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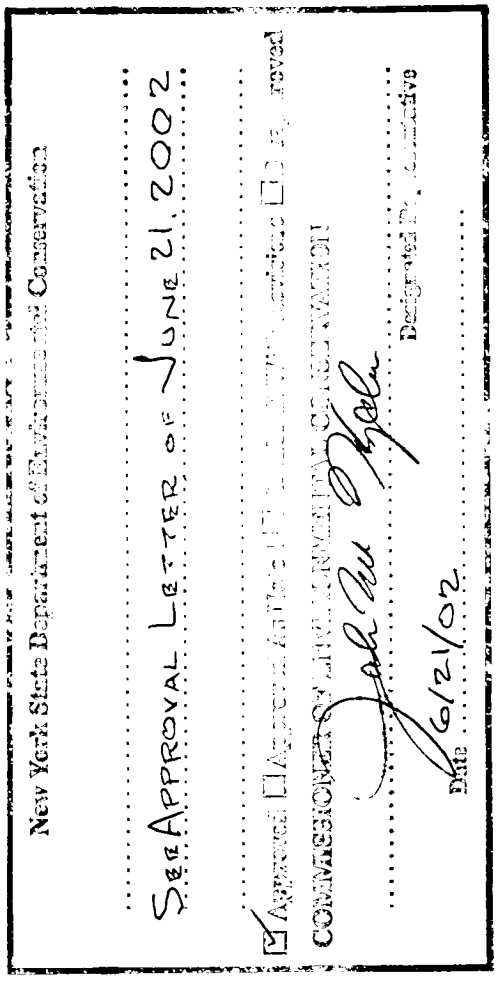
Envirotek II Site



Volume IIA of III
Appendices C1 through C4

Technical Committee
Participating Potentially
Responsible Parties

Tonawanda, New York

August 2001
Revised May 2002

Appendix C-1
SDG BG-03

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

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DATA REVIEW FOR

ENVIROTEK II SITE

SDG# BG03(0-6)

VOLATILE, SEMIVOLATILE
AND INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# BG03(0-6) for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
BG-03(0-6)[1]	315662	soil	8/11/99	x	x		x
BG-02(0-6)	515663	soil	8/11/99	x	x		x
BG-01(0-6)	315664	soil	8/11/99	x	x		x
BG-04(0-6)	315955	soil	8/12/99	x	x		
BG-05(0-8)	315956	soil	8/12/99	x	x		
SB-01(2-4)	315958	soil	8/12/99	x	x		
SB-01(4-6)	315959	soil	8/12/99	x	x		
SB-02(2-4)	315960	soil	8/12/99	x	x		
SB-02(6-8)	315961	soil	8/12/99	x	x		
SB-03(4-6)	315962	soil	8/12/99	x	x		
SB-03(6-8)	315963	soil	8/12/99	x	x		
SB-04(2-4)	315975	soil	8/12/99	x	x		
SB-04(6-8)	315978	soil	8/12/99	x	x		
SB-10(4-6)	315979	soil	8/13/99	x	x		
SB-10(6-8)[1]	315980	soil	8/13/99	x	x		
FD081399	315981	soil	8/13/99	x	x		
SB-05(4-6)	315982	soil	8/13/99	x	x		
SB-05(6-8)	315983	soil	8/13/99	x	x		
SB-06(4-6)	315984	soil	8/13/99	x	x		
SB-06(6-8)[1]	315985	soil	8/13/99	x	x		

1 MS/MSD analysis performed on sample

VOLATILE ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for soils 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Methylene chloride and Acetone were detected in the method blanks. Based on blank content, data for acetone in samples SB-06(4-6)DL and SB-06(6-8)DL and data for methylene chloride in samples BG-04(0-6), BG-05(0-8), SB-01(2-4), SB-01(4-6), SB-03(4-6), SB-04(6-8), SB-10(6-8) and SB-10(6-8)DL have been qualified as undetected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and all response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The response for several compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All data for compounds with decreasing responses and all positive data for compounds with increasing responses have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries for two surrogates were above control limits in sample SB-04(6-8)DL. All positive data for the sample have been qualified as estimated based on the recoveries. All remaining surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

The response for one internal standard was below established limits in samples SB-10(6-8), SB-10(6-8)MS, SB-10(6-8)MSD, SB-01(2-4), SB-01(4-6), SB-03(4-6), SB-03(4-6)RE, SB-03(6-8), SB-04(6-8), SB-04(2-4), SB-04(2-4)RE, SB-10(4-6) and SB-10(4-6)RE. Data for all compounds quantitated under the noncompliant standards have been qualified as estimated based on the deviations. All other internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Data for both low level and medium level matrix spikes were included in the data package. All medium level matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within

control limits. Recoveries for trichloroethene and toluene were, however, above control limits in the low level matrix spike and matrix spike duplicate. Since all matrix spike blank recoveries were within control limits, no data have been qualified based on the matrix spike performance.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SB-10(4-6) / FD081399	methylene chloride	21	19	10.0%
	acetone	11J	9J	20.0%
	carbon disulfide	3J	2J	40.0%
	1,1-dichloroethane	4J	3J	28.6%
	1,2-dichloroethene	29	26	10.9%
	chloroform	1J	ND	NA
	1,1,1-trichloroethane	14	11J	24.0%
	trichloroethene	170	140	19.4%
	benzene	2J	2J	0.0%
	tetrachloroethene	130	100	26.1%
	toluene	7J	5J	33.3%
	xylenes	6J	5J	18.2%

ND Not detected.
NA Anayte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?	X		
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
4 out of 20			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 10			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse blanks associated with every sample?		X	
Do any trip/field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Are the spectra and mass calibration acceptable?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		

	YES	NO	NA
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		

	YES	NO	NA
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?		X	
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
BG-03(0-6)							
BG-02(0-6)							
BG-01(0-6)							
BG-04(0-6)							
BG-05(0-8)							
SB-01(2-4)							
SB-01(2-4)DL							
SB-01(4-6)							
SB-01(4-6)DL							
SB-02(2-4)							
SB-02(6-8)							
SB-03(4-6)							
SB-03(4-6)RE							
SB-03(6-8)							
SB-03(6-8)DL							
SB-04(2-4)							
SB-04(2-4)RE							
SB-04(6-8)							
SB-04(6-8)DL							
SB-10(4-6)							
SB-10(4-6)RE							
SB-10(6-8)							
SB-10(6-8)MS							
SB-10(6-8)MSD							
SB-10(6-8)DL							
FD081399							
SB-05(4-6)							
SB-05(6-8)							
SB-06(4-6)							
SB-06(4-6)DL							
SB-06(6-8)							
SB-06(6-8)MS							

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
SB-06(6-8)MSD							
SB-06(6-8)DL							

Surrogates:
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
BCM Bromochloromethane
DFB 1,4-Difluorobenzene
CBZ Chlorobenzene-d5

Qualifiers:
D Diluted
↑ Recovery high
↓ Recovery low
↓↓ Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: MS6
Matrix: soil (med)

Date/Time	8/13/99		8/23/99 0858							
	Initial Cal.		Cont. Cal		Cont. Cal.		Cont. Cal		Cont. Cal	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										
bromomethane				29.7						
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone										
2-hexanone										
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										
chlorobenzene										

Volatile Calibration Outliers - Page 2

Date/Time	8/13/99		8/23/99 0858							
	Initial Cal.		Cont. Cal		Cont. Cal		Cont. Cal.		Cont Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
ethylbenzene										
styrene										
xylene (total)										

Affected Samples
sb06(4-6)dl
sb06(6-8)dl
sb06(6-8)ms
sb06(6-8)md

Volatile Calibration Outliers - Page 3

Instrument: MS6
Matrix: soil (low)

Date/Time	8/17/99		8/18/99 0844		8/18/99 1618		8/19/99 1024		8/19/99 1557	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										
bromomethane				-32.1						
vinyl chloride										
chloroethane								28.1		
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone										
2-hexanone										
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										

Volatile Calibration Outliers - Page 4

Date/Time	8/17/99		8/18/99 0844		8/18/99 1618		8/19/99 1024		8/19/99 1557	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chlorobenzene										
ethylbenzene										
styrene										
xylene (total)										

Affected Samples					
	sb10(6-8)		sb04(2-4)		
	sb10(6-8)ms		sb10(4-6)		
	sb10(6-8)md		sb05(4-6)		
	sb10(6-8)dl		sb05(6-8)		
	bg04(0-6)				
	bg05(0-8)				

Corrected Sample Analysis Data Sheets

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-04 (0-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315955

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3805

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	2	JB
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-04 (0-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315955

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3805

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-05 (0-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315956

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3806

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 15 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	4	JB
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BG-05 (0-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315956

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3806

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 15 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-01 (2-4)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3814

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 22 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	14	B
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	7	J
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	3	J
540-59-0	1,2-Dichloroethene (total)	74	
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	41	
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	~~260~~	~~E~~
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentonone	13	~~U~~
591-78-6	2-Hexanone	13	~~U~~
127-18-4	Tetrachloroethene	~~640~~	~~E~~
79-34-5	1,1,2,2-Tetrachloroethane	13	~~U~~
108-88-3	Toluene	17	
108-90-7	Chlorobenzene	13	~~U~~
100-41-4	Ethylbenzene	13	~~U~~
100-42-5	Styrene	13	~~U~~
1330-20-7	Xylene (Total)	13	~~U~~

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SB-01 (2-4)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3814

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 22 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-01 (2-4)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3847

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 22 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	64	U
74-83-9	Bromomethane	64	U
75-01-4	Vinyl Chloride	64	U
75-00-3	Chloroethane	64	U
75-09-2	Methylene Chloride	14	DJ
67-64-1	Acetone	64	U
75-15-0	Carbon Disulfide	8	DJ
75-35-4	1,1-Dichloroethene	64	U
75-34-3	1,1-Dichloroethane	64	U
540-59-0	1,2-Dichloroethene (total)	89	D
67-66-3	Chloroform	64	U
107-06-2	1,2-Dichloroethane	64	U
78-93-3	2-Butanone	64	U
71-55-6	1,1,1-Trichloroethane	36	DJ
56-23-5	Carbon Tetrachloride	64	U
75-27-4	Bromodichloromethane	64	U
78-87-5	1,2-Dichloropropane	64	U
10061-01-5	cis-1,3-Dichloropropene	64	U
79-01-6	Trichloroethene	400	D
124-48-1	Dibromochloromethane	64	U
79-00-5	1,1,2-Trichloroethane	64	U
71-43-2	Benzene	64	U
10061-02-6	trans-1,3-Dichloropropene	64	U
75-25-2	Bromoform	64	U
108-10-1	4-Methyl-2-Pentonone	64	U
591-78-6	2-Hexanone	64	U
127-18-4	Tetrachloroethene	990	D
79-34-5	1,1,2,2-Tetrachloroethane	64	U
108-88-3	Toluene	25	DJ
108-90-7	Chlorobenzene	64	U
100-41-4	Ethylbenzene	64	U
100-42-5	Styrene	64	U
1330-20-7	Xylene (Total)	64	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-01 (2-4)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3847

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 22 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-01 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3815

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 16 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	~~12~~ 7	~~U~~ JB
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	5	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	30	
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	33	
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	130	
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	~~U~~
591-78-6	2-Hexanone	12	~~U~~
127-18-4	Tetrachloroethene	~~340~~ 370	~~E~~ D
79-34-5	1,1,2,2-Tetrachloroethane	12	~~U~~
108-88-3	Toluene	23	
108-90-7	Chlorobenzene	12	~~U~~
100-41-4	Ethylbenzene	12	~~U~~
100-42-5	Styrene	12	~~U~~
1330-20-7	Xylene (Total)	12	~~U~~

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-01 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3815

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 16 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.54	11	J
2.	110-54-3	HEXANE	4.57	8	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-01 (4-6)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3848

