 Dichloroethane	√		1	GRAB	5030	2	<20			
21. 1,1 Dichloroethylene	√		1	GRAB	5030	2	<20			
22. cis-1,2 Dichloro-ethylene	√		1	GRAB	5030	2	<20			
23. Dichloromethane (Methylene Chloride)	√		1	GRAB	5030	2	<100			
24. Tetrachloroethylene	√		1	GRAB	5030	2	<20			

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
25. 1,1,1 Trichloroethane	√		1	GRAB	5030	2	<20			
26. 1,1,2 Trichloroethane	√		1	GRAB	5030	2	<20			
27. Trichloroethylene	√		1	GRAB	5030	2	<20			
28. Vinyl Chloride	√		1	GRAB	5030	2	<20			
29. Acetone	√		1	GRAB	5030	20	<200			
30. 1,4 Dioxane	√		1	GRAB	5030	40	<400			
31. Total Phenols	√		1	GRAB	625	1	<5			
32. Pentachlorophenol	√		1	GRAB	625	5	<5			
33. Total Phthalates [6] (phthalate esthers)	√		1	GRAB	625	5	All phthalates are <5 see lab report	-		
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	√		1	GRAB	625	5	<5			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	√		1	GRAB	625	35	All Group I PAHs are BDL			
a. Benzo(a) Anthracene	√		1	GRAB	625	5	<5			
b. Benzo(a) Pyrene	√		1	GRAB	625	5	<5			
c. Benzo(b)Fluoranthene	√		1	GRAB	625	5	<5			
d. Benzo(k) Fluoranthene	√		1	GRAB	625	5	<5			
e. Chrysene	√		1	GRAB	625	5	<5			

[6] The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	#of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
f. Dibenzo(a,h) anthracene	√		1	GRAB	625	5	<5			
g. Indeno(1,2,3-cd) Pyrene	√		1	GRAB	625	5	<5			
36. Total Group II Polycyclic Aromatic Hydrocarbons (pAR)		√	1	GRAB	625	45	100.3	0.016		
h. Acenaphthene		√	1	GRAB	625	5	1.01	0.00017		
i. Acenaphthylene	√		1	GRAB	625	5	<5			
j. Anthracene	√		1	GRAB	625	5	<5			
k. Benzo(ghi) Perylene	√		1	GRAB	625	5	<5			
I. Fluoranthene	√		1	GRAB	625	5	<5			
m. Fluorene		√	1	GRAB	625	5	1.17	0.00019		
n. Naphthalene-		√	1	GRAB	625	5	97.1	0.016		
o. Phenanthrene		√	1	GRAB	625	5	1.02	0.00017		
p. Pyrene	√		1	GRAB	625	5	<5			
37. Total Polychlorinated Biphenyls (PCBs)	√		1	GRAB	608	0.065	<0.065			
38. Antimony	√		1	GRAB	200.7	6	<6			
39. Arsenic		√	1	GRAB	200.7	4	193	0.03		
40. Cadmium	√		1	GRAB	200.7	<2.5	< 2.5			
41. Chromium III (1)		√	1	GRAB	calculated	calculated	32.6	0.005		
42. Chromium VI	√		1	GRAB	7196A	10	< 50			

NOTES: (1) Chromium III = Total Chromium – Hexavalent Chromium. Hexavalent Chromium was less than 50 ug/l.

PARAMETER	Believe Absent	Believe Present	#of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg/day)	concentration (ug/l)	mass (kg/day)
43. Copper		√	1	GRAB	200.7	5	36.9	0.006		
44. Lead		√	1	GRAB	200.7	3	23.2	0.004		
45. Mercury	√		1	GRAB	7470A	0.20	<0.20			
46. Nickel		√	1	GRAB	200.7	5	38	0.006		
47. Selenium	√		1	GRAB	200.7	5	< 15			
48. Silver	√		1	GRAB	200.7	2	<5			
49. Zinc		√	1	GRAB	200.7	5	88.1	0.014		
50. Iron		√	1	GRAB	200.7	5	53,200	8.7		
Other (describe): n-butylbenzene, Isopropylbenzene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene Dibenzofuran, 2,4-dimethylphenol, 2-methylnaphthalene	----	√	1	GRAB	5030, 625	See lab report----	See lab report----	----	----	----

Step 1: Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y ☒ N ☐	If yes, which metals? Arsenic, copper, lead, nickel, zinc, and iron
c. For discharges where **metals** are believed present, please fill out the following: *Step* 2: For any metals which have **reasonable potential** to exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: DF not applicable for discharges to saltwater. DF: _____.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV**. Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? NA Y ☐ N ☐ If "Yes," list which metals: _____.

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:
See Figure 2. 21,000-gallon frac tank, two sediment bag filters in parallel, two 1,000-lb liquid-phase activated carbon vessels in series, and flow meter.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☐	Equalization tanks ☐	Bag filter ☒	GAC filter ☒
	Chlorination ☐	Dechlorination ☐	Other (please describe):			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system:

Average flow rate of discharge 15 GPM Maximum flow rate of treatment system 30 GPM Design flow rate of treatment system 30 GPM

d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Not Applicable

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

a) Identify the discharge pathway:	Direct ☐	Within facility ☐	Storm drain ☒	River/brook ☐	Wetlands ☐	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Discharge to catchbasin and stormwater drainage system in Merrimac Street which discharges to the Merrimac River. (See Figures 1-4)

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 SA .

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water unknown cfs
Please attach any calculation sheets used to support stream flow and dilution calculations. DF
not applicable for discharges to salt water

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

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

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

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ☒ No ☐
Has any consultation with the federal services been completed? Yes ☒ No ☐ or is consultation underway? Yes ☐ No ☒

What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):

a "no jeopardy" opinion? ☐ or written concurrence ☒ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?

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

7. Supplemental information. :

Please provide any supplemental information. **Attach any analytical data used to support the application**. Attach any certification(s) required by the general permit.

Attachment A - Figures

Figure 1 – Site Locus Map

Figure 2 – Proposed Soil Excavation Area Map

Figure 3 – Excavation Dewatering Process & Instrumentation Diagram

Figure 4 – Stormwater Drainage System Mapping

Figure 5 – MassDEP Site Scoring Map

Figure 6 – NHESP Map

Attachment B – Correspondence with National Marine Fisheries Service

Attachment C – Laboratory Analytical Report, Groundwater

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

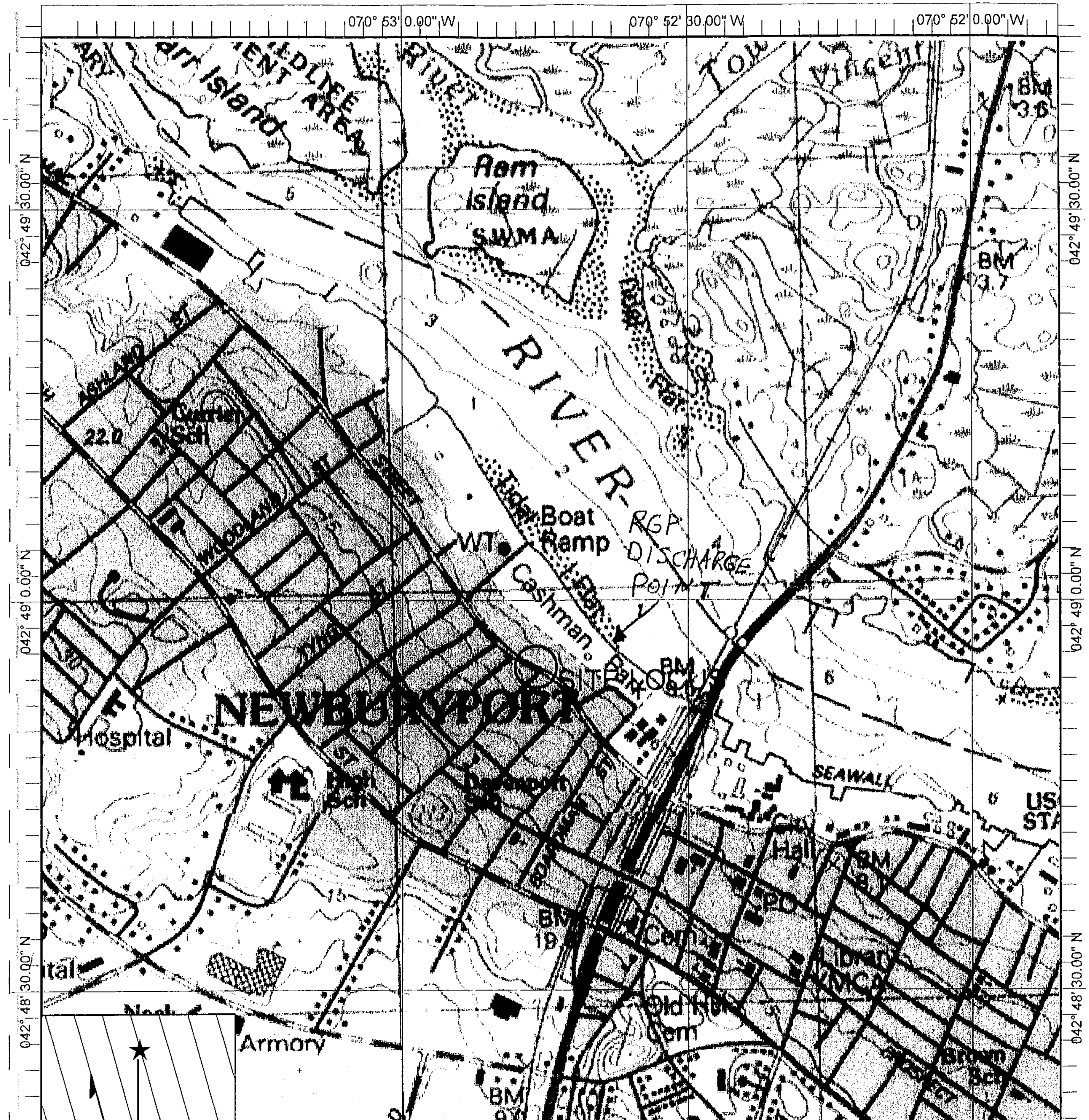
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