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 16 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	60	U
74-83-9	Bromomethane	60	U
75-01-4	Vinyl Chloride	60	U
75-00-3	Chloroethane	60	U
75-09-2	Methylene Chloride	7	DJ
67-64-1	Acetone	60	U
75-15-0	Carbon Disulfide	60	U
75-35-4	1,1-Dichloroethene	60	U
75-34-3	1,1-Dichloroethane	60	U
540-59-0	1,2-Dichloroethene (total)	34	DJ
67-66-3	Chloroform	60	U
107-06-2	1,2-Dichloroethane	60	U
78-93-3	2-Butanone	60	U
71-55-6	1,1,1-Trichloroethane	22	DJ
56-23-5	Carbon Tetrachloride	60	U
75-27-4	Bromodichloromethane	60	U
78-87-5	1,2-Dichloropropane	60	U
10061-01-5	cis-1,3-Dichloropropene	60	U
79-01-6	Trichloroethene	140	D
124-48-1	Dibromochloromethane	60	U
79-00-5	1,1,2-Trichloroethane	60	U
71-43-2	Benzene	60	U
10061-02-6	trans-1,3-Dichloropropene	60	U
75-25-2	Bromoform	60	U
108-10-1	4-Methyl-2-Pentonone	60	U
591-78-6	2-Hexanone	60	U
127-18-4	Tetrachloroethene	370	D
79-34-5	1,1,2,2-Tetrachloroethane	60	U
108-88-3	Toluene	24	DJ
108-90-7	Chlorobenzene	60	U
100-41-4	Ethylbenzene	60	U
100-42-5	Styrene	60	U
1330-20-7	Xylene (Total)	60	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-01 (4-6)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3848

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 16 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-02 (2-4)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315960

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3844

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	3	J
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	15	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	9	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-02 (2-4)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315960

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3844

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-02 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315961

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3845

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	5	J
75-15-0	Carbon Disulfide	4	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	5	J
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	13	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	23	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	52	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	1	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-02 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315961

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3845

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-03(4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3821

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 14 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	~~6~~	~~JB~~ U
67-64-1	Acetone	6	J
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	3	J
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	120	
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	77	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-03(4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3821

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 14 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-03 (4-6)RE

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3846

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 14 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	6	J
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	20	
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	1	J
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	95	
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	65	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-03 (4-6)RE

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3846

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 14 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-03 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963

Sample wt/vol: 2.0 (g/mL) G Lab File ID: Q3822

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 13 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	29	U
74-83-9	Bromomethane	29	U
75-01-4	Vinyl Chloride	29	U
75-00-3	Chloroethane	8	J
75-09-2	Methylene Chloride	29	U
67-64-1	Acetone	30	
75-15-0	Carbon Disulfide	7	J
75-35-4	1,1-Dichloroethene	29	U
75-34-3	1,1-Dichloroethane	110	
540-59-0	1,2-Dichloroethene (total)	280	
67-66-3	Chloroform	29	U
107-06-2	1,2-Dichloroethane	29	U
78-93-3	2-Butanone	29	U
71-55-6	1,1,1-Trichloroethane	190	
56-23-5	Carbon Tetrachloride	29	U
75-27-4	Bromodichloromethane	29	U
78-87-5	1,2-Dichloropropane	29	U
10061-01-5	cis-1,3-Dichloropropene	29	U
79-01-6	Trichloroethene	95	
124-48-1	Dibromochloromethane	29	U
79-00-5	1,1,2-Trichloroethane	29	U
71-43-2	Benzene	29	U
10061-02-6	trans-1,3-Dichloropropene	29	U
75-25-2	Bromoform	29	U
108-10-1	4-Methyl-2-Pentonone	29	U
591-78-6	2-Hexanone	29	U
127-18-4	Tetrachloroethene	150 680	E
79-34-5	1,1,2,2-Tetrachloroethane	29	U
108-88-3	Toluene	5	J
108-90-7	Chlorobenzene	29	U
100-41-4	Ethylbenzene	4	J
100-42-5	Styrene	29	U
1330-20-7	Xylene (Total)	7	J

FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-03 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963

Sample wt/vol: 2.0 (g/mL) G Lab File ID: Q3822

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 13 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.53	140	NJ
2.	107-83-5	PENTANE, 2-METHYL-	3.74	110	NJ
3.	96-14-0	PENTANE, 3-METHYL-	4.12	170	NJ
4.	110-54-3	HEXANE	4.57	280	NJ
5.	589-34-4	HEXANE, 3-METHYL-	6.86	130	NJ
6.	142-82-5	HEPTANE	7.59	98	NJ
7.	592-27-8	HEPTANE, 2-METHYL-	9.56	61	NJ
8.	589-81-1	HEPTANE, 3-METHYL-	9.79	79	NJ
9.	930-89-2	CYCLOPENTANE, 1-ETHYL-2-METH	10.64	68	NJ
10.	1795-26-2	CYCLOHEXANE, 1,3,5-TRIMETHYL	12.10	82	NJ
11.		UNKNOWN CYCLOALKANE	12.62	49	J
12.		UNKNOWN CYCLOALKANE	13.30	56	J
13.		UNKNOWN HYDROCARBON	13.91	86	J
14.		UNKNOWN HYDROCARBON	14.01	84	J
15.		UNKNOWN HYDROCARBON	14.23	82	J
16.		UNKNOWN HYDROCARBON	14.39	75	J
17.		UNKNOWN CYCLOALKANE	14.83	120	J
18.		UNKNOWN HYDROCARBON	15.13	110	J
19.		UNKNOWN HYDROCARBON	17.19	140	J
20.		UNKNOWN HYDROCARBON	18.26	180	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-03 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3854

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 13 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	58	U
74-83-9	Bromomethane	58	U
75-01-4	Vinyl Chloride	58	U
75-00-3	Chloroethane	58	U
75-09-2	Methylene Chloride	58	U
67-64-1	Acetone	44	DJ
75-15-0	Carbon Disulfide	9	DJ
75-35-4	1,1-Dichloroethene	58	U
75-34-3	1,1-Dichloroethane	110	D
540-59-0	1,2-Dichloroethene (total)	300	D
67-66-3	Chloroform	58	U
107-06-2	1,2-Dichloroethane	58	U
78-93-3	2-Butanone	58	U
71-55-6	1,1,1-Trichloroethane	190	D
56-23-5	Carbon Tetrachloride	58	U
75-27-4	Bromodichloromethane	58	U
78-87-5	1,2-Dichloropropane	58	U
10061-01-5	cis-1,3-Dichloropropene	58	U
79-01-6	Trichloroethene	100	D
124-48-1	Dibromochloromethane	58	U
79-00-5	1,1,2-Trichloroethane	58	U
71-43-2	Benzene	58	U
10061-02-6	trans-1,3-Dichloropropene	58	U
75-25-2	Bromoform	58	U
108-10-1	4-Methyl-2-Pentonone	58	U
591-78-6	2-Hexanone	58	U
127-18-4	Tetrachloroethene	750	D
79-34-5	1,1,2,2-Tetrachloroethane	58	U
108-88-3	Toluene	58	U
108-90-7	Chlorobenzene	58	U
100-41-4	Ethylbenzene	58	U
100-42-5	Styrene	58	U
1330-20-7	Xylene (Total)	58	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: SB-03 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3854

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 13 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.54	84	NJD
2.	96-14-0	PENTANE, 3-METHYL-	4.13	98	NJD
3.	110-54-3	HEXANE	4.58	150	NJD
4.	142-82-5	HEPTANE	7.60	76	NJD
5.	589-81-1	HEPTANE, 3-METHYL-	9.79	70	NJD
6.		UNKNOWN CYCLOALKANE	10.64	67	JD
7.		UNKNOWN CYCLOALKANE	11.51	49	JD
8.		UNKNOWN CYCLOALKANE	12.10	90	JD
9.		UNKNOWN CYCLOALKANE	12.63	56	JD
10.		UNKNOWN CYCLOALKANE	12.95	100	JD
11.		UNKNOWN CYCLOALKANE	13.30	100	JD
12.		UNKNOWN CYCLOALKANE	13.54	340	JD
13.		UNKNOWN HYDROCARBON	13.91	100	JD
14.		UNKNOWN CYCLOALKANE	14.01	91	JD
15.		UNKNOWN HYDROCARBON	14.23	110	JD
16.		UNKNOWN HYDROCARBON	14.39	94	JD
17.		UNKNOWN CYCLOALKANE	14.83	140	JD
18.		UNKNOWN CYCLOALKANE	15.12	120	JD
19.		UNKNOWN HYDROCARBON	17.19	170	JD
20.		UNKNOWN HYDROCARBON	18.26	220	JD
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-04 (2-4)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3832

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	18	
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	10	J
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	4	J
71-55-6	1,1,1-Trichloroethane	10	J
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	44	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	35	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-04 (2-4)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3832

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-04 (2-4)RE

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3849

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	21	
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	14	
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	6	J
71-55-6	1,1,1-Trichloroethane	10	J
56-23-5	Carbon Tetrachloride	2	J
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	57	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	44	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-04 (2-4)RE

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3849

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-04 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978

Sample wt/vol: 2.5 (g/mL) G Lab File ID: Q3824

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 7 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	22 4	JB
67-64-1	Acetone	65	
75-15-0	Carbon Disulfide	11	J
75-35-4	1,1-Dichloroethene	22	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	22	U
71-55-6	1,1,1-Trichloroethane	37	
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	43	
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	3	J
10061-02-6	trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentonone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	71	
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	7	J
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	5	J
100-42-5	Styrene	22	U
1330-20-7	Xylene (Total)	13	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-04 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978

Sample wt/vol: 2.5 (g/mL) G Lab File ID: Q3824

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 7 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108-87-2	CYCLOHEXANE, METHYL-	8.40	560	NJ
2.	6876-23-9	CYCLOHEXANE, 1,2-DIMETHYL-,	10.62	370	NJ
3.		UNKNOWN ALKANE	11.32	290	J
4.		UNKNOWN CYCLOALKANE	11.51	200	J
5.		UNKNOWN CYCLOALKANE	11.61	260	J
6.		UNKNOWN CYCLOALKANE	11.71	600	J
7.		UNKNOWN CYCLOALKANE	12.10	540	J
8.		UNKNOWN CYCLOALKANE	13.30	190	J
9.		UNKNOWN CYCLOALKANE	13.55	410	J
10.		UNKNOWN CYCLOALKANE	13.92	460	J
11.		UNKNOWN ALKANE	14.01	390	J
12.		UNKNOWN CYCLOALKANE	14.09	500	J
13.		UNKNOWN ALKANE	14.23	850	J
14.		UNKNOWN CYCLOALKANE	14.84	820	J
15.		UNKNOWN CYCLOALKANE	15.21	240	J
16.		UNKNOWN CYCLOALKANE	15.34	850	J
17.		UNKNOWN ALKANE	16.05	480	J
18.		UNKNOWN CYCLOALKANE	16.47	1000	J
19.		UNKNOWN HYDROCARBON	17.20	520	J
20.		UNKNOWN CYCLOALKANE	17.56	720	J
21.					
22.					
23.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-04 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3856

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 7 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	54	U
74-83-9	Bromomethane	54	U
75-01-4	Vinyl Chloride	54	U
75-00-3	Chloroethane	54	U
75-09-2	Methylene Chloride	54	U
67-64-1	Acetone	54	D
75-15-0	Carbon Disulfide	9	DJ
75-35-4	1,1-Dichloroethene	54	U
75-34-3	1,1-Dichloroethane	54	U
540-59-0	1,2-Dichloroethene (total)	6	DJ
67-66-3	Chloroform	54	U
107-06-2	1,2-Dichloroethane	54	U
78-93-3	2-Butanone	54	U
71-55-6	1,1,1-Trichloroethane	31	DJ
56-23-5	Carbon Tetrachloride	54	U
75-27-4	Bromodichloromethane	54	U
78-87-5	1,2-Dichloropropane	54	U
10061-01-5	cis-1,3-Dichloropropene	54	U
79-01-6	Trichloroethene	38	DJ
124-48-1	Dibromochloromethane	54	U
79-00-5	1,1,2-Trichloroethane	54	U
71-43-2	Benzene	54	U
10061-02-6	trans-1,3-Dichloropropene	54	U
75-25-2	Bromoform	54	U
108-10-1	4-Methyl-2-Pentonone	54	U
591-78-6	2-Hexanone	54	U
127-18-4	Tetrachloroethene	83	D
79-34-5	1,1,2,2-Tetrachloroethane	54	U
108-88-3	Toluene	7	DJ
108-90-7	Chlorobenzene	54	U
100-41-4	Ethylbenzene	6	DJ
100-42-5	Styrene	54	U
1330-20-7	Xylene (Total)	11	DJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-04 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3856

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 7 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN CYCLOALKANE	8.40	530	JD
2.		UNKNOWN CYCLOALKANE	10.62	430	JD
3.		UNKNOWN ALKANE	11.32	340	JD
4.		UNKNOWN HYDROCARBON	11.52	230	JD
5.		UNKNOWN HYDROCARBON	11.61	300	JD
6.		UNKNOWN CYCLOALKANE	11.71	700	JD
7.		UNKNOWN CYCLOALKANE	12.10	630	JD
8.		UNKNOWN CYCLOALKANE	12.94	280	JD
9.		UNKNOWN CYCLOALKANE	13.30	220	JD
10.		UNKNOWN HYDROCARBON	13.92	590	JD
11.		UNKNOWN ALKANE	14.01	610	JD
12.		UNKNOWN CYCLOALKANE	14.09	660	JD
13.		UNKNOWN ALKANE	14.23	600	JD
14.		UNKNOWN HYDROCARBON	14.31	340	JD
15.		UNKNOWN CYCLOALKANE	14.83	1100	JD
16.		UNKNOWN CYCLOALKANE	15.13	370	JD
17.		UNKNOWN CYCLOALKANE	15.34	1100	JD
18.		UNKNOWN HYDROCARBON	17.19	430	JD
19.		UNKNOWN CYCLOALKANE	17.56	1100	JD
20.		UNKNOWN HYDROCARBON	18.26	410	JD
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-05 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315982

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3835

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	9	J
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	3	J
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	3	J
71-55-6	1,1,1-Trichloroethane	27	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	43	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-05 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315982

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3835

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-05 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315983

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3838

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	55	U
74-83-9	Bromomethane	55	U
75-01-4	Vinyl Chloride	55	U
75-00-3	Chloroethane	7	J
75-09-2	Methylene Chloride	55	U
67-64-1	Acetone	140	
75-15-0	Carbon Disulfide	14	J
75-35-4	1,1-Dichloroethene	55	U
75-34-3	1,1-Dichloroethane	14	J
540-59-0	1,2-Dichloroethene (total)	10	J
67-66-3	Chloroform	55	U
107-06-2	1,2-Dichloroethane	55	U
78-93-3	2-Butanone	40	J
71-55-6	1,1,1-Trichloroethane	12	J
56-23-5	Carbon Tetrachloride	55	U
75-27-4	Bromodichloromethane	55	U
78-87-5	1,2-Dichloropropane	55	U
10061-01-5	cis-1,3-Dichloropropene	55	U
79-01-6	Trichloroethene	53	J
124-48-1	Dibromochloromethane	55	U
79-00-5	1,1,2-Trichloroethane	55	U
71-43-2	Benzene	55	U
10061-02-6	trans-1,3-Dichloropropene	55	U
75-25-2	Bromoform	55	U
108-10-1	4-Methyl-2-Pentonone	55	U
591-78-6	2-Hexanone	55	U
127-18-4	Tetrachloroethene	120	
79-34-5	1,1,2,2-Tetrachloroethane	55	U
108-88-3	Toluene	6	J
108-90-7	Chlorobenzene	55	U
100-41-4	Ethylbenzene	55	U
100-42-5	Styrene	55	U
1330-20-7	Xylene (Total)	16	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: SB-05 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315983

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3838

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN CYCLOALKANE	7.36	280	J
2.	108-87-2	CYCLOHEXANE, METHYL-	8.41	720	NJ
3.		UNKNOWN CYCLOALKANE	8.89	200	J
4.		UNKNOWN CYCLOALKANE	9.12	260	J
5.		UNKNOWN ALKANE	9.56	220	J
6.		UNKNOWN ALKANE	9.79	230	J
7.		UNKNOWN CYCLOALKANE	10.62	220	J
8.		UNKNOWN ALKANE	11.32	150	J
9.		UNKNOWN CYCLOALKANE	11.52	110	J
10.	1678-91-7	CYCLOHEXANE, ETHYL-	11.61	190	NJ
11.		UNKNOWN CYCLOALKANE	11.70	280	J
12.		UNKNOWN CYCLOALKANE	12.09	200	J
13.		UNKNOWN HYDROCARBON	13.91	140	J
14.	1678-92-8	CYCLOHEXANE, PROPYL-	14.09	200	NJ
15.		UNKNOWN ALKANE	14.23	110	J
16.		UNKNOWN CYCLOALKANE	14.83	190	J
17.		UNKNOWN CYCLOALKANE	15.34	190	J
18.		UNKNOWN HYDROCARBON	16.03	120	J
19.		UNKNOWN CYCLOALKANE	16.46	180	J
20.		UNKNOWN CYCLOALKANE	17.56	240	J
21.					
22.					
23.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-06 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3852

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	57	U
74-83-9	Bromomethane	57	U
75-01-4	Vinyl Chloride	57	U
75-00-3	Chloroethane	57	U
75-09-2	Methylene Chloride	21	J
67-64-1	Acetone	57	U
75-15-0	Carbon Disulfide	57	U
75-35-4	1,1-Dichloroethene	57	U
75-34-3	1,1-Dichloroethane	57	U
540-59-0	1,2-Dichloroethene (total)	140	
67-66-3	Chloroform	57	U
107-06-2	1,2-Dichloroethane	32	J
78-93-3	2-Butanone	57	U
71-55-6	1,1,1-Trichloroethane	22	J
56-23-5	Carbon Tetrachloride	57	U
75-27-4	Bromodichloromethane	57	U
78-87-5	1,2-Dichloropropane	57	U
10061-01-5	cis-1,3-Dichloropropene	57	U
79-01-6	Trichloroethene	~~500~~	
124-48-1	Dibromochloromethane	57	U
79-00-5	1,1,2-Trichloroethane	57	U
71-43-2	Benzene	57	U
10061-02-6	trans-1,3-Dichloropropene	57	U
75-25-2	Bromoform	57	U
108-10-1	4-Methyl-2-Pentonone	57	U
591-78-6	2-Hexanone	57	U
127-18-4	Tetrachloroethene	~~2100~~	E
79-34-5	1,1,2,2-Tetrachloroethane	57	U
108-88-3	Toluene	57	U
108-90-7	Chlorobenzene	57	U
100-41-4	Ethylbenzene	57	U
100-42-5	Styrene	57	U
1330-20-7	Xylene (Total)	57	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-06 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3852

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-06(4-6)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3888

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1400	U
74-83-9	Bromomethane	1400	U
75-01-4	Vinyl Chloride	1400	U
75-00-3	Chloroethane	1400	U
75-09-2	Methylene Chloride	1400	U
67-64-1	Acetone	~~220~~ 1400	~~DJB~~ U
75-15-0	Carbon Disulfide	1400	U
75-35-4	1,1-Dichloroethene	1400	U
75-34-3	1,1-Dichloroethane	1400	U
540-59-0	1,2-Dichloroethene (total)	420	DJ
67-66-3	Chloroform	1400	U
107-06-2	1,2-Dichloroethane	1400	U
78-93-3	2-Butanone	1400	U
71-55-6	1,1,1-Trichloroethane	200	DJ
56-23-5	Carbon Tetrachloride	1400	U
75-27-4	Bromodichloromethane	1400	U
78-87-5	1,2-Dichloropropane	1400	U
10061-01-5	cis-1,3-Dichloropropene	1400	U
79-01-6	Trichloroethene	2600	D
124-48-1	Dibromochloromethane	1400	U
79-00-5	1,1,2-Trichloroethane	1400	U
71-43-2	Benzene	1400	U
10061-02-6	trans-1,3-Dichloropropene	1400	U
75-25-2	Bromoform	1400	U
108-10-1	4-Methyl-2-Pentonone	1400	U
591-78-6	2-Hexanone	1400	U
127-18-4	Tetrachloroethene	14000	D
79-34-5	1,1,2,2-Tetrachloroethane	1400	U
108-88-3	Toluene	1400	U
108-90-7	Chlorobenzene	1400	U
100-41-4	Ethylbenzene	1400	U
100-42-5	Styrene	1400	U
1330-20-7	Xylene (Total)	1400	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-06(4-6)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3888

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~UNKNOWN ALKANE~~	~~2.48~~	~~2200~~	~~JBD~~
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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19.					
20.					
21.					
22.					
23.					
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25.					
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27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-06 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3853

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	56	U
74-83-9	Bromomethane	56	U
75-01-4	Vinyl Chloride	56	U
75-00-3	Chloroethane	56	U
75-09-2	Methylene Chloride	28	J
67-64-1	Acetone	28	J
75-15-0	Carbon Disulfide	17	J
75-35-4	1,1-Dichloroethene	56	U
75-34-3	1,1-Dichloroethane	56	U
540-59-0	1,2-Dichloroethene (total)	120	
67-66-3	Chloroform	56	U
107-06-2	1,2-Dichloroethane	34	J
78-93-3	2-Butanone	56	U
71-55-6	1,1,1-Trichloroethane	41	J
56-23-5	Carbon Tetrachloride	56	U
75-27-4	Bromodichloromethane	56	U
78-87-5	1,2-Dichloropropane	56	U
10061-01-5	cis-1,3-Dichloropropene	56	U
79-01-6	Trichloroethene	540	
124-48-1	Dibromochloromethane	56	U
79-00-5	1,1,2-Trichloroethane	56	U
71-43-2	Benzene	56	U
10061-02-6	trans-1,3-Dichloropropene	56	U
75-25-2	Bromoform	56	U
108-10-1	4-Methyl-2-Pentonone	56	U
591-78-6	2-Hexanone	56	U
127-18-4	Tetrachloroethene	5300 ~~2600~~	E D
79-34-5	1,1,2,2-Tetrachloroethane	56	U
108-88-3	Toluene	13	J
108-90-7	Chlorobenzene	56	U
100-41-4	Ethylbenzene	56	U
100-42-5	Styrene	56	U
1330-20-7	Xylene (Total)	56	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-06 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3853

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.53	32	NJ
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-06 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3889

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1400	U
74-83-9	Bromomethane	1400	U
75-01-4	Vinyl Chloride	1400	U
75-00-3	Chloroethane	1400	U
75-09-2	Methylene Chloride	1400	U
67-64-1	Acetone	1400 ~~280~~	~~DJB~~ U
75-15-0	Carbon Disulfide	1400	U
75-35-4	1,1-Dichloroethene	1400	U
75-34-3	1,1-Dichloroethane	1400	U
540-59-0	1,2-Dichloroethene (total)	1400	U
67-66-3	Chloroform	1400	U
107-06-2	1,2-Dichloroethane	1400	U
78-93-3	2-Butanone	1400	U
71-55-6	1,1,1-Trichloroethane	1400	U
56-23-5	Carbon Tetrachloride	1400	U
75-27-4	Bromodichloromethane	1400	U
78-87-5	1,2-Dichloropropane	1400	U
10061-01-5	cis-1,3-Dichloropropene	1400	U
79-01-6	Trichloroethene	540	DJ
124-48-1	Dibromochloromethane	1400	U
79-00-5	1,1,2-Trichloroethane	1400	U
71-43-2	Benzene	1400	U
10061-02-6	trans-1,3-Dichloropropene	1400	U
75-25-2	Bromoform	1400	U
108-10-1	4-Methyl-2-Pentonone	1400	U
591-78-6	2-Hexanone	1400	U
127-18-4	Tetrachloroethene	5300	D
79-34-5	1,1,2,2-Tetrachloroethane	1400	U
108-88-3	Toluene	1400	U
108-90-7	Chlorobenzene	1400	U
100-41-4	Ethylbenzene	1400	U
100-42-5	Styrene	1400	U
1330-20-7	Xylene (Total)	1400	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-06 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3889

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKANE	2.49	1600	JBD
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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27.					
28.					
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30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-10 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3833

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	21	
67-64-1	Acetone	11	J
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	29	
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	170	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	130	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	7	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	6	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-10 (4-6)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3833

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.54	10	NJ
2.	110-54-3	HEXANE	4.58	13	NJ
3.	108-87-2	CYCLOHEXANE, METHYL-	8.41	6	NJ
4.					
5.					
6.					
7.					
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9.					
10.					
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28.					
29.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-10 (4-6)RE

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3850

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	27	
67-64-1	Acetone	13	
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	5	J
540-59-0	1,2-Dichloroethene (total)	34	
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	15	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	190	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	150	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	7	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	6	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-10 (4-6)RE

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3850

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 11 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.54	7	NJ
2.	110-54-3	HEXANE	4.58	10	NJ
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-10 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3800