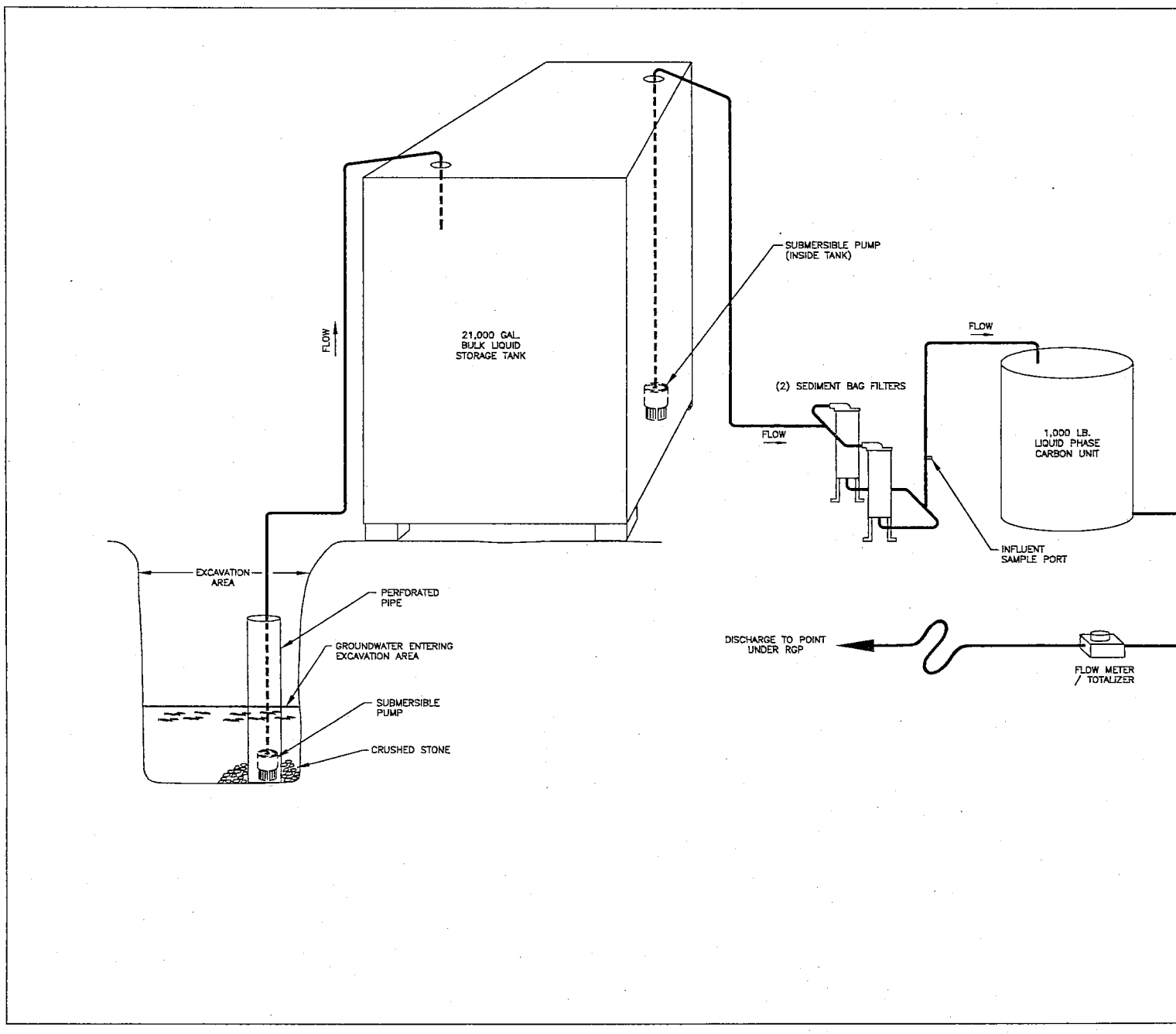
Facility/Site Name: Apartment Building Complex, 200 Merrimac Street, Newburyport, MA 01950

Operator signature: 

Title: Michael J. Dziura, Sr. Env. Engineer

Date: 6-9-09


070° 53' 0.00" W
070° 52' 30.00" W
070° 52' 0.00" W
042° 49' 30.00" N
042° 49' 0.00" N
042° 48' 30.00" N
Ram Island
SWMA
RIVER
Tidal Flat
Boat Ramp
WT
RGP DISCHARGE POINT
Cashman Park
SITE LOCUS
BM
NEWBURYPORT
Hospital
SEAWALL
City Hall
PO
Library
YMCA
Old Hill Cem
Armory
Vincent


21,000 GAL.
BULK LIQUID
STORAGE TANK
SUBMERSIBLE PUMP
(INSIDE TANK)
FLOW
FLOW
(2) SEDIMENT BAG FILTERS
FLOW
1,000 LB.
LIQUID PHASE
CARBON UNIT
INFLUENT
SAMPLE PORT
EXCAVATION
AREA
PERFORATED
PIPE
GROUNDWATER ENTERING
EXCAVATION AREA
SUBMERSIBLE
PUMP
CRUSHED STONE
DISCHARGE TO POINT
UNDER RGP
FLOW METER
/ TOTALIZER

FOR SITE DRAINAGE EXTENSION
NEWBURYPORT, MA

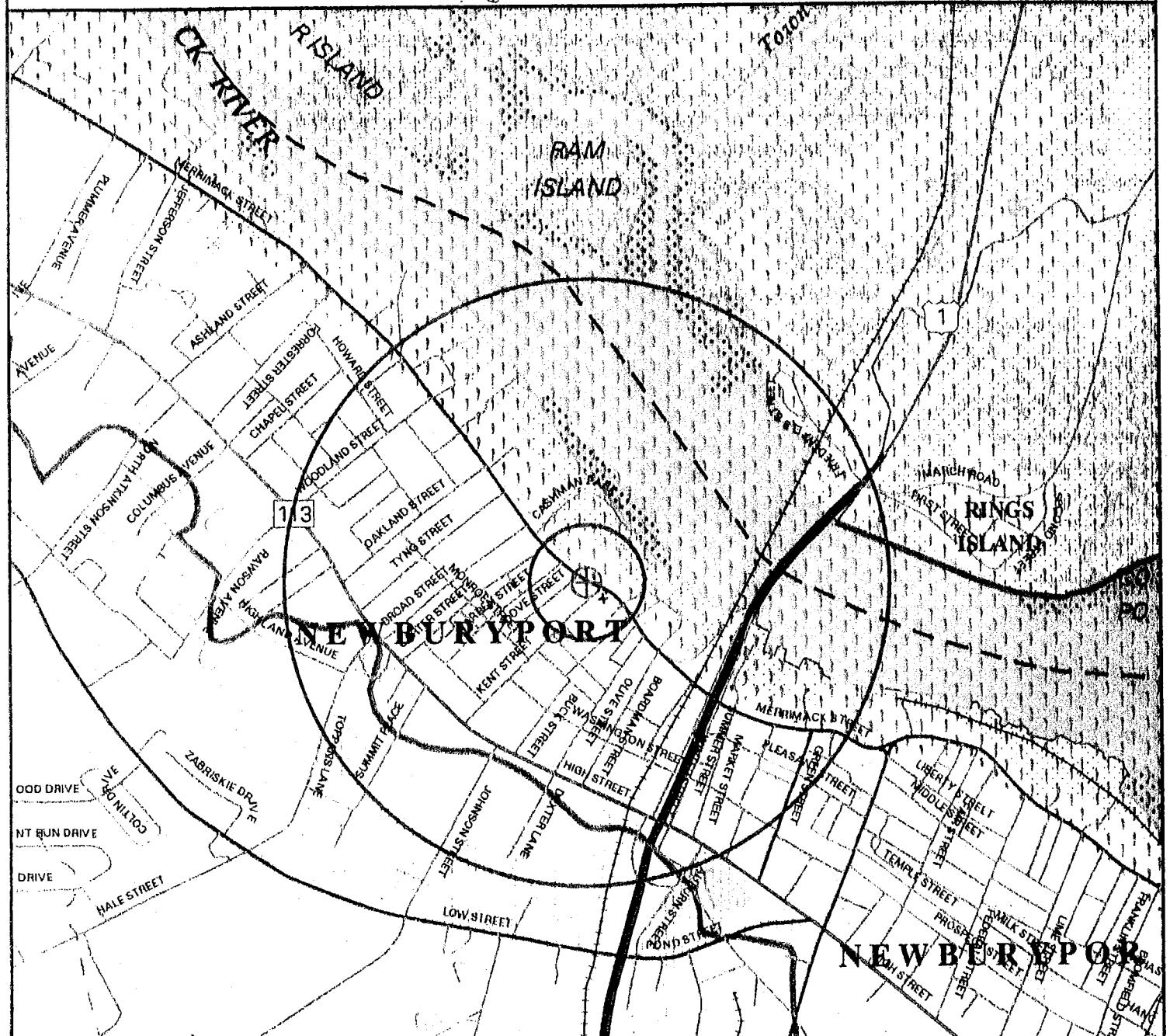
MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

Citgo Station
185 Merrimac Street
NEWBURYPORT, MA 01950
4741824n 346316ew

Site Location

MASS GIS — Massachusetts Geographic Information System
Massachusetts Executive Office of Environmental Affairs - 2004



Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
LEI-1 SA93140-01	6744-08	Ground Water	07-Apr-09 13:15	08-Apr-09

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Cert.
Volatile Organic Compounds												
Volatile Organic Compounds			GS									
Prepared by method SW846 5030 Water MS												
76-13-1	1,1,2-Trichlorotrifluoroethane (Fre 113)	BRL		µg/l	20.0	8.2	20	SW846 8260B	11-Apr-09	11-Apr-09	9040770	
67-64-1	Acetone	BRL		µg/l	200	51.2	20	"	"	"	"	
107-13-1	Acrylonitrile	BRL		µg/l	10.0	9.6	20	"	"	"	"	
71-43-2	Benzene	29.2		µg/l	20.0	11.4	20	"	"	"	"	
108-86-1	Bromobenzene	BRL		µg/l	20.0	13.2	20	"	"	"	"	
74-97-5	Bromochloromethane	BRL		µg/l	20.0	18.4	20	"	"	"	"	
75-27-4	Bromodichloromethane	BRL		µg/l	10.0	5.4	20	"	"	"	"	
75-25-2	Bromoform	BRL		µg/l	20.0	8.8	20	"	"	"	"	
74-83-9	Bromomethane	BRL		µg/l	40.0	33.0	20	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL		µg/l	200	48.6	20	"	"	"	"	
104-51-8	n-Butylbenzene	46.0		µg/l	20.0	12.4	20	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL		µg/l	20.0	11.2	20	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL		µg/l	20.0	12.8	20	"	"	"	"	
75-15-0	Carbon disulfide	BRL		µg/l	100	6.6	20	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL		µg/l	20.0	11.6	20	"	"	"	"	
108-90-7	Chlorobenzene	BRL		µg/l	20.0	10.4	20	"	"	"	"	
75-00-3	Chloroethane	BRL		µg/l	40.0	14.2	20	"	"	"	"	
67-66-3	Chloroform	BRL		µg/l	20.0	16.0	20	"	"	"	"	
74-87-3	Chloromethane	BRL		µg/l	40.0	11.2	20	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL		µg/l	20.0	13.8	20	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL		µg/l	20.0	12.8	20	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL		µg/l	40.0	12.8	20	"	"	"	"	
124-48-1	Dibromochloromethane	BRL		µg/l	10.0	8.2	20	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	10.0	3.2	20	"	"	"	"	
74-95-3	Dibromomethane	BRL		µg/l	20.0	12.6	20	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	20.0	10.8	20	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	20.0	11.4	20	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	20.0	9.0	20	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12	BRL		µg/l	40.0	11.6	20	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL		µg/l	20.0	6.6	20	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		µg/l	20.0	8.4	20	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL		µg/l	20.0	11.8	20	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	20.0	7.8	20	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	20.0	18.6	20	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL		µg/l	20.0	8.8	20	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL		µg/l	20.0	10.2	20	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL		µg/l	20.0	11.0	20	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL		µg/l	20.0	7.8	20	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	10.0	8.6	20	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	10.0	7.2	20	"	"	"	"	
100-41-4	Ethylbenzene	918		µg/l	20.0	5.6	20	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL		µg/l	10.0	8.0	20	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL		µg/l	200	10.6	20	"	"	"	"	
98-82-8	Isopropylbenzene	114		µg/l	20.0	7.8	20	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL		µg/l	20.0	10.2	20	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	20.0	5.2	20	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL		µg/l	200	8.4	20	"	"	"	"	
75-09-2	Methylene chloride	BRL		µg/l	100	11.6	20	"	"	"	"	
91-20-3	Naphthalene	261		µg/l	20.0	13.2	20	"	"	"	"	
103-65-1	n-Propylbenzene	232		µg/l	20.0	11.4	20	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
LEI-1 SA93140-01	6744-08	Ground Water	07-Apr-09 13:15	08-Apr-09

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Cert.
Volatile Organic Compounds												
Volatile Organic Compounds			GS									
Prepared by method SW846 5030 Water MS												
100-42-5	Styrene	BRL		µg/l	20.0	7.6	20	SW846 8260B	11-Apr-09	11-Apr-09	9040770	
630-20-6	1,1,1,2-Tetrachloroethane	BRL		µg/l	20.0	14.8	20	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL		µg/l	10.0	4.6	20	"	"	"	"	
127-18-4	Tetrachloroethene	BRL		µg/l	20.0	10.2	20	"	"	"	"	
108-88-3	Toluene	32.6		µg/l	20.0	12.8	20	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL		µg/l	20.0	14.8	20	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	20.0	14.2	20	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	BRL		µg/l	20.0	6.4	20	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	20.0	10.6	20	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	20.0	18.6	20	"	"	"	"	
79-01-6	Trichloroethene	BRL		µg/l	20.0	9.2	20	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11	BRL		µg/l	20.0	9.6	20	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL		µg/l	20.0	9.6	20	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	161		µg/l	20.0	13.2	20	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	113		µg/l	20.0	10.8	20	"	"	"	"	
75-01-4	Vinyl chloride	BRL		µg/l	20.0	17.2	20	"	"	"	"	
179601-23-1	m,p-Xylene	1,420		µg/l	40.0	13.6	20	"	"	"	"	
95-47-6	o-Xylene	401		µg/l	20.0	10.6	20	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL		µg/l	200	8.2	20	"	"	"	"	
60-29-7	Ethyl ether	BRL		µg/l	20.0	7.4	20	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL		µg/l	20.0	7.6	20	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL		µg/l	20.0	5.4	20	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL		µg/l	20.0	6.0	20	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL		µg/l	200	148	20	"	"	"	"	
123-91-1	1,4-Dioxane	BRL		µg/l	400	97.4	20	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	BRL		µg/l	100	50.0	20	"	"	"	"	
64-17-5	Ethanol	BRL		µg/l	8000	1470	20	"	"	"	"	
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*109*		*70-130 %*				"	"	"	"	
2037-26-5	*Toluene-d8*	*87*		*70-130 %*				"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*97*		*70-130 %*				"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*96*		*70-130 %*				"	"	"	"	
Microextractable Organic Compounds												
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100	0.00980	1	EPA 504.1	13-Apr-09	13-Apr-09	9040793	
Semivolatile Organic Compounds by GCMS												
Semivolatile Organic Compounds by EPA 625			GS									
Prepared by method SW846 3510C												
83-32-9	Acenaphthene	1.01	J	µg/l	5.00	0.120	1	EPA 625	10-Apr-09	13-Apr-09	9040694	
208-96-8	Acenaphthylene	BDL	U	µg/l	5.00	0.150	1	"	"	"	"	
62-53-3	Aniline	BDL	U	µg/l	5.00	0.380	1	"	"	"	"	
120-12-7	Anthracene	BDL	U	µg/l	5.00	0.150	1	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazine	BDL	U	µg/l	5.00	0.130	1	"	"	"	"	
92-87-5	Benzidine	BDL	U	µg/l	5.00	0.560	1	"	"	"	"	
56-55-3	Benzo (a) anthracene	BDL	U	µg/l	5.00	0.320	1	"	"	"	"	
50-32-8	Benzo (a) pyrene	BDL	U	µg/l	5.00	0.170	1	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BDL	U	µg/l	5.00	0.660	1	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BDL	U	µg/l	5.00	0.140	1	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BDL	U	µg/l	5.00	0.200	1	"	"	"	"	
65-85-0	Benzoic acid	BDL	U	µg/l	5.00	0.0900	1	"	"	"	"	
100-51-6	Benzyl alcohol	BDL	U	µg/l	5.00	0.0900	1	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
LEI-1 SA93140-01	6744-08	Ground Water	07-Apr-09 13:15	08-Apr-09

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Cert.
Semivolatile Organic Compounds by GCMS												
Semivolatile Organic Compounds by EPA 625			GS									
Prepared by method SW846 3510C												
111-91-1	Bis(2-chloroethoxy)methane	BDL	U	µg/l	5.00	0.100	1	EPA 625	10-Apr-09	13-Apr-09	9040694	
111-44-4	Bis(2-chloroethyl)ether	BDL	U	µg/l	5.00	0.0700	1	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	BDL	U	µg/l	5.00	0.0900	1	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	BDL	U	µg/l	5.00	0.950	1	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	BDL	U	µg/l	5.00	0.230	1	"	"	"	"	
85-68-7	Butyl benzyl phthalate	BDL	U	µg/l	5.00	0.570	1	"	"	"	"	
86-74-8	Carbazole	BDL	U	µg/l	5.00	0.180	1	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	BDL	U	µg/l	5.00	0.180	1	"	"	"	"	
106-47-8	4-Chloroaniline	BDL	U	µg/l	5.00	0.480	1	"	"	"	"	
91-58-7	2-Chloronaphthalene	BDL	U	µg/l	5.00	0.0700	1	"	"	"	"	
95-57-8	2-Chlorophenol	BDL	U	µg/l	5.00	0.100	1	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	BDL	U	µg/l	5.00	0.0600	1	"	"	"	"	
218-01-9	Chrysene	BDL	U	µg/l	5.00	0.0700	1	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BDL	U	µg/l	5.00	0.0800	1	"	"	"	"	
132-64-9	Dibenzofuran	0.578	J	µg/l	5.00	0.0600	1	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BDL	U	µg/l	5.00	0.160	1	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BDL	U	µg/l	5.00	0.210	1	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BDL	U	µg/l	5.00	0.220	1	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	BDL	U	µg/l	5.00	0.360	1	"	"	"	"	
120-83-2	2,4-Dichlorophenol	BDL	U	µg/l	5.00	0.130	1	"	"	"	"	
84-66-2	Diethyl phthalate	1.11	J	µg/l	5.00	0.160	1	"	"	"	"	
131-11-3	Dimethyl phthalate	BDL	U	µg/l	5.00	0.140	1	"	"	"	"	
105-67-9	2,4-Dimethylphenol	7.10		µg/l	5.00	0.230	1	"	"	"	"	
84-74-2	Di-n-butyl phthalate	BDL	U	µg/l	5.00	0.130	1	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	BDL	U	µg/l	5.00	0.120	1	"	"	"	"	
51-28-5	2,4-Dinitrophenol	BDL	U	µg/l	5.00	0.310	1	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	BDL	U	µg/l	5.00	0.210	1	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	BDL	U	µg/l	5.00	0.120	1	"	"	"	"	
117-84-0	Di-n-octyl phthalate	BDL	U	µg/l	5.00	0.240	1	"	"	"	"	
206-44-0	Fluoranthene	BDL	U	µg/l	5.00	0.120	1	"	"	"	"	
86-73-7	Fluorene	1.17	J	µg/l	5.00	0.120	1	"	"	"	"	
118-74-1	Hexachlorobenzene	BDL	U	µg/l	5.00	0.370	1	"	"	"	"	
87-68-3	Hexachlorobutadiene	BDL	U	µg/l	5.00	0.560	1	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	BDL	U	µg/l	5.00	0.370	1	"	"	"	"	
67-72-1	Hexachloroethane	BDL	U	µg/l	5.00	0.510	1	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BDL	U	µg/l	5.00	0.230	1	"	"	"	"	
78-59-1	Isophorone	BDL	U	µg/l	5.00	0.300	1	"	"	"	"	
91-57-6	2-Methylnaphthalene	16.3		µg/l	5.00	0.110	1	"	"	"	"	
95-48-7	2-Methylphenol	BDL	U	µg/l	5.00	0.210	1	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	BDL	U	µg/l	10.0	0.240	1	"	"	"	"	
91-20-3	Naphthalene	97.1		µg/l	5.00	0.190	1	"	"	"	"	
88-74-4	2-Nitroaniline	BDL	U	µg/l	5.00	0.0600	1	"	"	"	"	
99-09-2	3-Nitroaniline	BDL	U	µg/l	5.00	0.170	1	"	"	"	"	
100-01-6	4-Nitroaniline	BDL	U	µg/l	5.00	0.190	1	"	"	"	"	
98-95-3	Nitrobenzene	BDL	U	µg/l	5.00	0.180	1	"	"	"	"	
88-75-5	2-Nitrophenol	BDL	U	µg/l	5.00	0.230	1	"	"	"	"	
100-02-7	4-Nitrophenol	BDL	U	µg/l	5.00	0.260	1	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	BDL	U	µg/l	5.00	0.110	1	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	BDL	U	µg/l	5.00	0.600	1	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	BDL	U	µg/l	5.00	0.190	1	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
LEI-1 SA93140-01	6744-08	Ground Water	07-Apr-09 13:15	08-Apr-09