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	18	B
67-64-1	Acetone	13	
75-15-0	Carbon Disulfide	9	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	30	
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	5	J
71-55-6	1,1,1-Trichloroethane	82	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	200	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	150	
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	540	E
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	68	
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	27	
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	30 ~~390~~	E D

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-10 (6-8)

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3800

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN CYCLOALKANE	8.41	21	J
2.		UNKNOWN HYDROCARBON	11.34	0.0	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-10 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3804

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	57	U
74-83-9	Bromomethane	57	U
75-01-4	Vinyl Chloride	57	U
75-00-3	Chloroethane	57	U
75-09-2	Methylene Chloride	22	DJB
67-64-1	Acetone	57	U
75-15-0	Carbon Disulfide	6	DJ
75-35-4	1,1-Dichloroethene	57	U
75-34-3	1,1-Dichloroethane	57	U
540-59-0	1,2-Dichloroethene (total)	24	DJ
67-66-3	Chloroform	57	U
107-06-2	1,2-Dichloroethane	57	U
78-93-3	2-Butanone	57	U
71-55-6	1,1,1-Trichloroethane	40	DJ
56-23-5	Carbon Tetrachloride	57	U
75-27-4	Bromodichloromethane	57	U
78-87-5	1,2-Dichloropropane	57	U
10061-01-5	cis-1,3-Dichloropropene	57	U
79-01-6	Trichloroethene	200	D
124-48-1	Dibromochloromethane	57	U
79-00-5	1,1,2-Trichloroethane	57	U
71-43-2	Benzene	57	U
10061-02-6	trans-1,3-Dichloropropene	57	U
75-25-2	Bromoform	57	U
108-10-1	4-Methyl-2-Pentonone	57	U
591-78-6	2-Hexanone	57	U
127-18-4	Tetrachloroethene	540	D
79-34-5	1,1,2,2-Tetrachloroethane	57	U
108-88-3	Toluene	68	D
108-90-7	Chlorobenzene	57	U
100-41-4	Ethylbenzene	24	DJ
100-42-5	Styrene	57	U
1330-20-7	Xylene (Total)	300	D

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-10 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3804

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/18/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD081399

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315981

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3851

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	19	
67-64-1	Acetone	9	J
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	3	J
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	J
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	140	
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	100	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	5	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	5	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD081399

Lab Name: CAS-ROC Contract: 99-8-157

Lab Code: 10145 Case No.: SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315981

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3851

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/19/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.53	7	NJ
2.	110-54-3	HEXANE	4.57	9	NJ
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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29.					
30.					

SEMIVOLATILE ANALYSES

Introduction

Analyses were performed according to EPA SW-846 Method 8270 as referenced in the NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, and rinse blanks) are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

Di-n-butyl phthalate and bis(2-ethylhexyl)phthalate were detected in the method blanks. Based on the blank content, data for di-n-butyl phthalate in samples BG-01(0-6), BG-02(0-6), BG-03(0-6), BG-04(0-6), BG-05(0-8), FD081399, SB-01(4-6), SB-02(2-4), SB-02(6-8), SB-03(4-6), SB-04(204), SB-04(6-8), SB-05(4-6) and SB-10(4-6) and bis(2-ethylhexyl)phthalate data for samples BG-01(0-6), BG-02(0-6), BG-04(0-6), BG-05(0-8), SB-01(2-4), SB-01(4-6), SB-02(2-4), SB-02(6-8), SB-03(4-6), SB-04(2-4), SB-04(6-8), SB-05(4-6), SB-06(4-6), SB-06(6-8), SB10(6-8).

In addition to the listed target compounds, several non-target compounds were detected in the method blanks. When common to the blanks and samples, their presence in the samples have been rejected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The response for several compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All data for compounds with decreasing responses and all positive data for compounds with increasing responses have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was below control limits in sample SB-04(6-8). Since recoveries for the remaining surrogates were within control limits, no data have been qualified based on the deviation. All other surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

The recoveries for two matrix spike matrix spike duplicate sets were included in the data package. The recovery for pentachlorophenol was above control limits in the matrix spike duplicate. All other matrix spike and matrix spike duplicate recoveries and all relative percent differences between recoveries were within control limits. All recoveries in one of the two sets were within control limits. Recoveries for three compounds were, however, outside control limits in

the second set. Since two of the three compounds were present at elevated levels in the unspiked sample, interfering with accurate recovery determination and since all matrix spike blank recoveries were within control limits, no data have been qualified based on matrix spike performance.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SB-10(4-6) / FD081399	naphthalene	ND	42J	NA
	2-methylnaphthalene	46J	52J	12.2%
	carbazole	ND	40J	NA
	phenanthrene	180J	280J	43.5%
	anthracene	49J	84J	52.6%
	fluoranthene	290J	600	69.7%
	pyrene	220J	500	77.8%
	benzo(a)anthracene	160J	410	87.7%
	chrysene	210J	470	76.5%
	bis(2-ethylhexyl)phthalate	690B	790B	13.5%
	benzo(b)fluoranthene	130J	380	98.0%
	benzo(k)fluoranthene	160J	300J	60.9%
	benzo(a)pyrene	160J	410	87.7%
	indeno(1,2,3-cd)pyrene	170J	370	74.1%
	benzo(g,h,i)perylene	170J	520	101.4%

ND Not detected.
NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Semi-Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
5 out of 44			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
2 out of 22			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method blanks have positive results?	X		

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Are there field/rinse blanks associated with every sample?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		

	YES	NO	NA
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		

	YES	NO	NA
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every samples and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semi-Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*								Internal Standards*					
		NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	DCB	NPT	ANT	PHN	CRY	PRY
BG-03(0-6)															
BG-03(0-6)MS															
BG-03(0-6)MSD															
BG-02(0-6)															
BG-01(0-6)															
BG-04(0-6)															
BG-05(0-8)															
SB-01(2-4)															
SB-01(4-6)															
SB-02(2-4)															
SB-02(6-8)															
SB-03(4-6)															
SB-03(6-8)															
SB-04(2-4)															
SB-04(6-8)			I												
SB-10(4-6)															
SB-10(6-8)															
SB-10(6-8)MS															
SB-10(6-8)MSD															
FD081399															
SB-05(4-6)															
SB-05(6-8)															
SB-06(4-6)															
SB-06(6-8)															

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
DCB 1,2-Dichlorobenzene-d4
PHL Phenol-d6
2FP 2-Fluorophenol
TBP 2,4,6-Tribromophenol
2CP 2-Chlorophenol-d4

Internal Standards:
DCB 1,4-Dichlorobenzene-d4
NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12
PRY Perylene-d12

Qualifiers:
D Diluted
I Recovery low
H Recovery high
na not applicable

* Unless otherwise specified, all parameters are within acceptable limits.

Semivolatile Calibration Outliers

Instrument: HP5973-A

Date/Time	8/20/99		8/24/99 1135		8/25/99 1435		8/26/99 1331		8/27/99 1400	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'oxybis(1-Chloropropane)										-29.0
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene										
3-Nitroaniline										
Acenaphthene										
2,4-Dinitrophenol										

Semivolatile Calibration Outliers - Page 2

Date/Time	8/20/99		8/24/99 1135		8/25/99 1435		8/26/99 1331		8/27/99 1400	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
4-Nitrophenol										
Dibenzofuran										
2,4-Dinitrotoluene										
Diethylphthalate										
4-Nitroaniline										
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol								-27.3		-37.2
Phenanthrene										
Anthracene										
Carbazole										
Di-n-butylphthalate						26.8				
Fluoranthene										
Pyrene								29.4		
Butylbenzylphthalate						42.7		33.8		
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate				32.9		61.6		35.5		34.6
Di-n-octylphthalate						57.9		38.9		31.6
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										

Affected Samples:				
	bg03(0-6)	sb10(4-6)	bg03(0-6)ms	sb10(6-8)
	bg02(0-6)	fd081399	bg03(0-6)md	sb10(6-8)ms
	bg01(0-6)	sb05(4-6)		sb10(6-8)md
	bg04(0-6)	sb06(4-6)		
	bg05(0-8)	sb06(6-8)		
	sb01(4-6)	sb01(2-4)		

Semivolatile Calibration Outliers - Page 3

Date/Time	8/20/99		8/24/99 1135		8/25/99 1435		8/26/99 1331		8/27/99 1400	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
			sb02(2-4)		sb04(6-8)					
			sb02(6-8)							
			sb03(4-6)							
			sb03(6-8)							
			sb04(2-4)							

Corrected Sample Analysis Data Sheets

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-01(0-0.6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315664

Sample wt/vol: 30 (g/ml) G Lab File ID: AC435.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 13 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 11.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
95-48-7	2-Methylphenol	380	U
621-24-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	960	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	960	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl Phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	960	U
51-28-5	2,4-Dinitrophenol	960	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	960	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-01(0-0.6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315664

Sample wt/vol: 30 (g/ml) G Lab File ID: AC435.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 13 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 11.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	960	U
534-52-1	4,6-Dinitro-2-methylphenol	960	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	960	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	43	J
86-74-8	Carbazole	380	U
84-74-2	Di-n-Butylphthalate	380 ~~78~~	~~JB~~ U
206-44-0	Fluoranthene	240	J
129-00-0	Pyrene	270	J
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	150	J
218-01-9	Chrysene	170	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	380 ~~190~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)Fluoranthene	110	J
50-32-8	Benzo(a)Pyrene	150	J
193-39-5	Indeno(1,2,3-cd)Pyrene	120	J
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	140	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BG-01(0-0.6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315664

Sample wt/vol: 30 (g/ml) G Lab File ID: AC435.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 13 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 11.1

Number TICs found: 17 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	001678-97-3	Cyclohexane, 1,2,3-trimethyl-	4.59	92	JN
2.	000822-67-3	2-Cyclohexen-1-ol	4.68	180	JN
3.		unknown	5.22	200	J
4.		~~unknown~~	~~5.33~~	~~120~~	~~JA~~
5.		~~unknown~~	~~5.46~~	~~2100~~	~~JBA~~
6.	~~000591-78-6~~	~~2-Hexanone~~	~~6.15~~	~~140~~	~~JN~~
7.		~~unknown~~	~~6.50~~	~~230~~	~~JB~~
8.		unknown	6.65	1600	J
9.	~~000112-34-5~~	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.03~~	~~150~~	~~JNB~~
10.		~~unknown~~	~~10.13~~	~~100~~	~~JB~~
11.		~~unknown~~	~~11.02~~	~~220~~	~~JB~~
12.		~~unknown~~	~~13.25~~	~~300~~	~~JB~~
13.		unknown	19.28	200	J
14.		unknown	19.99	97	J
15.		unknown	23.23	180	J
16.		unknown	23.41	110	J
17.	000192-97-2	Benzo[e]pyrene	24.49	170	JN

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-02(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315663

Sample wt/vol: 30 (g/ml) G Lab File ID: AC434.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	67	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	61	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	130	J
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	60	J
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-02(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315663

Sample wt/vol: 30 (g/ml) G Lab File ID: AC434.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	55	J
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	720	
120-12-7	Anthracene	180	J
86-74-8	Carbazole	64	J
84-74-2	Di-n-Butylphthalate	370 ~~170~~	~~JB~~ U
206-44-0	Fluoranthene	1800	
129-00-0	Pyrene	1300	
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	1000	
218-01-9	Chrysene	970	
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~110~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	820	
207-08-9	Benzo(k)Fluoranthene	1200	
50-32-8	Benzo(a)Pyrene	1000	
193-39-5	Indeno(1,2,3-cd)Pyrene	800	
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	710	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BG-02(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315663

Sample wt/vol: 30 (g/ml) G Lab File ID: AC434.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.8