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Cert.
Semivolatile Organic Compounds by GCMS												
Semivolatile Organic Compounds by EPA 625			GS									
Prepared by method SW846 3510C												
87-86-5	Pentachlorophenol	BDL	U	µg/l	5.00	0.320	1	EPA 625	10-Apr-09	13-Apr-09	9040694	
85-01-8	Phenanthrene	1.02	J	µg/l	5.00	0.230	1	"	"	"	"	
108-95-2	Phenol	BDL	U	µg/l	5.00	0.100	1	"	"	"	"	
129-00-0	Pyrene	BDL	U	µg/l	5.00	0.350	1	"	"	"	"	
110-86-1	Pyridine	BDL	U	µg/l	5.00	0.100	1	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BDL	U	µg/l	5.00	0.0700	1	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	BDL	U	µg/l	5.00	0.100	1	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	BDL	U	µg/l	5.00	0.100	1	"	"	"	"	
Surrogate recoveries:												
321-60-8	*2-Fluorobiphenyl*	*49*		*30-130 %*				"	"	"	"	
367-12-4	*2-Fluorophenol*	*29*		*15-110 %*				"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*51*		*30-130 %*				"	"	"	"	
4165-62-2	*Phenol-d5*	*21*		*15-110 %*				"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*56*		*30-130 %*				"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*45*		*15-110 %*				"	"	"	"	
Semivolatile Organic Compounds by GC												
Polychlorinated Biphenyls by EPA 608												
Prepared by method SW846 3510C												
12674-11-2	Aroclor-1016	BRL		µg/l	0.0650	0.00650	1	EPA 608	09-Apr-09	09-Apr-09	9040577	
11104-28-2	Aroclor-1221	BRL		µg/l	0.0650	0.00630	1	"	"	"	"	
11141-16-5	Aroclor-1232	BRL		µg/l	0.0650	0.0152	1	"	"	"	"	
53469-21-9	Aroclor-1242	BRL		µg/l	0.0650	0.0131	1	"	"	"	"	
12672-29-6	Aroclor-1248	BRL		µg/l	0.0650	0.0155	1	"	"	"	"	
11097-69-1	Aroclor-1254	BRL		µg/l	0.0650	0.00464	1	"	"	"	"	
11096-82-5	Aroclor-1260	BRL		µg/l	0.0650	0.00537	1	"	"	"	"	
37324-23-5	Aroclor-1262	BRL		µg/l	0.0650	0.00240	1	"	"	"	"	
11100-14-4	Aroclor-1268	BRL		µg/l	0.0650	0.0116	1	"	"	"	"	
Surrogate recoveries:												
2051-24-3	*Decachlorobiphenyl (Sr)*	*94*		*30-150 %*				"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*65*		*30-150 %*				"	"	"	"	
Extractable Petroleum Hydrocarbons												
	Non-polar material (SGT-HEM)	BRL		mg/l	1.0	0.4	1	EPA 1664 Rev. A	10-Apr-09	11-Apr-09	9040691	
Total Metals by EPA 200 Series Methods												
7440-22-4	Silver	BRL		mg/l	0.0050	0.0032	1	EPA 200.7	16-Apr-09	17-Apr-09	9040679	X
7440-38-2	Arsenic	0.193		mg/l	0.0040	0.0032	1	"	"	"	"	X
7440-43-9	Cadmium	BRL		mg/l	0.0025	0.0006	1	"	"	"	"	X
7440-47-3	Chromium	0.0326		mg/l	0.0050	0.0019	1	"	"	"	"	X
7440-50-8	Copper	0.0369		mg/l	0.0050	0.0018	1	"	"	"	"	X
7439-89-6	Iron	53.2		mg/l	0.0150	0.0098	1	"	"	"	"	X
7439-97-6	Mercury	BRL		mg/l	0.00020	0.00011	1	EPA 245.1/7470A	"	17-Apr-09	9040680	X
7440-02-0	Nickel	0.0380		mg/l	0.0050	0.0011	1	EPA 200.7	"	17-Apr-09	9040679	X
7439-92-1	Lead	0.0232		mg/l	0.0075	0.0038	1	"	"	"	"	X
7440-36-0	Antimony	BRL		mg/l	0.0060	0.0036	1	"	"	"	"	X
7782-49-2	Selenium	BRL		mg/l	0.0150	0.0036	1	"	"	"	"	
7440-66-6	Zinc	0.0881		mg/l	0.0050	0.0025	1	"	"	"	"	X
General Chemistry Parameters												
18540-29-9	Hexavalent Chromium	BRL	R01	mg/l	0.050	0.035	10	SW846 7196A/SM3500Cr D	08-Apr-09 11:00	08-Apr-09 11:00	9040525	
57-12-5	Cyanide (total)	BRL		mg/l	0.0100	0.00769	1	EPA 335.4	09-Apr-09	10-Apr-09	9040601	X

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* Reportable Detection Limit BDL = Below Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
LEI-1 SA93140-01	6744-08	Ground Water	07-Apr-09 13:15	08-Apr-09

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Cert.
General Chemistry Parameters												
7782-50-5	Total Residual Chlorine	BRL	R01,CI HT	mg/l	0.200	0.096	10	Hach 8167	08-Apr-09 10:30	08-Apr-09 10:30	9040526	X
	Total Suspended Solids	32.0		mg/l	5.00	4.38	1	SM2540D	10-Apr-09	10-Apr-09	9040737	X

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040770 - SW846 5030 Water MS										
Blank (9040770-BLK1)										
Prepared & Analyzed: 11-Apr-09										
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	1.0						
Benzene	BRL		µg/l	0.5						
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	0.5						
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	0.5						
1,3-Dichlorobenzene	BRL		µg/l	0.5						
1,4-Dichlorobenzene	BRL		µg/l	0.5						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	0.5						
1,2-Dichloroethane	BRL		µg/l	0.5						
1,1-Dichloroethene	BRL		µg/l	0.5						
cis-1,2-Dichloroethene	BRL		µg/l	0.5						
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	0.5						
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	0.5						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	1.0						
Naphthalene	BRL		µg/l	0.5						
n-Propylbenzene	BRL		µg/l	1.0						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040770 - SW846 5030 Water MS										
Blank (9040770-BLK1)										
Prepared & Analyzed: 11-Apr-09										
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	0.5						
Toluene	BRL		µg/l	0.5						
1,2,3-Trichlorobenzene	BRL		µg/l	1.0						
1,2,4-Trichlorobenzene	BRL		µg/l	1.0						
1,3,5-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	0.5						
1,1,2-Trichloroethane	BRL		µg/l	0.5						
Trichloroethene	BRL		µg/l	0.5						
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	0.5						
m,p-Xylene	BRL		µg/l	1.0						
o-Xylene	BRL		µg/l	0.5						
Tetrahydrofuran	BRL		µg/l	5.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	0.5						
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						
trans-1,4-Dichloro-2-butene	BRL		µg/l	5.0						
Ethanol	BRL		µg/l	500						
Surrogate: 4-Bromofluorobenzene	*24.3*		µg/l		*30.0*		*81*	*70-130*		
Surrogate: Toluene-d8	*23.3*		µg/l		*30.0*		*78*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*28.5*		µg/l		*30.0*		*95*	*70-130*		
Surrogate: Dibromofluoromethane	*28.4*		µg/l		*30.0*		*95*	*70-130*		
LCS (9040770-BS1)										
Prepared & Analyzed: 11-Apr-09										
Acetone	18.1		µg/l		20.0		91	31.7-144		
Acrylonitrile	16.0		µg/l		20.0		80	70-130		
Benzene	19.6		µg/l		20.0		98	70-130		
Bromobenzene	23.4		µg/l		20.0		117	70-130		
Bromochloromethane	21.5		µg/l		20.0		107	70-130		
Bromodichloromethane	20.6		µg/l		20.0		103	70-130		
Bromoform	22.2		µg/l		20.0		111	70-130		
Bromomethane	16.7		µg/l		20.0		84	43-158		
2-Butanone (MEK)	19.7		µg/l		20.0		98	54.5-137		
n-Butylbenzene	17.9		µg/l		20.0		89	70-130		
sec-Butylbenzene	22.2		µg/l		20.0		111	70-130		
tert-Butylbenzene	21.4		µg/l		20.0		107	70-130		
Carbon disulfide	19.8		µg/l		20.0		99	70-130		
Carbon tetrachloride	20.5		µg/l		20.0		102	70-130		
Chlorobenzene	22.0		µg/l		20.0		110	70-130		
Chloroethane	15.5		µg/l		20.0		77	60.1-131		
Chloroform	19.4		µg/l		20.0		97	70-130		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040770 - SW846 5030 Water MS										
LCS (9040770-BS1)										
Prepared & Analyzed: 11-Apr-09										
Chloromethane	13.9		µg/l		20.0		70	70-130		
2-Chlorotoluene	21.5		µg/l		20.0		107	70-130		
4-Chlorotoluene	21.6		µg/l		20.0		108	70-130		
1,2-Dibromo-3-chloropropane	19.1		µg/l		20.0		96	70-130		
Dibromochloromethane	15.7		µg/l		20.0		79	66.2-145		
1,2-Dibromoethane (EDB)	22.3		µg/l		20.0		111	70-130		
Dibromomethane	19.8		µg/l		20.0		99	70-130		
1,2-Dichlorobenzene	24.5		µg/l		20.0		122	70-130		
1,3-Dichlorobenzene	23.9		µg/l		20.0		120	70-130		
1,4-Dichlorobenzene	20.0		µg/l		20.0		100	70-130		
Dichlorodifluoromethane (Freon12)	18.4		µg/l		20.0		92	46.9-168		
1,1-Dichloroethane	17.9		µg/l		20.0		90	70-130		
1,2-Dichloroethane	19.7		µg/l		20.0		98	70-130		
1,1-Dichloroethene	20.8		µg/l		20.0		104	70-130		
cis-1,2-Dichloroethene	22.2		µg/l		20.0		111	70-130		
trans-1,2-Dichloroethene	19.4		µg/l		20.0		97	70-130		
1,2-Dichloropropane	18.1		µg/l		20.0		91	70-130		
1,3-Dichloropropane	18.1		µg/l		20.0		91	70-130		
2,2-Dichloropropane	19.6		µg/l		20.0		98	70-130		
1,1-Dichloropropene	17.3		µg/l		20.0		87	70-130		
cis-1,3-Dichloropropene	17.3		µg/l		20.0		87	70-130		
trans-1,3-Dichloropropene	21.0		µg/l		20.0		105	70-130		
Ethylbenzene	20.1		µg/l		20.0		100	70-130		
Hexachlorobutadiene	24.9		µg/l		20.0		124	70-135		
2-Hexanone (MBK)	20.8		µg/l		20.0		104	70-130		
Isopropylbenzene	18.9		µg/l		20.0		95	70-130		
4-Isopropyltoluene	19.5		µg/l		20.0		97	70-130		
Methyl tert-butyl ether	22.3		µg/l		20.0		111	70-130		
4-Methyl-2-pentanone (MIBK)	21.8		µg/l		20.0		109	57.6-130		
Methylene chloride	18.8		µg/l		20.0		94	70-130		
Naphthalene	16.9		µg/l		20.0		84	70-130		
n-Propylbenzene	19.7		µg/l		20.0		99	70-130		
Styrene	18.6		µg/l		20.0		93	70-130		
1,1,1,2-Tetrachloroethane	22.9		µg/l		20.0		114	70-130		
1,1,2,2-Tetrachloroethane	18.7		µg/l		20.0		94	70-130		
Tetrachloroethene	21.5		µg/l		20.0		108	70-130		
Toluene	17.4		µg/l		20.0		87	70-130		
1,2,3-Trichlorobenzene	20.8		µg/l		20.0		104	70-130		
1,2,4-Trichlorobenzene	19.2		µg/l		20.0		96	70-130		
1,3,5-Trichlorobenzene	20.2		µg/l		20.0		101	70-130		
1,1,1-Trichloroethane	20.5		µg/l		20.0		102	70-130		
1,1,2-Trichloroethane	18.6		µg/l		20.0		93	70-130		
Trichloroethene	22.4		µg/l		20.0		112	70-130		
Trichlorofluoromethane (Freon 11)	21.9		µg/l		20.0		109	64.9-147		
1,2,3-Trichloropropane	22.8		µg/l		20.0		114	70-130		
1,2,4-Trimethylbenzene	20.3		µg/l		20.0		102	70-130		
1,3,5-Trimethylbenzene	18.9		µg/l		20.0		94	70-130		
Vinyl chloride	14.3		µg/l		20.0		72	70-130		
m,p-Xylene	42.9		µg/l		40.0		107	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040770 - SW846 5030 Water MS										
LCS (9040770-BS1)										
Prepared & Analyzed: 11-Apr-09										
o-Xylene	21.6		µg/l		20.0		108	70-130		
Tetrahydrofuran	18.1		µg/l		20.0		90	70-130		
Ethyl ether	21.6		µg/l		20.0		108	70-130		
Tert-amyl methyl ether	19.5		µg/l		20.0		98	70-130		
Ethyl tert-butyl ether	17.4		µg/l		20.0		87	70-130		
Di-isopropyl ether	16.0		µg/l		20.0		80	70-130		
Tert-Butanol / butyl alcohol	193		µg/l		200		97	70-130		
1,4-Dioxane	257		µg/l		200		129	53.8-137		
trans-1,4-Dichloro-2-butene	18.2		µg/l		20.0		91	70-130		
Ethanol	351		µg/l		400		88	70-130		
Surrogate: 4-Bromofluorobenzene	*34.0*		µg/l		*30.0*		*113*	*70-130*		
Surrogate: Toluene-d8	*27.4*		µg/l		*30.0*		*92*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*27.2*		µg/l		*30.0*		*91*	*70-130*		
Surrogate: Dibromofluoromethane	*27.9*		µg/l		*30.0*		*93*	*70-130*		
LCS Dup (9040770-BSD1)										
Prepared & Analyzed: 11-Apr-09										
Acetone	14.2		µg/l		20.0		71	31.7-144	24	50
Acrylonitrile	14.6		µg/l		20.0		73	70-130	9	25
Benzene	18.5		µg/l		20.0		93	70-130	5	25
Bromobenzene	22.4		µg/l		20.0		112	70-130	4	25
Bromochloromethane	20.7		µg/l		20.0		103	70-130	4	25
Bromodichloromethane	19.3		µg/l		20.0		97	70-130	6	25
Bromoform	21.3		µg/l		20.0		107	70-130	4	25
Bromomethane	15.9		µg/l		20.0		80	43-158	5	50
2-Butanone (MEK)	22.0		µg/l		20.0		110	54.5-137	11	50
n-Butylbenzene	17.5		µg/l		20.0		87	70-130	2	25
sec-Butylbenzene	20.5		µg/l		20.0		103	70-130	8	25
tert-Butylbenzene	20.0		µg/l		20.0		100	70-130	7	25
Carbon disulfide	18.2		µg/l		20.0		91	70-130	8	25
Carbon tetrachloride	18.9		µg/l		20.0		95	70-130	8	25
Chlorobenzene	20.8		µg/l		20.0		104	70-130	6	25
Chloroethane	14.8		µg/l		20.0		74	60.1-131	4	50
Chloroform	18.3		µg/l		20.0		91	70-130	6	25
Chloromethane	13.0	QC1	µg/l		20.0		65	70-130	7	25
2-Chlorotoluene	21.8		µg/l		20.0		109	70-130	2	25
4-Chlorotoluene	19.8		µg/l		20.0		99	70-130	9	25
1,2-Dibromo-3-chloropropane	17.9		µg/l		20.0		90	70-130	6	25
Dibromochloromethane	15.2		µg/l		20.0		76	66.2-145	4	50
1,2-Dibromoethane (EDB)	21.2		µg/l		20.0		106	70-130	5	25
Dibromomethane	18.7		µg/l		20.0		94	70-130	5	25
1,2-Dichlorobenzene	23.4		µg/l		20.0		117	70-130	4	25
1,3-Dichlorobenzene	22.3		µg/l		20.0		112	70-130	7	25
1,4-Dichlorobenzene	19.4		µg/l		20.0		97	70-130	3	25
Dichlorodifluoromethane (Freon12)	16.7		µg/l		20.0		84	46.9-168	10	50
1,1-Dichloroethane	16.9		µg/l		20.0		85	70-130	6	25
1,2-Dichloroethane	18.7		µg/l		20.0		94	70-130	5	25
1,1-Dichloroethene	18.9		µg/l		20.0		94	70-130	10	25
cis-1,2-Dichloroethene	20.6		µg/l		20.0		103	70-130	8	25
trans-1,2-Dichloroethene	18.4		µg/l		20.0		92	70-130	5	25
1,2-Dichloropropane	16.8		µg/l		20.0		84	70-130	8	25

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040770 - SW846 5030 Water MS										
LCS Dup (9040770-BSD1)										
Prepared & Analyzed: 11-Apr-09										
1,3-Dichloropropane	17.7		µg/l		20.0		88	70-130	2	25
2,2-Dichloropropane	18.6		µg/l		20.0		93	70-130	5	25
1,1-Dichloropropene	16.7		µg/l		20.0		84	70-130	4	25
cis-1,3-Dichloropropene	16.7		µg/l		20.0		84	70-130	4	25
trans-1,3-Dichloropropene	19.5		µg/l		20.0		98	70-130	7	25
Ethylbenzene	18.8		µg/l		20.0		94	70-130	7	25
Hexachlorobutadiene	23.2		µg/l		20.0		116	70-135	7	50
2-Hexanone (MBK)	20.5		µg/l		20.0		102	70-130	2	25
Isopropylbenzene	17.6		µg/l		20.0		88	70-130	7	25
4-Isopropyltoluene	18.6		µg/l		20.0		93	70-130	5	25
Methyl tert-butyl ether	21.3		µg/l		20.0		106	70-130	5	25
4-Methyl-2-pentanone (MIBK)	21.3		µg/l		20.0		107	57.6-130	2	50
Methylene chloride	17.6		µg/l		20.0		88	70-130	7	25
Naphthalene	17.9		µg/l		20.0		90	70-130	6	25
n-Propylbenzene	17.6		µg/l		20.0		88	70-130	11	25
Styrene	17.6		µg/l		20.0		88	70-130	6	25
1,1,1,2-Tetrachloroethane	21.5		µg/l		20.0		108	70-130	6	25
1,1,2,2-Tetrachloroethane	17.7		µg/l		20.0		89	70-130	6	25
Tetrachloroethene	20.9		µg/l		20.0		105	70-130	3	25
Toluene	17.0		µg/l		20.0		85	70-130	2	25
1,2,3-Trichlorobenzene	20.3		µg/l		20.0		102	70-130	2	25
1,2,4-Trichlorobenzene	18.7		µg/l		20.0		94	70-130	2	25
1,3,5-Trichlorobenzene	19.8		µg/l		20.0		99	70-130	2	25
1,1,1-Trichloroethane	19.3		µg/l		20.0		97	70-130	6	25
1,1,2-Trichloroethane	17.8		µg/l		20.0		89	70-130	4	25
Trichloroethene	21.3		µg/l		20.0		106	70-130	5	25
Trichlorofluoromethane (Freon 11)	19.9		µg/l		20.0		100	64.9-147	9	50
1,2,3-Trichloropropane	21.7		µg/l		20.0		109	70-130	5	25
1,2,4-Trimethylbenzene	18.8		µg/l		20.0		94	70-130	7	25
1,3,5-Trimethylbenzene	17.5		µg/l		20.0		88	70-130	7	25
Vinyl chloride	23.0	QR2	µg/l		20.0		115	70-130	47	25
m,p-Xylene	39.9		µg/l		40.0		100	70-130	7	25
o-Xylene	20.3		µg/l		20.0		102	70-130	6	25
Tetrahydrofuran	16.6		µg/l		20.0		83	70-130	9	25
Ethyl ether	19.3		µg/l		20.0		96	70-130	12	50
Tert-amyl methyl ether	19.1		µg/l		20.0		96	70-130	2	25
Ethyl tert-butyl ether	16.5		µg/l		20.0		83	70-130	5	25
Di-isopropyl ether	15.3		µg/l		20.0		76	70-130	5	25
Tert-Butanol / butyl alcohol	176		µg/l		200		88	70-130	9	25
1,4-Dioxane	207		µg/l		200		104	53.8-137	22	25
trans-1,4-Dichloro-2-butene	17.7		µg/l		20.0		88	70-130	3	25
Ethanol	303		µg/l		400		76	70-130	15	30
Surrogate: 4-Bromofluorobenzene	*33.1*		µg/l		*30.0*		*110*	*70-130*		
Surrogate: Toluene-d8	*28.0*		µg/l		*30.0*		*93*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*26.6*		µg/l		*30.0*		*89*	*70-130*		
Surrogate: Dibromofluoromethane	*27.8*		µg/l		*30.0*		*93*	*70-130*		
Matrix Spike (9040770-MS1)	**Source: SA93059-02**									
Prepared & Analyzed: 11-Apr-09										
Benzene	16.9		µg/l		20.0	BRL	85	70-130		
Chlorobenzene	21.6		µg/l		20.0	BRL	108	70-130		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040770 - SW846 5030 Water MS										
Matrix Spike (9040770-MS1)	**Source: SA93059-02**									
Prepared & Analyzed: 11-Apr-09										
1,1-Dichloroethene	15.6		µg/l		20.0	BRL	78	70-130		
Toluene	15.9		µg/l		20.0	BRL	79	70-130		
Trichloroethene	20.7		µg/l		20.0	BRL	103	70-130		
Surrogate: 4-Bromofluorobenzene	*33.1*		µg/l		*30.0*		*110*	*70-130*		
Surrogate: Toluene-d8	*27.7*		µg/l		*30.0*		*92*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*27.6*		µg/l		*30.0*		*92*	*70-130*		
Surrogate: Dibromofluoromethane	*28.2*		µg/l		*30.0*		*94*	*70-130*		
Matrix Spike Dup (9040770-MSD1)	**Source: SA93059-02**									
Prepared & Analyzed: 11-Apr-09										
Benzene	16.2		µg/l		20.0	BRL	81	70-130	5	30
Chlorobenzene	21.6		µg/l		20.0	BRL	108	70-130	0.3	30
1,1-Dichloroethene	14.9		µg/l		20.0	BRL	75	70-130	4	30
Toluene	15.2		µg/l		20.0	BRL	76	70-130	5	30
Trichloroethene	19.2		µg/l		20.0	BRL	96	70-130	7	30
Surrogate: 4-Bromofluorobenzene	*33.6*		µg/l		*30.0*		*112*	*70-130*		
Surrogate: Toluene-d8	*26.6*		µg/l		*30.0*		*89*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*27.3*		µg/l		*30.0*		*91*	*70-130*		
Surrogate: Dibromofluoromethane	*28.1*		µg/l		*30.0*		*94*	*70-130*		