Number TICs found: 29 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	4.68	130	J
2.		~~unknown~~	~~5.46~~	~~1900~~	~~JBA~~
3.		~~unknown~~	~~5.94~~	~~380~~	~~JBA~~
4.		~~unknown~~	~~6.50~~	~~200~~	~~JB~~
5.		unknown	6.64	590	J
6.	000112-34-5	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.03~~	~~300~~	~~JNB~~
7.		~~unknown~~	~~8.97~~	~~130~~	~~JB~~
8.		~~unknown~~	~~10.13~~	~~200~~	~~JB~~
9.		~~unknown~~	~~11.02~~	~~150~~	~~JB~~
10.		~~unknown~~	~~13.24~~	~~260~~	~~JB~~
11.		unknown	15.73	130	J
12.	000610-48-0	Anthracene, 1-methyl-	15.90	180	JN
13.		unknown	16.04	140	J
14.		unknown	16.21	350	J
15.	006572-60-7	Tricyclo[8.2.2.2(4,7)]hexadeca-2,	16.53	130	JN
16.	003674-66-6	Phenanthrene, 2,5-dimethyl-	17.14	180	JN
17.	005737-13-3	Cyclopenta(def)phenanthrenone	17.38	140	JN
18.		unknown	17.73	180	J
19.	000238-84-6	11H-Benzo[a]fluorene	18.75	140	JN
20.		unknown	23.30	130	J
21.	000192-97-2	Benzo[e]pyrene	23.93	350	JN
22.	000205-82-3	Benzo[j]fluoranthene	24.50	1100	JN
23.		unknown	24.97	400	J
24.		unknown	25.18	190	J
25.		unknown	25.53	240	J
26.		unknown	27.99	270	J
27.		unknown	28.62	220	J
28.	000215-58-7	Benzo[b]triphenylene	29.70	170	JN
29.		unknown	29.94	130	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-03(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315662

Sample wt/vol: 30 (g/ml) G Lab File ID: AC433.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 8 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(-2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
95-48-7	2-Methylphenol	360	U
621-24-7	N-Nitroso-Di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
106-44-5	4-Methylphenol	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(-2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
208-96-8	Acenaphthylene	39	J
131-11-3	Dimethyl Phthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
83-32-9	Acenaphthene	360	U
99-09-2	3-Nitroaniline	910	U
51-28-5	2,4-Dinitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
100-02-7	4-Nitrophenol	910	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-03(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315662

Sample wt/vol: 30 (g/ml) G Lab File ID: AC433.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 8 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
84-66-2	Diethylphthalate	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	84	J
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	290	J
120-12-7	Anthracene	93	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-Butylphthalate	~~65~~	~~JB~~
206-44-0	Fluoranthene	520	
129-00-0	Pyrene	490	
85-68-7	Butyl benzyl phthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)Anthracene	360	
218-01-9	Chrysene	470	
117-81-7	Bis(2-Ethylhexyl)Phthalate	1400	B
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	560	
207-08-9	Benzo(k)Fluoranthene	460	
50-32-8	Benzo(a)Pyrene	430	
193-39-5	Indeno(1,2,3-cd)Pyrene	460	
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	480	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BG-03(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315662

Sample wt/vol: 30 (g/ml) G Lab File ID: AC433.D

Level: (low/med) LOW Date Received: 8/12/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

Number TICs found: 25 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	5.23	120	J
2.		unknown	5.33	120	JA
3.		unknown	5.47	1800	JBA
4.		unknown	6.17	120	J
5.		unknown	6.22	98	J
6.		unknown	6.52	170	JB
7.		unknown	6.67	2700	J
8.	000112-34-5	Ethanol, 2-(2-butoxyethoxy)-	8.04	130	JNB
9.		unknown	11.03	190	JB
10.		unknown	13.25	170	JB
11.		unknown	15.74	160	J
12.	000203-64-5	4H-Cyclopenta[def]phenanthrene	16.21	120	JN
13.		unknown	18.49	91	J
14.	000238-84-6	11H-Benzo[a]fluorene	18.76	110	JN
15.	003353-12-6	Pyrene, 4-methyl-	19.22	190	JN
16.	000082-05-3	7H-Benz[de]anthracen-7-one	19.93	110	JN
17.		unknown	22.34	290	J
18.		unknown	22.63	210	J
19.		unknown	23.23	1200	J
20.		unknown	23.93	120	J
21.	000205-82-3	Benzo[j]fluoranthene	24.51	630	JN
22.		unknown	28.00	89	J
23.	000112-95-8	Eicosane	28.07	250	JN
24.		unknown	29.05	850	J
25.		unknown	29.95	92	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-04(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315955

Sample wt/vol: 30 (g/ml) G Lab File ID: AC436.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	54	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	92	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	940	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	940	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-04(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315955

Sample wt/vol: 30 (g/ml) G Lab File ID: AC436.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	190	J
120-12-7	Anthracene	42	J
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	370 ~~55~~	~~JB~~ U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	270	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	180	J
218-01-9	Chrysene	210	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~79~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)Fluoranthene	140	J
50-32-8	Benzo(a)Pyrene	170	J
193-39-5	Indeno(1,2,3-cd)Pyrene	170	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	170	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BG-04(0-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315955

Sample wt/vol: 30 (g/ml) G Lab File ID: AC436.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	4.68	130	J
2.		~~unknown~~	~~5.34~~	~~130~~	~~JA~~
3.		~~unknown~~	~~5.46~~	~~2300~~	~~JBA~~
4.		~~unknown~~	~~5.58~~	~~93~~	~~JBA~~
5.		~~unknown~~	~~5.94~~	~~400~~	~~JB~~
6.		~~unknown~~	~~6.51~~	~~240~~	~~JB~~
7.		unknown	6.65	1100	J
8.	000112-34-5	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.04~~	~~120~~	~~JNB~~
9.		~~unknown~~	~~11.02~~	~~170~~	~~JB~~
10.	000829-26-5	Naphthalene, 2,3,6-trimethyl-	12.26	110	JN
11.	002131-42-2	Naphthalene, 1,4,6-trimethyl-	12.76	100	JN
12.		~~unknown~~	~~13.25~~	~~230~~	~~JB~~
13.	001576-67-6	Phenanthrene, 3,6-dimethyl-	17.15	100	JN
14.		unknown	19.29	240	J
15.		unknown	20.00	90	J
16.		unknown	22.34	290	J
17.		unknown	23.23	120	J
18.	000205-99-2	Benz[e]acephenanthrylene	24.51	110	JN
19.		unknown	26.74	110	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BG-05(0-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315956

Sample wt/vol: 30 (g/ml) G Lab File ID: AC437.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 15 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(-2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
95-48-7	2-Methylphenol	390	U
621-24-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(-2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	980	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	980	U
208-96-8	Acenaphthylene	390	U
131-11-3	Dimethyl Phthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
83-32-9	Acenaphthene	390	U
99-09-2	3-Nitroaniline	980	U
51-28-5	2,4-Dinitrophenol	980	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	980	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG-05(0-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315956

Sample wt/vol: 30 (g/ml) G Lab File ID: AC437.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 15 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	980	U
534-52-1	4,6-Dinitro-2-methylphenol	980	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	100	J
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-Butylphthalate	390 ~~84~~	~~JB~~ U
206-44-0	Fluoranthene	210	J
129-00-0	Pyrene	200	J
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	150	J
218-01-9	Chrysene	160	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	390 ~~130~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)Fluoranthene	120	J
50-32-8	Benzo(a)Pyrene	160	J
193-39-5	Indeno(1,2,3-cd)Pyrene	140	J
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	83	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BG-05(0-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: _____ SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315956

Sample wt/vol: 30 (g/ml) G Lab File ID: AC437.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 15 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 11

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.68	150	J
2.	unknown	5.06	90	J
3.	unknown	5.23	170	J
4.	~~unknown~~	~~5.34~~	~~120~~	~~JA~~
5.	~~unknown~~	~~5.46~~	~~1900~~	~~JBA~~
6.	~~unknown~~	~~5.58~~	~~110~~	~~JBA~~
7.	~~unknown~~	~~6.51~~	~~130~~	~~JB~~
8.	unknown	6.66	1300	J
9.	000112-34-5 ~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.04~~	~~180~~	~~JNB~~
10.	~~unknown~~	~~10.14~~	~~97~~	~~JB~~
11.	~~unknown~~	~~11.03~~	~~160~~	~~JB~~
12.	~~unknown~~	~~13.24~~	~~210~~	~~JB~~
13.	unknown	19.24	150	J
14.	unknown	19.34	370	J
15.	unknown	19.38	280	J
16.	unknown	19.93	83	J
17.	unknown	19.98	180	J
18.	unknown	21.48	200	J
19.	unknown	22.34	260	J
20.	014167-59-0 Tetratriacontane	23.05	230	JN
21.	000192-97-2 Benzo[e]pyrene	24.52	150	JN
22.	unknown	29.04	470	J
23.	unknown	30.73	94	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD081399

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315981

Sample wt/vol: 30 (g/ml) G Lab File ID: AC455.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	42	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	52	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD081399

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315981

Sample wt/vol: 30 (g/ml) G Lab File ID: AC455.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	280	J
120-12-7	Anthracene	84	J
86-74-8	Carbazole	40	J
84-74-2	Di-n-Butylphthalate	~~370~~ 44	~~JB~~ U
206-44-0	Fluoranthene	600	
129-00-0	Pyrene	500	
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	410	
218-01-9	Chrysene	470	
117-81-7	Bis(2-Ethylhexyl)Phthalate	790	B
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	380	
207-08-9	Benzo(k)Fluoranthene	300	J
50-32-8	Benzo(a)Pyrene	410	
193-39-5	Indeno(1,2,3-cd)Pyrene	370	
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	520	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FD081399

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315981

Sample wt/vol: 30 (g/ml) G Lab File ID: AC455.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.3

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~5.06~~	~~230~~	~~JBA~~
2.	unknown	5.26	120	J
3.	~~unknown~~	~~5.45~~	~~480~~	~~JBA~~
4.	~~unknown~~	~~5.94~~	~~290~~	~~JBA~~
5.	unknown	6.65	240	J
6.	unknown	15.91	150	J
7.	unknown	16.55	140	J
8.	unknown	16.99	110	J
9.	unknown	17.16	210	J
10.	unknown	17.40	120	J
11. 002381-21-7	Pyrene, 1-methyl-	18.77	120	JN
12.	unknown	22.34	120	J
13.	unknown	22.62	120	J
14.	unknown	23.32	220	J
15. 000205-82-3	Benzo[j]fluoranthene	24.53	530	JN
16.	unknown	25.54	210	J
17.	unknown	26.84	250	J
18.	unknown	28.02	530	J
19.	unknown	29.72	180	J
20.	unknown	29.94	120	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-01(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958 1/2

Sample wt/vol: 30 (g/ml) G Lab File ID: AC459.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 22 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	850	U
111-44-4	bis(-2-Chloroethyl)Ether	850	U
95-57-8	2-Chlorophenol	850	U
541-73-1	1,3-Dichlorobenzene	850	U
106-46-7	1,4-Dichlorobenzene	850	U
95-50-1	1,2-Dichlorobenzene	850	U
108-60-1	2,2'-oxybis(1-Chloropropane)	850	U
95-48-7	2-Methylphenol	850	U
621-24-7	N-Nitroso-Di-n-propylamine	850	U
67-72-1	Hexachloroethane	850	U
106-44-5	4-Methylphenol	850	U
98-95-3	Nitrobenzene	850	U
78-59-1	Isophorone	850	U
88-75-5	2-Nitrophenol	850	U
105-67-9	2,4-Dimethylphenol	850	U
111-91-1	bis(-2-Chloroethoxy)Methane	850	U
120-83-2	2,4-Dichlorophenol	850	U
120-82-1	1,2,4-Trichlorobenzene	850	U
91-20-3	Naphthalene	850	U
106-47-8	4-Chloroaniline	850	U
87-68-3	Hexachlorobutadiene	850	U
59-50-7	4-Chloro-3-methylphenol	850	U
91-57-6	2-Methylnaphthalene	850	U
77-47-4	Hexachlorocyclopentadiene	850	U
88-06-2	2,4,6-Trichlorophenol	850	U
95-95-4	2,4,5-Trichlorophenol	2100	U
91-58-7	2-Chloronaphthalene	850	U
88-74-4	2-Nitroaniline	2100	U
208-96-8	Acenaphthylene	85	JD
131-11-3	Dimethyl Phthalate	850	U
606-20-2	2,6-Dinitrotoluene	850	U
83-32-9	Acenaphthene	850	U
99-09-2	3-Nitroaniline	2100	U
51-28-5	2,4-Dinitrophenol	2100	U
132-64-9	Dibenzofuran	850	U
121-14-2	2,4-Dinitrotoluene	850	U
100-02-7	4-Nitrophenol	2100	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-01(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958 1/2