Microextractable Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040793 - General Preparation SVOC										
Blank (9040793-BLK1)										
Prepared & Analyzed: 13-Apr-09										
1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100						
LCS (9040793-BS1)										
Prepared & Analyzed: 13-Apr-09										
1,2-Dibromoethane (EDB)	0.201		µg/l	0.0100	0.200		100	50-150		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040694 - SW846 3510C										
Blank (9040694-BLK1)										
Prepared: 10-Apr-09 Analyzed: 13-Apr-09										
n-Octadecane	BRL	U	µg/l	10.0						
Acenaphthene	BRL	U	µg/l	5.00						
Acenaphthylene	BRL	U	µg/l	5.00						
Aniline	BRL	U	µg/l	5.00						
Anthracene	BRL	U	µg/l	5.00						
Azobenzene/Diphenyldiazine	BRL	U	µg/l	5.00						
Benzidine	BRL	U	µg/l	5.00						
Benzo (a) anthracene	BRL	U	µg/l	5.00						
Benzo (a) pyrene	BRL	U	µg/l	5.00						
Benzo (b) fluoranthene	BRL	U	µg/l	5.00						
Benzo (g,h,i) perylene	BRL	U	µg/l	5.00						
Benzo (k) fluoranthene	BRL	U	µg/l	5.00						
Benzoic acid	BRL	U	µg/l	5.00						
Benzyl alcohol	BRL	U	µg/l	5.00						
Bis(2-chloroethoxy)methane	BRL	U	µg/l	5.00						
Bis(2-chloroethyl)ether	BRL	U	µg/l	5.00						
Bis(2-chloroisopropyl)ether	BRL	U	µg/l	5.00						
Bis(2-ethylhexyl)phthalate	BRL	U	µg/l	5.00						
4-Bromophenyl phenyl ether	BRL	U	µg/l	5.00						
Butyl benzyl phthalate	BRL	U	µg/l	5.00						
Carbazole	BRL	U	µg/l	5.00						
4-Chloro-3-methylphenol	BRL	U	µg/l	5.00						
4-Chloroaniline	BRL	U	µg/l	5.00						
2-Chloronaphthalene	BRL	U	µg/l	5.00						
2-Chlorophenol	BRL	U	µg/l	5.00						
4-Chlorophenyl phenyl ether	BRL	U	µg/l	5.00						
Chrysene	BRL	U	µg/l	5.00						
Dibenzo (a,h) anthracene	BRL	U	µg/l	5.00						
Dibenzofuran	BRL	U	µg/l	5.00						
1,2-Dichlorobenzene	BRL	U	µg/l	5.00						
1,3-Dichlorobenzene	BRL	U	µg/l	5.00						
1,4-Dichlorobenzene	BRL	U	µg/l	5.00						
3,3'-Dichlorobenzidine	BRL	U	µg/l	5.00						
2,4-Dichlorophenol	BRL	U	µg/l	5.00						
Diethyl phthalate	BRL	U	µg/l	5.00						
Dimethyl phthalate	BRL	U	µg/l	5.00						
2,4-Dimethylphenol	BRL	U	µg/l	5.00						
Di-n-butyl phthalate	BRL	U	µg/l	5.00						
4,6-Dinitro-2-methylphenol	BRL	U	µg/l	5.00						
2,4-Dinitrophenol	BRL	U	µg/l	5.00						
2,4-Dinitrotoluene	BRL	U	µg/l	5.00						
2,6-Dinitrotoluene	BRL	U	µg/l	5.00						
Di-n-octyl phthalate	BRL	U	µg/l	5.00						
Fluoranthene	BRL	U	µg/l	5.00						
Fluorene	BRL	U	µg/l	5.00						
Hexachlorobenzene	BRL	U	µg/l	5.00						
Hexachlorobutadiene	BRL	U	µg/l	5.00						
Hexachlorocyclopentadiene	BRL	U	µg/l	5.00						
Hexachloroethane	BRL	U	µg/l	5.00						