Sample wt/vol: 30 (g/ml) G Lab File ID: AC459.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 22 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	850	U
7005-72-3	4-Chlorophenyl-phenylether	850	U
84-66-2	Diethylphthalate	850	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	850	U
101-55-3	4-Bromophenyl-phenylether	850	U
118-74-1	Hexachlorobenzene	850	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	390	JD
120-12-7	Anthracene	150	JD
86-74-8	Carbazole	850	U
84-74-2	Di-n-Butylphthalate	850	U
206-44-0	Fluoranthene	400	JD
129-00-0	Pyrene	400	JD
85-68-7	Butyl benzyl phthalate	850	U
91-94-1	3,3'-Dichlorobenzidine	850	U
56-55-3	Benzo(a)Anthracene	300	JD
218-01-9	Chrysene	370	JD
117-81-7	Bis(2-Ethylhexyl)Phthalate	850 ~~140~~	~~JBD~~
117-84-0	Di-n-octyl phthalate	850	U
205-99-2	Benzo(b)fluoranthene	850	U
207-08-9	Benzo(k)Fluoranthene	850	U
50-32-8	Benzo(a)Pyrene	850	U
193-39-5	Indeno(1,2,3-cd)Pyrene	850	U
53-70-3	Dibenz(a,h)anthracene	850	U
191-24-2	Benzo(g,h,i)Perylene	850	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-01(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315958 1/2

Sample wt/vol: 30 (g/ml) G Lab File ID: AC459.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 22 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.4

Number TICs found: 29 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	5.24	400	JD
2.		~~unknown~~	~~6.46~~	~~1300~~	~~JDBA~~
3.		~~unknown~~	~~5.94~~	~~610~~	~~JDB~~
4.		~~unknown~~	~~6.51~~	~~350~~	~~JDB~~
5.		~~unknown~~	~~6.65~~	~~780~~	~~JDA~~
6.		~~unknown~~	~~13.25~~	~~570~~	~~JDB~~
7.		unknown	15.90	510	JD
8.		unknown	15.99	400	JD
9.	002531-84-2	Phenanthrene, 2-methyl-	16.19	330	JND
10.		unknown	16.23	230	JD
11.		unknown	16.35	230	JD
12.		unknown	16.57	320	JD
13.		unknown	17.16	750	JD
14.		unknown	17.38	360	JD
15.		unknown	17.66	550	JD
16.		unknown	17.70	240	JD
17.		unknown	18.40	330	JD
18.		unknown	18.77	320	JD
19.		unknown	19.23	390	JD
20.		unknown	19.37	380	JD
21.		unknown	19.94	230	JD
22.		unknown	21.38	260	JD
23.		unknown	22.37	280	JD
24.		unknown	22.99	290	JD
25.		unknown	23.35	770	JD
26.		unknown	24.25	290	JD
27.		unknown	25.59	360	JD
28.		unknown	26.16	230	JD
29.		unknown	28.06	410	JD

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-01(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959

Sample wt/vol: 30 (g/ml) G Lab File ID: AC439.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 16 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(-2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
95-48-7	2-Methylphenol	400	U
621-24-7	N-Nitroso-Di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
106-44-5	4-Methylphenol	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(-2-Chloroethoxy)Methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	990	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	990	U
208-96-8	Acenaphthylene	400	U
131-11-3	Dimethyl Phthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
83-32-9	Acenaphthene	400	U
99-09-2	3-Nitroaniline	990	U
51-28-5	2,4-Dinitrophenol	990	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
100-02-7	4-Nitrophenol	990	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-01(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959

Sample wt/vol: 30 (g/ml) G Lab File ID: AC439.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 16 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
84-66-2	Diethylphthalate	400	U
100-01-6	4-Nitroaniline	990	U
534-52-1	4,6-Dinitro-2-methylphenol	990	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	990	U
85-01-8	Phenanthrene	87	J
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-Butylphthalate	~~78~~ 400	~~JB~~ U
206-44-0	Fluoranthene	140	J
129-00-0	Pyrene	130	J
85-68-7	Butyl benzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)Anthracene	96	J
218-01-9	Chrysene	120	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	~~160~~ 400	~~JB~~ U
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)Fluoranthene	400	U
50-32-8	Benzo(a)Pyrene	400	U
193-39-5	Indeno(1,2,3-cd)Pyrene	130	J
53-70-3	Dibenz(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)Perylene	170	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-01(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315959

Sample wt/vol: 30 (g/ml) G Lab File ID: AC439.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 16 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

Number TICs found: 28 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	4.68	150	J
2.		unknown	5.06	130	J
3.		unknown	5.23	500	J
4.		~~unknown~~	~~5.33~~	~~170~~	~~JA~~
5.		~~unknown~~	~~5.46~~	~~1600~~	~~JBA~~
6.		~~unknown~~	~~5.58~~	~~100~~	~~JBA~~
7.	000138-86-3	Limonene	6.43	120	JN
8.		~~unknown~~	~~6.50~~	~~240~~	~~JB~~
9.		unknown	6.65	890	J
10.	000112-34-5	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.04~~	~~100~~	~~JNB~~
11.		~~unknown~~	~~11.04~~	~~210~~	~~JB~~
12.		~~unknown~~	~~13.24~~	~~290~~	~~JB~~
13.		unknown	15.74	150	J
14.		unknown	16.34	110	J
15.		unknown	16.57	120	J
16.		unknown	17.66	140	J
17.		unknown	19.22	110	J
18.		unknown	20.16	120	J
19.		unknown	21.38	240	J
20.	000112-84-5	Erucylamide	22.36	1200	JN
21.		unknown	22.62	240	J
22.		unknown	22.74	140	J
23.		unknown	23.22	150	J
24.		unknown	23.32	300	J
25.		unknown	24.24	170	J
26.		unknown	24.34	150	J
27.	000192-97-2	Benzo[e]pyrene	24.53	120	JN
28.		unknown	25.55	230	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-02(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315960

Sample wt/vol: 30 (g/ml) G Lab File ID: AC440.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
95-48-7	2-Methylphenol	380	U
621-24-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl Phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	950	U
51-28-5	2,4-Dinitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	950	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-02(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315960

Sample wt/vol: 30 (g/ml) G Lab File ID: AC440.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	40	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-Butylphthalate	~~70~~	~~JB~~
206-44-0	Fluoranthene	57	J
129-00-0	Pyrene	51	J
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	45	J
218-01-9	Chrysene	64	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	~~97~~	~~JB~~
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	55	J
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-02(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315960

Sample wt/vol: 30 (g/ml) G Lab File ID: AC440.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

Number TICs found: 17 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000822-67-3	2-Cyclohexen-1-ol	4.68	110	JN
2.		unknown	5.34	110	JA
3.		unknown	5.46	2000	JBA
4.		unknown	5.58	200	JBA
5.		unknown	5.94	220	JB
6.	000112-34-5	Ethanol, 2-(2-butoxyethoxy)-	8.04	94	JNB
7.		unknown	11.06	150	JB
8.		unknown	13.24	320	JB
9.		unknown	16.34	140	J
10.		unknown	16.90	85	J
11.		unknown	18.76	80	J
12.		unknown	19.23	97	J
13.		unknown	19.39	76	J
14.		unknown	19.47	610	J
15.		unknown	21.81	430	J
16.		unknown	22.34	580	J
17.		unknown	23.05	88	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-02(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315961

Sample wt/vol: 30 (g/ml) G Lab File ID: AC441.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	940	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	940	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-02(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315961

Sample wt/vol: 30 (g/ml) G Lab File ID: AC441.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	370 ~~92~~	~~JB~~ U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~81~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-02(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: _____ SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315961

Sample wt/vol: 30 (g/ml) G Lab File ID: AC441.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

Number TICs found: 15 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~4.68~~	~~96~~	~~JA~~
2.	unknown	5.23	260	J
3.	~~unknown~~	~~5.34~~	~~130~~	~~JA~~
4.	~~unknown~~	~~5.46~~	~~1400~~	~~JBA~~
5.	unknown	6.18	120	J
6.	~~unknown~~	~~6.51~~	~~77~~	~~JB~~
7.	unknown	6.65	430	J
8.	000112-34-5 Ethanol, 2-(2-butoxyethoxy)-	~~8.05~~	~~180~~	~~JNB~~
9.	~~unknown~~	~~10.16~~	~~89~~	~~JB~~
10.	~~unknown~~	~~13.25~~	~~430~~	~~JB~~
11.	unknown	15.90	160	J
12.	unknown	16.35	140	J
13.	unknown	16.57	110	J
14.	unknown	18.00	120	J
15.	unknown	22.36	180	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-03(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962

Sample wt/vol: 30 (g/ml) G Lab File ID: AC442.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 14 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(-2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
95-48-7	2-Methylphenol	390	U
621-24-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(-2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	970	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	970	U
208-96-8	Acenaphthylene	390	U
131-11-3	Dimethyl Phthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
83-32-9	Acenaphthene	390	U
99-09-2	3-Nitroaniline	970	U
51-28-5	2,4-Dinitrophenol	970	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	970	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-03(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962

Sample wt/vol: 30 (g/ml) G Lab File ID: AC442.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 14 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	970	U
534-52-1	4,6-Dinitro-2-methylphenol	970	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	970	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-Butylphthalate	390 ~~110~~	~~JB~~ U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	390	U
218-01-9	Chrysene	390	U
117-81-7	Bis(2-Ethythexyl)Phthalate	390 ~~98~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	390	U
207-08-9	Benzo(k)Fluoranthene	390	U
50-32-8	Benzo(a)Pyrene	390	U
193-39-5	Indeno(1,2,3-cd)Pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	390	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-03(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315962

Sample wt/vol: 30 (g/ml) G Lab File ID: AC442.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.3

Number TICs found: 16 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.61	81	J
2.	unknown	4.69	140	J
3.	unknown	5.23	130	J
4.	unknown	5.34	130	JA
5.	unknown	5.46	1400	JBA
6.	unknown	6.17	100	J
7.	unknown	6.65	130	JB
8.	000112-34-5	Ethanol, 2-(2-butoxyethoxy)-	8.04	180	JNB
9.	unknown	9.99	92	J
10.	unknown	10.15	140	JB
11.	unknown	11.06	170	JB
12.	unknown	13.25	210	JB
13.	unknown	19.40	440	J
14.	unknown	19.44	360	J
15.	unknown	21.82	310	J
16.	unknown	22.35	770	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-03(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC443.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 13 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3800	U
111-44-4	bis(-2-Chloroethyl)Ether	3800	U
95-57-8	2-Chlorophenol	3800	U
541-73-1	1,3-Dichlorobenzene	3800	U
106-46-7	1,4-Dichlorobenzene	3800	U
95-50-1	1,2-Dichlorobenzene	3800	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3800	U
95-48-7	2-Methylphenol	3800	U
621-24-7	N-Nitroso-Di-n-propylamine	3800	U
67-72-1	Hexachloroethane	3800	U
106-44-5	4-Methylphenol	3800	U
98-95-3	Nitrobenzene	3800	U
78-59-1	Isophorone	3800	U
88-75-5	2-Nitrophenol	3800	U
105-67-9	2,4-Dimethylphenol	3800	U
111-91-1	bis(-2-Chloroethoxy)Methane	3800	U
120-83-2	2,4-Dichlorophenol	3800	U
120-82-1	1,2,4-Trichlorobenzene	3800	U
91-20-3	Naphthalene	3800	U
106-47-8	4-Chloroaniline	3800	U
87-68-3	Hexachlorobutadiene	3800	U
59-50-7	4-Chloro-3-methylphenol	3800	U
91-57-6	2-Methylnaphthalene	3800	U
77-47-4	Hexachlorocyclopentadiene	3800	U
88-06-2	2,4,6-Trichlorophenol	3800	U
95-95-4	2,4,5-Trichlorophenol	9600	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	9600	U
208-96-8	Acenaphthylene	3800	U
131-11-3	Dimethyl Phthalate	3800	U
606-20-2	2,6-Dinitrotoluene	3800	U
83-32-9	Acenaphthene	3800	U
99-09-2	3-Nitroaniline	9600	U
51-28-5	2,4-Dinitrophenol	9600	U
132-64-9	Dibenzofuran	3800	U
121-14-2	2,4-Dinitrotoluene	3800	U
100-02-7	4-Nitrophenol	9600	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-03(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC443.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 13 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	3800	U
7005-72-3	4-Chlorophenyl-phenylether	3800	U
84-66-2	Diethylphthalate	3800	U
100-01-6	4-Nitroaniline	9600	U
534-52-1	4,6-Dinitro-2-methylphenol	9600	U
86-30-6	N-Nitrosodiphenylamine	3800	U
101-55-3	4-Bromophenyl-phenylether	3800	U
118-74-1	Hexachlorobenzene	3800	U
87-86-5	Pentachlorophenol	9600	U
85-01-8	Phenanthrene	3800	U
120-12-7	Anthracene	3800	U
86-74-8	Carbazole	3800	U
84-74-2	Di-n-Butylphthalate	3800	U
206-44-0	Fluoranthene	3800	U
129-00-0	Pyrene	3800	U
85-68-7	Butyl benzyl phthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo(a)Anthracene	3800	U
218-01-9	Chrysene	3800	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	3800	U
117-84-0	Di-n-octyl phthalate	3800	U
205-99-2	Benzo(b)fluoranthene	3800	U
207-08-9	Benzo(k)Fluoranthene	3800	U
50-32-8	Benzo(a)Pyrene	3800	U
193-39-5	Indeno(1,2,3-cd)Pyrene	3800	U
53-70-3	Dibenz(a,h)anthracene	3800	U
191-24-2	Benzo(g,h,i)Perylene	3800	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-03(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315963 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC443.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 13 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.9