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040694 - SW846 3510C										
Blank (9040694-BLK1)										
Prepared: 10-Apr-09 Analyzed: 13-Apr-09										
Indeno (1,2,3-cd) pyrene	BRL	U	µg/l	5.00						
Isophorone	BRL	U	µg/l	5.00						
2-Methylnaphthalene	BRL	U	µg/l	5.00						
2-Methylphenol	BRL	U	µg/l	5.00						
3 & 4-Methylphenol	BRL	U	µg/l	10.0						
Naphthalene	BRL	U	µg/l	5.00						
2-Nitroaniline	BRL	U	µg/l	5.00						
3-Nitroaniline	BRL	U	µg/l	5.00						
4-Nitroaniline	BRL	U	µg/l	5.00						
Nitrobenzene	BRL	U	µg/l	5.00						
2-Nitrophenol	BRL	U	µg/l	5.00						
4-Nitrophenol	BRL	U	µg/l	5.00						
N-Nitrosodimethylamine	BRL	U	µg/l	5.00						
N-Nitrosodi-n-propylamine	BRL	U	µg/l	5.00						
N-Nitrosodiphenylamine	BRL	U	µg/l	5.00						
Pentachlorophenol	BRL	U	µg/l	5.00						
Phenanthrene	BRL	U	µg/l	5.00						
Phenol	BRL	U	µg/l	5.00						
Pyrene	BRL	U	µg/l	5.00						
Pyridine	BRL	U	µg/l	5.00						
1,2,4-Trichlorobenzene	BRL	U	µg/l	5.00						
2,4,5-Trichlorophenol	BRL	U	µg/l	5.00						
2,4,6-Trichlorophenol	BRL	U	µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	*30.8*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: 2-Fluorophenol	*19.0*		µg/l		*50.0*		*38*	*15-110*		
Surrogate: Nitrobenzene-d5	*35.7*		µg/l		*50.0*		*71*	*30-130*		
Surrogate: Phenol-d5	*11.3*		µg/l		*50.0*		*23*	*15-110*		
Surrogate: Terphenyl-dl4	*30.7*		µg/l		*50.0*		*61*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*23.3*		µg/l		*50.0*		*47*	*15-110*		
LCS (9040694-BS1)										
Prepared: 10-Apr-09 Analyzed: 13-Apr-09										
Acenaphthene	35.4		µg/l	5.00	50.0		71	40-140		
Acenaphthylene	34.0		µg/l	5.00	50.0		68	40-140		
Aniline	26.0		µg/l	5.00	50.0		52	40-140		
Anthracene	32.4		µg/l	5.00	50.0		65	40-140		
Azobenzene/Diphenyldiazine	35.9		µg/l	5.00	50.0		72	40-140		
Benzidine	6.29		µg/l	5.00	50.0		13	0-130		
Benzo (a) anthracene	36.0		µg/l	5.00	50.0		72	40-140		
Benzo (a) pyrene	36.7		µg/l	5.00	50.0		73	40-140		
Benzo (b) fluoranthene	39.7		µg/l	5.00	50.0		79	40-140		
Benzo (g,h,i) perylene	30.1		µg/l	5.00	50.0		60	40-140		
Benzo (k) fluoranthene	37.4		µg/l	5.00	50.0		75	40-140		
Benzoic acid	13.5		µg/l	5.00	50.0		27	11.8-130		
Benzyl alcohol	27.2		µg/l	5.00	50.0		54	40-140		
Bis(2-chloroethoxy)methane	37.1		µg/l	5.00	50.0		74	40-140		
Bis(2-chloroethyl)ether	36.1		µg/l	5.00	50.0		72	40-140		
Bis(2-chloroisopropyl)ether	31.3		µg/l	5.00	50.0		63	40-140		
Bis(2-ethylhexyl)phthalate	43.5		µg/l	5.00	50.0		87	40-140		
4-Bromophenyl phenyl ether	36.1		µg/l	5.00	50.0		72	40-140		
Butyl benzyl phthalate	39.6		µg/l	5.00	50.0		79	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040694 - SW846 3510C										
LCS (9040694-BS1)										
Prepared: 10-Apr-09 Analyzed: 13-Apr-09										
Carbazole	35.0		µg/l	5.00	50.0		70	0-200		
4-Chloro-3-methylphenol	39.1		µg/l	5.00	50.0		78	30-130		
4-Chloroaniline	31.8		µg/l	5.00	50.0		64	40-140		
2-Chloronaphthalene	31.4		µg/l	5.00	50.0		63	40-140		
2-Chlorophenol	28.4		µg/l	5.00	50.0		57	30-130		
4-Chlorophenyl phenyl ether	40.2		µg/l	5.00	50.0		80	40-140		
Chrysene	36.5		µg/l	5.00	50.0		73	40-140		
Dibenzo (a,h) anthracene	34.7		µg/l	5.00	50.0		69	40-140		
Dibenzofuran	34.6		µg/l	5.00	50.0		69	40-140		
1,2-Dichlorobenzene	25.0		µg/l	5.00	50.0		50	40-140		
1,3-Dichlorobenzene	22.0		µg/l	5.00	50.0		44	40-140		
1,4-Dichlorobenzene	26.6		µg/l	5.00	50.0		53	40-140		
3,3'-Dichlorobenzidine	42.3		µg/l	5.00	50.0		85	40-140		
2,4-Dichlorophenol	33.6		µg/l	5.00	50.0		67	30-130		
Diethyl phthalate	45.2		µg/l	5.00	50.0		90	40-140		
Dimethyl phthalate	41.0		µg/l	5.00	50.0		82	40-140		
2,4-Dimethylphenol	33.1		µg/l	5.00	50.0		66	30-130		
Di-n-butyl phthalate	37.5		µg/l	5.00	50.0		75	40-140		
4,6-Dinitro-2-methylphenol	24.8		µg/l	5.00	50.0		50	30-130		
2,4-Dinitrophenol	27.8		µg/l	5.00	50.0		56	30-130		
2,4-Dinitrotoluene	39.5		µg/l	5.00	50.0		79	40-140		
2,6-Dinitrotoluene	37.1		µg/l	5.00	50.0		74	40-140		
Di-n-octyl phthalate	44.1		µg/l	5.00	50.0		88	40-140		
Fluoranthene	33.0		µg/l	5.00	50.0		66	40-140		
Fluorene	35.5		µg/l	5.00	50.0		71	40-140		
Hexachlorobenzene	27.8		µg/l	5.00	50.0		56	40-140		
Hexachlorobutadiene	28.9		µg/l	5.00	50.0		58	40-140		
Hexachlorocyclopentadiene	18.4	QC2	µg/l	5.00	50.0		37	40-140		
Hexachloroethane	26.2		µg/l	5.00	50.0		52	40-140		
Indeno (1,2,3-cd) pyrene	32.6		µg/l	5.00	50.0		65	40-140		
Isophorone	37.8		µg/l	5.00	50.0		76	40-140		
2-Methylnaphthalene	30.6		µg/l	5.00	50.0		61	40-140		
2-Methylphenol	30.9		µg/l	5.00	50.0		62	40-140		
3 & 4-Methylphenol	30.2		µg/l	10.0	50.0		60	40-140		
Naphthalene	30.2		µg/l	5.00	50.0		60	40-140		
2-Nitroaniline	36.3		µg/l	5.00	50.0		73	40-140		
3-Nitroaniline	37.9		µg/l	5.00	50.0		76	40-140		
4-Nitroaniline	38.0		µg/l	5.00	50.0		76	40-140		
Nitrobenzene	37.7		µg/l	5.00	50.0		75	40-140		
2-Nitrophenol	32.0		µg/l	5.00	50.0		64	30-130		
4-Nitrophenol	18.1		µg/l	5.00	50.0		36	30-130		
N-Nitrosodimethylamine	19.9		µg/l	5.00	50.0		40	40-140		
N-Nitrosodi-n-propylamine	40.0		µg/l	5.00	50.0		80	40-140		
N-Nitrosodiphenylamine	37.2		µg/l	5.00	50.0		74	40-140		
Pentachlorophenol	23.8		µg/l	5.00	50.0		48	30-130		
Phenanthrene	33.7		µg/l	5.00	50.0		67	40-140		
Phenol	18.4		µg/l	5.00	50.0		37	30-130		
Pyrene	35.3		µg/l	5.00	50.0		71	40-140		
Pyridine	8.74	QC2	µg/l	5.00	50.0		17	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040694 - SW846 3510C										
LCS (9040694-BS1)										
Prepared: 10-Apr-09 Analyzed: 13-Apr-09										
1,2,4-Trichlorobenzene	27.5		µg/l	5.00	50.0		55	40-140		
2,4,5-Trichlorophenol	38.4		µg/l	5.00	50.0		77	30-130		
2,4,6-Trichlorophenol	34.1		µg/l	5.00	50.0		68	30-130		
Surrogate: 2-Fluorobiphenyl	*31.7*		µg/l		*50.0*		*63*	*30-130*		
Surrogate: 2-Fluorophenol	*19.0*		µg/l		*50.0*		*38*	*15-110*		
Surrogate: Nitrobenzene-d5	*37.5*		µg/l		*50.0*		*75*	*30-130*		
Surrogate: Phenol-d5	*11.6*		µg/l		*50.0*		*23*	*15-110*		
Surrogate: Terphenyl-dl4	*35.6*		µg/l		*50.0*		*71*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*24.6*		µg/l		*50.0*		*49*	*15-110*		

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040577 - SW846 3510C										
Blank (9040577-BLK1)										
Prepared & Analyzed: 09-Apr-09										
Aroclor-1016	BRL		µg/l	0.0650						
Aroclor-1016 [2C]	BRL		µg/l	0.0650						
Aroclor-1221	BRL		µg/l	0.0650						
Aroclor-1221 [2C]	BRL		µg/l	0.0650						
Aroclor-1232	BRL		µg/l	0.0650						
Aroclor-1232 [2C]	BRL		µg/l	0.0650						
Aroclor-1242	BRL		µg/l	0.0650						
Aroclor-1242 [2C]	BRL		µg/l	0.0650						
Aroclor-1248	BRL		µg/l	0.0650						
Aroclor-1248 [2C]	BRL		µg/l	0.0650						
Aroclor-1254	BRL		µg/l	0.0650						
Aroclor-1254 [2C]	BRL		µg/l	0.0650						
Aroclor-1260	BRL		µg/l	0.0650						
Aroclor-1260 [2C]	BRL		µg/l	0.0650						
Aroclor-1262	BRL		µg/l	0.0650						
Aroclor-1262 [2C]	BRL		µg/l	0.0650						
Aroclor-1268	BRL		µg/l	0.0650						
Aroclor-1268 [2C]	BRL		µg/l	0.0650						
Surrogate: Decachlorobiphenyl (Sr)	*0.221*		µg/l		*0.200*		*111*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.149*		µg/l		*0.200*		*74*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.143*		µg/l		*0.200*		*72*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2	*0.159*		µg/l		*0.200*		*80*	*30-150*		
LCS (9040577-BS1)										
Prepared & Analyzed: 09-Apr-09										
Aroclor-1016	2.61		µg/l	0.0650	2.50		104	50-114		
Aroclor-1016 [2C]	2.62		µg/l	0.0650	2.50		105	50-114		
Aroclor-1260	2.84		µg/l	0.0650	2.50		114	40-127		
Aroclor-1260 [2C]	2.48		µg/l	0.0650	2.50		99	40-127		
Surrogate: Decachlorobiphenyl (Sr)	*0.252*		µg/l		*0.200*		*126*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.189*		µg/l		*0.200*		*94*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.202*		µg/l		*0.200*		*101*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2	*0.191*		µg/l		*0.200*		*96*	*30-150*		
LCS Dup (9040577-BSD1)										
Prepared & Analyzed: 09-Apr-09										
Aroclor-1016	2.60		µg/l	0.0650	2.50		104	50-114	0.4	20
Aroclor-1016 [2C]	2.53		µg/l	0.0650	2.50		101	50-114	4	20
Aroclor-1260	2.75		µg/l	0.0650	2.50		110	40-127	3	20
Aroclor-1260 [2C]	2.49		µg/l	0.0650	2.50		100	40-127	0.5	20
Surrogate: Decachlorobiphenyl (Sr)	*0.262*		µg/l		*0.200*		*131*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.187*		µg/l		*0.200*		*94*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.191*		µg/l		*0.200*		*96*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2	*0.194*		µg/l		*0.200*		*97*	*30-150*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040691 - SW846 3510C										
Blank (9040691-BLK1)										
Prepared: 10-Apr-09 Analyzed: 11-Apr-09										
Non-polar material (SGT-HEM)	BRL		mg/l	1.0						
LCS (9040691-BS1)										
Prepared: 10-Apr-09 Analyzed: 11-Apr-09										
Non-polar material (SGT-HEM)	19.8		mg/l		25.4		78	75.2-87.5		

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 9040679 - EPA 200 Series										
Blank (9040679-BLK1)										
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Iron	BRL		mg/l	0.0150						
Nickel	BRL		mg/l	0.0050						
Lead	BRL		mg/l	0.0075						
Zinc	BRL		mg/l	0.0050						
Selenium	BRL		mg/l	0.0150						
Antimony	BRL		mg/l	0.0060						
Cadmium	BRL		mg/l	0.0025						
Arsenic	BRL		mg/l	0.0040						
Copper	BRL		mg/l	0.0050						
Silver	BRL		mg/l	0.0050						
Chromium	BRL		mg/l	0.0050						
LCS (9040679-BS1)										
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Antimony	1.32		mg/l	0.0060	1.25		105	85-115		
Zinc	1.31		mg/l	0.0050	1.25		105	85-115		
Selenium	1.35		mg/l	0.0150	1.25		108	85-115		
Lead	1.30		mg/l	0.0075	1.25		104	85-115		
Iron	1.33		mg/l	0.0150	1.25		106	85-115		
Nickel	1.32		mg/l	0.0050	1.25		105	85-115		
Arsenic	1.30		mg/l	0.0040	1.25		104	85-115		
Chromium	1.28		mg/l	0.0050	1.25		102	85-115		
Cadmium	1.28		mg/l	0.0025	1.25		102	85-115		
Copper	1.34		mg/l	0.0050	1.25		108	85-115		
Silver	1.32		mg/l	0.0050	1.25		106	85-115		
Duplicate (9040679-DUP1)	**Source: SA93140-01**									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Zinc	0.0886		mg/l	0.0050		0.0881			0.5	20
Selenium	0.0046	J	mg/l	0.0150		0.0054			17	20
Antimony	BRL		mg/l	0.0060		BRL				20
Lead	0.0232		mg/l	0.0075		0.0232			0.4	20
Nickel	0.0384		mg/l	0.0050		0.0380			0.9	20
Iron	54.4		mg/l	0.0150		53.2			2	20
Copper	0.0377		mg/l	0.0050		0.0369			2	20
Chromium	0.0322		mg/l	0.0050		0.0326			1	20
Cadmium	0.0009	J,QR8	mg/l	0.0025		0.0012			26	20
Arsenic	0.197		mg/l	0.0040		0.193			2	20
Silver	BRL		mg/l	0.0050		BRL				20
Matrix Spike (9040679-MS1)	**Source: SA93163-01**									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Selenium	1.38		mg/l	0.0150	1.25	BRL	110	70-130		
Iron	4.30		mg/l	0.0150	1.25	3.02	103	70-130		
Zinc	1.35		mg/l	0.0050	1.25	0.0226	106	70-130		
Nickel	1.31		mg/l	0.0050	1.25	0.0020	104	70-130		
Antimony	1.36		mg/l	0.0060	1.25	BRL	109	70-130		
Lead	1.28		mg/l	0.0075	1.25	BRL	102	70-130		
Copper	1.37		mg/l	0.0050	1.25	0.0041	109	70-130		
Arsenic	1.34		mg/l	0.0040	1.25	BRL	107	70-130		
Cadmium	1.28		mg/l	0.0025	1.25	BRL	102	70-130		