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	002958-76-1	Naphthalene, decahydro-2-methy	7.63	1300	JND
2.		unknown	8.21	3400	JD
3.	054676-39-0	Cyclohexane, 2-butyl-1,1,3-trimet	8.56	1300	JND
4.		unknown	8.84	1600	JD
5.		unknown	9.08	1300	JD
6.		unknown	9.16	1500	JD
7.		unknown	9.75	1500	JD
8.		unknown	11.24	1500	JD
9.		unknown	11.35	1400	JD
10.	000829-26-5	Naphthalene, 2,3,6-trimethyl-	12.27	3000	JND
11.		unknown	13.65	1500	JD
12.	003031-15-0	Naphthalene, 1,2,3,4-tetramethyl-	13.72	1600	JND
13.		unknown	13.86	2100	JD
14.		unknown	14.19	1500	JD
15.		unknown	14.24	2200	JD
16.		unknown	14.93	1400	JD
17.		unknown	15.09	2600	JD
18.		unknown	15.16	1700	JD
19.		unknown	15.22	2400	JD
20.		unknown	15.36	2100	JD
21.		unknown	15.63	1700	JD
22.		unknown	15.91	3800	JD
23.		unknown	16.57	3100	JD
24.		unknown	16.64	1600	JD
25.		unknown	18.68	1500	JD
26.		unknown	19.23	1600	JD
27.		unknown	21.82	1600	JD
28.		unknown	22.10	1300	JD
29.		unknown	22.61	1400	JD
30.		unknown	23.32	3100	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-04(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975

Sample wt/vol: 30 (g/ml) G Lab File ID: AC444.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-04(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975

Sample wt/vol: 30 (g/ml) G Lab File ID: AC444.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	310 ~~150~~	~~JB~~ U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	120	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	99	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~80~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	51	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	51	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-04(2-4)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315975

Sample wt/vol: 30 (g/ml) G Lab File ID: AC444.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/24/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.1

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	11.96	2000	J
2.	unknown	13.67	1600	J
3. 000629-78-7	Heptadecane	14.29	10000	JN
4. 004536-30-5	Ethanol, 2-(dodecyloxy)-	15.95	4300	JN

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-04(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978 1/2

Sample wt/vol: 30 (g/ml) G Lab File ID: AC460.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 7 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 9.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	720	U
111-44-4	bis(-2-Chloroethyl)Ether	720	U
95-57-8	2-Chlorophenol	720	U
541-73-1	1,3-Dichlorobenzene	720	U
106-46-7	1,4-Dichlorobenzene	720	U
95-50-1	1,2-Dichlorobenzene	720	U
108-60-1	2,2'-oxybis(1-Chloropropane)	720	U
95-48-7	2-Methylphenol	720	U
621-24-7	N-Nitroso-Di-n-propylamine	720	U
67-72-1	Hexachloroethane	720	U
106-44-5	4-Methylphenol	720	U
98-95-3	Nitrobenzene	720	U
78-59-1	Isophorone	720	U
88-75-5	2-Nitrophenol	720	U
105-67-9	2,4-Dimethylphenol	720	U
111-91-1	bis(-2-Chloroethoxy)Methane	720	U
120-83-2	2,4-Dichlorophenol	720	U
120-82-1	1,2,4-Trichlorobenzene	720	U
91-20-3	Naphthalene	720	U
106-47-8	4-Chloroaniline	720	U
87-68-3	Hexachlorobutadiene	720	U
59-50-7	4-Chloro-3-methylphenol	720	U
91-57-6	2-Methylnaphthalene	160	JD
77-47-4	Hexachlorocyclopentadiene	720	U
88-06-2	2,4,6-Trichlorophenol	720	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	720	U
88-74-4	2-Nitroaniline	1800	U
208-96-8	Acenaphthylene	720	U
131-11-3	Dimethyl Phthalate	720	U
606-20-2	2,6-Dinitrotoluene	720	U
83-32-9	Acenaphthene	720	U
99-09-2	3-Nitroaniline	1800	U
51-28-5	2,4-Dinitrophenol	1800	U
132-64-9	Dibenzofuran	91	JD
121-14-2	2,4-Dinitrotoluene	720	U
100-02-7	4-Nitrophenol	1800	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-04(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978 1/2

Sample wt/vol: 30 (g/ml) G Lab File ID: AC460.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 7 decanted:(Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 9.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	150	JD
7005-72-3	4-Chlorophenyl-phenylether	720	U
84-66-2	Diethylphthalate	720	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	720	U
101-55-3	4-Bromophenyl-phenylether	720	U
118-74-1	Hexachlorobenzene	720	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	220	JD
120-12-7	Anthracene	720	U
86-74-8	Carbazole	720	U
84-74-2	Di-n-Butylphthalate	720 ~~76~~	~~JBD~~ U
206-44-0	Fluoranthene	320	JD
129-00-0	Pyrene	210	JD
85-68-7	Butyl benzyl phthalate	720	U
91-94-1	3,3'-Dichlorobenzidine	720	U
56-55-3	Benzo(a)Anthracene	130	JD
218-01-9	Chrysene	360	JD
117-81-7	Bis(2-Ethylhexyl)Phthalate	720 ~~91~~	~~JBD~~ U
117-84-0	Di-n-octyl phthalate	720	U
205-99-2	Benzo(b)fluoranthene	720	U
207-08-9	Benzo(k)Fluoranthene	720	U
50-32-8	Benzo(a)Pyrene	720	U
193-39-5	Indeno(1,2,3-cd)Pyrene	92	JD
53-70-3	Dibenz(a,h)anthracene	720	U
191-24-2	Benzo(g,h,i)Perylene	720	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-04(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315978 1/2

Sample wt/vol: 30 (g/ml) G Lab File ID: AC460.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 8/17/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 9.3

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	002245-38-7	Naphthalene, 1,6,7-trimethyl-	12.27	2900	JND
2.		unknown	16.59	4100	JD
3.	000638-36-8	Hexadecane, 2,6,10,14-tetrameth	18.65	3300	JND
4.		unknown	23.39	3900	JD
5.		unknown	25.66	2200	JD
6.		unknown	28.19	4100	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-05(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315982

Sample wt/vol: 30 (g/ml) G Lab File ID: AC456.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
95-48-7	2-Methylphenol	380	U
621-24-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	39	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl Phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	190	J
99-09-2	3-Nitroaniline	950	U
51-28-5	2,4-Dinitrophenol	950	U
132-64-9	Dibenzofuran	70	J
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	950	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-05(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315982

Sample wt/vol: 30 (g/ml) G Lab File ID: AC456.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	87	J
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	1200	
120-12-7	Anthracene	250	J
86-74-8	Carbazole	130	J
84-74-2	Di-n-Butylphthalate	350 ~~49~~	~~JB~~
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	930	
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	590	
218-01-9	Chrysene	610	
117-81-7	Bis(2-Ethylhexyl)Phthalate	350 ~~84~~	~~JB~~
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)Fluoranthene	350	J
50-32-8	Benzo(a)Pyrene	520	
193-39-5	Indeno(1,2,3-cd)Pyrene	460	
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	480	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-05(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315982

Sample wt/vol: 30 (g/ml) G Lab File ID: AC456.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.3

Number TICs found: 29 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~unknown~~	~~5.65~~	~~250~~	~~JBA~~
2.		~~unknown~~	~~5.45~~	~~530~~	~~JBA~~
3.	014167-59-0	Tetratriacontane	13.27	520	JN
4.	002531-84-2	Phenanthrene, 2-methyl-	15.90	750	JN
5.		unknown	16.05	270	J
6.		unknown	16.20	410	J
7.		unknown	16.42	230	J
8.		unknown	16.56	560	J
9.	000084-65-1	9,10-Anthracenedione	16.65	250	JN
10.		unknown	16.89	370	J
11.		unknown	17.16	300	J
12.		unknown	18.17	220	J
13.	002381-21-7	Pyrene, 1-methyl-	18.52	290	JN
14.		unknown	18.77	370	J
15.		unknown	19.23	470	J
16.		unknown	19.72	250	J
17.		unknown	19.93	230	J
18.		unknown	21.81	220	J
19.		unknown	21.94	420	J
20.		unknown	22.10	340	J
21.		unknown	22.61	440	J
22.		unknown	22.99	400	J
23.		unknown	23.33	1300	J
24.		unknown	24.25	410	J
25.		unknown	24.34	380	J
26.	000205-99-2	Benz[e]acephenanthrylene	24.55	580	JN
27.		unknown	25.55	1500	J
28.		unknown	28.03	1100	J
29.		unknown	29.71	260	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-05(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315983 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC480.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3700	U
111-44-4	bis(-2-Chloroethyl)Ether	3700	U
95-57-8	2-Chlorophenol	3700	U
541-73-1	1,3-Dichlorobenzene	3700	U
106-46-7	1,4-Dichlorobenzene	3700	U
95-50-1	1,2-Dichlorobenzene	3700	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3700	U
95-48-7	2-Methylphenol	3700	U
621-24-7	N-Nitroso-Di-n-propylamine	3700	U
67-72-1	Hexachloroethane	3700	U
106-44-5	4-Methylphenol	3700	U
98-95-3	Nitrobenzene	3700	U
78-59-1	Isophorone	3700	U
88-75-5	2-Nitrophenol	3700	U
105-67-9	2,4-Dimethylphenol	3700	U
111-91-1	bis(-2-Chloroethoxy)Methane	3700	U
120-83-2	2,4-Dichlorophenol	3700	U
120-82-1	1,2,4-Trichlorobenzene	3700	U
91-20-3	Naphthalene	3700	U
106-47-8	4-Chloroaniline	3700	U
87-68-3	Hexachlorobutadiene	3700	U
59-50-7	4-Chloro-3-methylphenol	3700	U
91-57-6	2-Methylnaphthalene	3700	U
77-47-4	Hexachlorocyclopentadiene	3700	U
88-06-2	2,4,6-Trichlorophenol	3700	U
95-95-4	2,4,5-Trichlorophenol	9300	U
91-58-7	2-Chloronaphthalene	3700	U
88-74-4	2-Nitroaniline	9300	U
208-96-8	Acenaphthylene	3700	U
131-11-3	Dimethyl Phthalate	3700	U
606-20-2	2,6-Dinitrotoluene	3700	U
83-32-9	Acenaphthene	3700	U
99-09-2	3-Nitroaniline	9300	U
51-28-5	2,4-Dinitrophenol	9300	U
132-64-9	Dibenzofuran	3700	U
121-14-2	2,4-Dinitrotoluene	3700	U
100-02-7	4-Nitrophenol	9300	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-05(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315983 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC480.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	3700	U
7005-72-3	4-Chlorophenyl-phenylether	3700	U
84-66-2	Diethylphthalate	3700	U
100-01-6	4-Nitroaniline	9300	U
534-52-1	4,6-Dinitro-2-methylphenol	9300	U
86-30-6	N-Nitrosodiphenylamine	3700	U
101-55-3	4-Bromophenyl-phenylether	3700	U
118-74-1	Hexachlorobenzene	3700	U
87-86-5	Pentachlorophenol	9300	~~U~~ UJ
85-01-8	Phenanthrene	470	JD
120-12-7	Anthracene	3700	U
86-74-8	Carbazole	3700	U
84-74-2	Di-n-Butylphthalate	3700	U
206-44-0	Fluoranthene	3700	U
129-00-0	Pyrene	590	JD
85-68-7	Butyl benzyl phthalate	3700	U
91-94-1	3,3'-Dichlorobenzidine	3700	U
56-55-3	Benzo(a)Anthracene	3700	U
218-01-9	Chrysene	3700	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	3700	U
117-84-0	Di-n-octyl phthalate	3700	U
205-99-2	Benzo(b)fluoranthene	3700	U
207-08-9	Benzo(k)Fluoranthene	3700	U
50-32-8	Benzo(a)Pyrene	3700	U
193-39-5	Indeno(1,2,3-cd)Pyrene	3700	U
53-70-3	Dibenz(a,h)anthracene	3700	U
191-24-2	Benzo(g,h,i)Perylene	3700	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-05(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315983 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC480.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 10