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 9040679 - EPA 200 Series										
Matrix Spike (9040679-MS1)	**Source: SA93163-01**									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Silver	1.36		mg/l	0.0050	1.25	BRL	109	70-130		
Chromium	1.29		mg/l	0.0050	1.25	BRL	103	70-130		
Matrix Spike (9040679-MS2)	**Source: SA93163-02**									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Selenium	1.35		mg/l	0.0150	1.25	BRL	108	70-130		
Antimony	1.34		mg/l	0.0060	1.25	BRL	107	70-130		
Lead	1.30		mg/l	0.0075	1.25	BRL	104	70-130		
Nickel	1.31		mg/l	0.0050	1.25	0.0028	105	70-130		
Zinc	1.35		mg/l	0.0050	1.25	0.0298	106	70-130		
Iron	3.86		mg/l	0.0150	1.25	2.56	104	70-130		
Chromium	1.28		mg/l	0.0050	1.25	BRL	103	70-130		
Arsenic	1.31		mg/l	0.0040	1.25	BRL	105	70-130		
Silver	1.34		mg/l	0.0050	1.25	BRL	107	70-130		
Cadmium	1.27		mg/l	0.0025	1.25	BRL	102	70-130		
Copper	1.37		mg/l	0.0050	1.25	0.0036	109	70-130		
Post Spike (9040679-PS1)	**Source: SA93163-01**									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Lead	1.27		mg/l	0.0075	1.25	BRL	101	85-115		
Iron	4.22		mg/l	0.0150	1.25	3.02	96	85-115		
Selenium	1.36		mg/l	0.0150	1.25	BRL	109	85-115		
Antimony	1.32		mg/l	0.0060	1.25	BRL	105	85-115		
Zinc	1.33		mg/l	0.0050	1.25	0.0226	105	85-115		
Nickel	1.29		mg/l	0.0050	1.25	0.0020	103	85-115		
Copper	1.36		mg/l	0.0050	1.25	0.0041	108	85-115		
Cadmium	1.26		mg/l	0.0025	1.25	BRL	101	85-115		
Silver	1.34		mg/l	0.0050	1.25	BRL	108	85-115		
Arsenic	1.33		mg/l	0.0040	1.25	BRL	106	85-115		
Chromium	1.28		mg/l	0.0050	1.25	BRL	102	85-115		
Post Spike (9040679-PS2)	**Source: SA93163-02**									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Iron	3.84		mg/l	0.0150	1.25	2.56	102	85-115		
Antimony	1.33		mg/l	0.0060	1.25	BRL	106	85-115		
Nickel	1.33		mg/l	0.0050	1.25	0.0028	106	85-115		
Lead	1.32		mg/l	0.0075	1.25	BRL	106	85-115		
Zinc	1.37		mg/l	0.0050	1.25	0.0298	107	85-115		
Selenium	1.37		mg/l	0.0150	1.25	BRL	109	85-115		
Chromium	1.30		mg/l	0.0050	1.25	BRL	104	85-115		
Cadmium	1.28		mg/l	0.0025	1.25	BRL	102	85-115		
Silver	1.36		mg/l	0.0050	1.25	BRL	109	85-115		
Arsenic	1.32		mg/l	0.0040	1.25	BRL	106	85-115		
Copper	1.40		mg/l	0.0050	1.25	0.0036	111	85-115		
Batch 9040680 - EPA200/SW7000 Series										
Blank (9040680-BLK1)										
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Mercury	BRL		mg/l	0.00020						
LCS (9040680-BS1)										
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										

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 9040680 - EPA200/SW7000 Series										
LCS (9040680-BS1)										
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Mercury	0.00460		mg/l	0.00020	0.00500		92	85-115		
Duplicate (9040680-DUP1)	Source: SA93140-01									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Mercury	BRL		mg/l	0.00020		BRL				20
Matrix Spike (9040680-MS1)	Source: SA93163-01									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Mercury	0.00500		mg/l	0.00020	0.00500	BRL	100	75-125		
Post Spike (9040680-PS1)	Source: SA93163-01									
Prepared: 16-Apr-09 Analyzed: 17-Apr-09										
Mercury	0.00476		mg/l	0.00020	0.00500	BRL	95	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040525 - General Preparation										
Blank (9040525-BLK1)										
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	BRL		mg/l	0.005						
Blank (9040525-BLK2)										
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	BRL		mg/l	0.005						
LCS (9040525-BS1)										
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.052		mg/l	0.005	0.0501		104	90-110		
LCS (9040525-BS2)										
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.050		mg/l	0.005	0.0501		100	90-110		
Duplicate (9040525-DUP1)	**Source: SA93137-01**									
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.016		mg/l	0.005		0.015			6	20
Duplicate (9040525-DUP3)	**Source: SA93140-01**									
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	BRL		mg/l	0.050		BRL				20
Matrix Spike (9040525-MS1)	**Source: SA93137-01**									
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.067		mg/l	0.005	0.0501	0.015	104	80-120		
Matrix Spike (9040525-MS2)	**Source: SA93137-02**									
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.480		mg/l	0.050	0.501	0.050	86	80-120		
Matrix Spike (9040525-MS3)	**Source: SA93140-01**									
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.470		mg/l	0.050	0.501	BRL	94	80-120		
Matrix Spike Dup (9040525-MSD1)	**Source: SA93137-01**									
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.068		mg/l	0.005	0.0501	0.015	106	80-120	1	20
Reference (9040525-SRM1)										
Prepared & Analyzed: 08-Apr-09										
Hexavalent Chromium	0.026		mg/l	0.005	0.0250		104	85-115		
Batch 9040526 - General Preparation										
Blank (9040526-BLK1)										
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	BRL		mg/l	0.020						
Blank (9040526-BLK2)										
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	BRL		mg/l	0.020						
LCS (9040526-BS1)										
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.047		mg/l	0.020	0.0500		94	90-110		
LCS (9040526-BS2)										
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.049		mg/l	0.020	0.0500		98	90-110		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040526 - General Preparation										
LCS (9040526-BS2)										
Prepared & Analyzed: 08-Apr-09										
Duplicate (9040526-DUP1)	**Source: SA93137-01**									
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.089		mg/l	0.020		0.085			5	20
Matrix Spike (9040526-MS1)	**Source: SA93137-01**									
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.140		mg/l	0.020	0.0500	0.085	110	80-120		
Matrix Spike (9040526-MS2)	**Source: SA93137-02**									
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	3.50	QM9	mg/l	1.00	2.50	2.60	36	80-120		
Matrix Spike (9040526-MS3)	**Source: SA93147-01**									
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.090		mg/l	0.020	0.0500	0.039	102	80-120		
Matrix Spike Dup (9040526-MSD1)	**Source: SA93137-01**									
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.142		mg/l	0.020	0.0500	0.085	114	80-120	1	200
Reference (9040526-SRM1)										
Prepared & Analyzed: 08-Apr-09										
Total Residual Chlorine	0.096		mg/l	0.020	0.113		85	85-115		
Batch 9040601 - General Preparation										
Blank (9040601-BLK1)										
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	BRL		mg/l	0.0100						
Blank (9040601-BLK2)										
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	BRL		mg/l	0.0100						
LCS (9040601-BS1)										
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	0.278		mg/l	0.0100	0.300		93	90-110		
LCS (9040601-BS2)										
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	0.255	QM9	mg/l	0.0100	0.300		85	90-110		
Duplicate (9040601-DUP1)	**Source: SA93150-03**									
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	BRL		mg/l	0.0100		BRL				20
Matrix Spike (9040601-MS1)	**Source: SA93150-03**									
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	0.272		mg/l	0.0100	0.300	BRL	91	90-110		
Matrix Spike Dup (9040601-MSD1)	**Source: SA93150-03**									
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	0.285		mg/l	0.0100	0.300	BRL	95	90-110	5	20
Reference (9040601-SRM1)										
Prepared: 09-Apr-09 Analyzed: 10-Apr-09										
Cyanide (total)	0.519		mg/l	0.0100	0.596		87	75-125		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 9040737 - General Preparation										
Blank (9040737-BLK1)										
Prepared & Analyzed: 10-Apr-09										
Total Suspended Solids	BRL		mg/l	5.00						
Blank (9040737-BLK2)										
Prepared & Analyzed: 10-Apr-09										
Total Suspended Solids	BRL		mg/l	5.00						
Duplicate (9040737-DUP1)	**Source: SA93120-01**									
Prepared & Analyzed: 10-Apr-09										
Total Suspended Solids	BRL		mg/l	5.00		BRL				20
Duplicate (9040737-DUP2)	**Source: SA93098-03**									
Prepared & Analyzed: 10-Apr-09										
Total Suspended Solids	BRL		mg/l	5.00		BRL				20
Reference (9040737-SRM1)										
Prepared & Analyzed: 10-Apr-09										
Total Suspended Solids	82.0		mg/l	10.0	88.8		92	90-110		
Reference (9040737-SRM2)										
Prepared & Analyzed: 10-Apr-09										
Total Suspended Solids	82.0		mg/l	10.0	88.8		92	90-110		

Notes and Definitions

GS	This sample was not able to be analyzed for low level reporting limits due to high concentrations of other target analytes in the sample.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QC1	Analyte out of acceptance range.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS or SRM recoveries within the control limits.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
R01	The Reporting Limit has been raised to account for matrix interference.
U	Analyte included in the analysis, but not detected
BDL	Below Detection Limit - Analyte NOT DETECTED at or above the minimum detection limit
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
ClHT	The method for residual chlorine indicates that samples should be analyzed immediately. 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous residual chlorine samples not analyzed in the field are considered out of hold time at the time of sample receipt.

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.

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