Number TICs found: 12 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	15.65	3700	JD
2.		unknown	16.00	3900	JD
3.		unknown	16.58	7700	JD
4.		unknown	16.66	3600	JD
5.	1000197-14-1	4b,8-Dimethyl-2-isopropylphenan	16.88	8200	JND
6.	003674-66-6	Phenanthrene, 2,5-dimethyl-	17.18	14000	JND
7.	069009-90-1	1,1'-Biphenyl, bis(1-methylethyl)-	17.58	21000	JND
8.	003674-73-5	Phenanthrene, 2,3,5-trimethyl-	18.18	4400	JND
9.		unknown	19.39	3600	JD
10.	017312-55-9	Decane, 3,8-dimethyl-	19.95	14000	JND
11.		unknown	22.12	6000	JD
12.		unknown	22.37	4500	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-06(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984

Sample wt/vol: 30 (g/ml) G Lab File ID: AC457.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
95-48-7	2-Methylphenol	380	U
621-24-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl Phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	950	U
51-28-5	2,4-Dinitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	950	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-06(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984

Sample wt/vol: 30 (g/ml) G Lab File ID: AC457.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	40	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	39	J
129-00-0	Pyrene	41	J
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	44	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	350 ~~90~~	~~JB~~
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-06(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315984

Sample wt/vol: 30 (g/ml) G Lab File ID: AC457.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.5

Number TICs found: 14 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	5.06	250	JBA
2.	unknown	5.46	470	JBA
3.	unknown	5.94	180	JBA
4.	unknown	6.18	110	JB
5. 074663-85-7	Cyclopropane, nonyl-	11.04	170	JN
6.	unknown	13.25	120	J
7.	unknown	19.44	900	J
8. 000630-04-6	Hentriacontane	19.93	210	JN
9.	unknown	20.01	87	J
10.	unknown	20.14	78	J
11.	unknown	21.12	79	J
12.	unknown	21.39	76	J
13.	unknown	22.34	160	J
14.	unknown	25.21	140	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-06(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985

Sample wt/vol: 30 (g/ml) G Lab File ID: AC458.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	940	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	940	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-06(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985

Sample wt/vol: 30 (g/ml) G Lab File ID: AC458.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~87~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-06(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315985

Sample wt/vol: 30 (g/ml) G Lab File ID: AC458.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.2

Number TICs found: 15 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~5.06~~	~~210~~	~~JBA~~
2.	~~unknown~~	~~5.46~~	~~390~~	~~JBA~~
3.	~~unknown~~	~~5.94~~	~~250~~	~~JBA~~
4.	~~unknown~~	~~6.18~~	~~99~~	~~JB~~
5.	unknown	11.04	160	J
6.	unknown	13.25	150	J
7.	unknown	19.23	150	J
8.	unknown	19.31	79	J
9.	unknown	20.15	91	J
10.	unknown	21.38	100	J
11.	unknown	21.82	100	J
12.	unknown	22.35	200	J
13.	unknown	22.62	79	J
14.	unknown	28.07	78	J
15.	unknown	29.92	110	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-10(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979

Sample wt/vol: 30 (g/ml) G Lab File ID: AC454.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	940	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	940	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-10(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979

Sample wt/vol: 30 (g/ml) G Lab File ID: AC454.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	49	J
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	~~43~~	~~JB~~
206-44-0	Fluoranthene	290	J
129-00-0	Pyrene	220	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	160	J
218-01-9	Chrysene	210	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	690	B
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)Fluoranthene	160	J
50-32-8	Benzo(a)Pyrene	160	J
193-39-5	Indeno(1,2,3-cd)Pyrene	170	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	170	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-10(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315979

Sample wt/vol: 30 (g/ml) G Lab File ID: AC454.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/25/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 10.2

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~5.05~~	~~180~~	~~JBA~~
2.	~~unknown~~	~~5.45~~	~~410~~	~~JBA~~
3.	~~unknown~~	~~5.94~~	~~290~~	~~JBA~~
4.	~~unknown~~	~~6.17~~	~~79~~	~~JB~~
5.	unknown	6.64	290	J
6.	unknown	15.90	77	J
7.	unknown	16.56	75	J
8.	unknown	17.15	130	J
9.	unknown	18.48	130	J
10. 003442-78-2	Pyrene, 2-methyl-	18.75	110	JN
11.	unknown	21.80	82	J
12.	unknown	22.34	180	J
13.	unknown	23.21	140	J
14.	unknown	23.31	280	J
15.	unknown	26.74	280	J
16.	unknown	26.83	170	J
17.	unknown	28.01	200	J
18.	unknown	29.69	150	J
19.	unknown	29.71	150	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-10(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC477.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3800	U
111-44-4	bis(-2-Chloroethyl)Ether	3800	U
95-57-8	2-Chlorophenol	3800	U
541-73-1	1,3-Dichlorobenzene	3800	U
106-46-7	1,4-Dichlorobenzene	3800	U
95-50-1	1,2-Dichlorobenzene	3800	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3800	U
95-48-7	2-Methylphenol	3800	U
621-24-7	N-Nitroso-Di-n-propylamine	3800	U
67-72-1	Hexachloroethane	3800	U
106-44-5	4-Methylphenol	3800	U
98-95-3	Nitrobenzene	3800	U
78-59-1	Isophorone	3800	U
88-75-5	2-Nitrophenol	3800	U
105-67-9	2,4-Dimethylphenol	3800	U
111-91-1	bis(-2-Chloroethoxy)Methane	3800	U
120-83-2	2,4-Dichlorophenol	3800	U
120-82-1	1,2,4-Trichlorobenzene	3800	U
91-20-3	Naphthalene	2800	JD
106-47-8	4-Chloroaniline	3800	U
87-68-3	Hexachlorobutadiene	3800	U
59-50-7	4-Chloro-3-methylphenol	3800	U
91-57-6	2-Methylnaphthalene	910	JD
77-47-4	Hexachlorocyclopentadiene	3800	U
88-06-2	2,4,6-Trichlorophenol	3800	U
95-95-4	2,4,5-Trichlorophenol	9500	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	9500	U
208-96-8	Acenaphthylene	3800	U
131-11-3	Dimethyl Phthalate	3800	U
606-20-2	2,6-Dinitrotoluene	3800	U
83-32-9	Acenaphthene	3200	JD
99-09-2	3-Nitroaniline	9500	U
51-28-5	2,4-Dinitrophenol	9500	U
132-64-9	Dibenzofuran	2000	JD
121-14-2	2,4-Dinitrotoluene	3800	U
100-02-7	4-Nitrophenol	9500	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-10(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC477.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 8.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	2700	JD
7005-72-3	4-Chlorophenyl-phenylether	3800	U
84-66-2	Diethylphthalate	3800	U
100-01-6	4-Nitroaniline	9500	U
534-52-1	4,6-Dinitro-2-methylphenol	9500	U
86-30-6	N-Nitrosodiphenylamine	3800	U
101-55-3	4-Bromophenyl-phenylether	3800	U
118-74-1	Hexachlorobenzene	3800	U
87-86-5	Pentachlorophenol	9500	U
85-01-8	Phenanthrene	22000	D
120-12-7	Anthracene	5000	D
86-74-8	Carbazole	3600	JD
84-74-2	Di-n-Butylphthalate	3800	U
206-44-0	Fluoranthene	22000	D
129-00-0	Pyrene	15000	D
85-68-7	Butyl benzyl phthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo(a)Anthracene	9600	D
218-01-9	Chrysene	8800	D
117-81-7	Bis(2-Ethylhexyl)Phthalate	~~470~~	~~JBD~~
117-84-0	Di-n-octyl phthalate	3800	U
205-99-2	Benzo(b)fluoranthene	4900	D
207-08-9	Benzo(k)Fluoranthene	7800	D
50-32-8	Benzo(a)Pyrene	8100	D
193-39-5	Indeno(1,2,3-cd)Pyrene	6000	D
53-70-3	Dibenz(a,h)anthracene	3800	U
191-24-2	Benzo(g,h,i)Perylene	5600	D

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-10(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-157 SAS No.: SDG No.: BG03(0-6)

Matrix: (soil/water) SOIL Lab Sample ID: 315980 1/10

Sample wt/vol: 30 (g/ml) G Lab File ID: AC477.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 8.9

Number TICs found: 22 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	14.60	1000	JD
2.	000832-69-9	Phenanthrene, 1-methyl-	15.91	1900	JND
3.	000610-48-0	Anthracene, 1-methyl-	15.99	2600	JND
4.	000832-69-9	Phenanthrene, 1-methyl-	16.07	900	JND
5.	000203-64-5	4H-Cyclopenta[def]phenanthrene	16.22	5200	JND
6.	035465-71-5	2-Phenylnaphthalene	16.55	1100	JND
7.	000084-65-1	9,10-Anthracenedione	16.66	1500	JND
8.	002381-21-7	Pyrene, 1-methyl-	18.78	1300	JND
9.	003697-24-3	Chrysene, 5-methyl-	21.70	810	JND
10.	000205-82-3	Benzo[j]fluoranthene	23.95	2000	JND
11.		unknown	24.21	1100	JD
12.	000192-97-2	Benzo[e]pyrene	24.53	8300	JND
13.		unknown	25.56	2400	JD
14.		unknown	26.23	1800	JD
15.		unknown	26.74	3100	JD
16.		unknown	26.84	2100	JD
17.		unknown	28.01	9600	JD
18.		unknown	28.67	1200	JD
19.		unknown	28.70	1100	JD
20.		unknown	29.73	2200	JD
21.		unknown	29.75	2200	JD
22.		unknown	29.96	2600	JD

INORGANIC ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- M Duplicate injection precision not met.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the method of standard additions (MSA).
- W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- * Duplicate analysis not within control limits.
- + Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days
Cyanide	12 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days
Cyanide	14 days

All samples were analyzed within specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRDL.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and the recoveries for all initial calibration verification standards were acceptable.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits, with the following exceptions:

CRA#1	Thallium	122.9%
CRI#2	Manganese	121.2%

Thallium data for samples BG-01(0-6) and BG-02(0-6) have been qualified as estimated based on the recoveries. No other data fell in the affected range.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

With the exception of antimony, lead and cyanide, all matrix spike recoveries were within control limits. Based on the matrix spike recoveries, all data for antimony, lead and cyanide have been qualified as estimated.

4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits, with the following exceptions:

Cadmium	>CRDL
Chromium	22.4%
Manganese	38.3%

All cadmium data have been qualified as estimated based on the results. No other data have been qualified based on the duplicate results.

5. Field Duplicate

No field duplicates were included in this data set.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

All required serial dilution results were acceptable.

8. Furnace QC

The relative percent differences between multiple injections were acceptable. The analytical spike recoveries for thallium were, however, outside control limits in samples BG-01(0-6) and BG-02(0-6). Thallium data for these samples have been qualified as estimated based on the recoveries.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?	X		
Is the distillation log for mercury present?	X		
Is the distillation log for cyanides present?	X		
Are pH values listed?			X
pH for metals analyses <2 (waters)?			X
pH for cyanide analyses >12 (waters)?			X
Percent solids calculation present for soils/sediments?	X		
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA	X		
Mercury	X		
Cyanides	X		
Is the data legible?	X		

	YES	NO	NA
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	X		
Were cyanide distillations performed within 14 days?	X		
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?			X
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Is a brief physical description of samples given on Form I's?	X		
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?	X		
Cyanides?	X		
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
Is correlation coefficient greater than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?	X		
Atomic Absorption Analysis?	X		
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		

	YES	NO	NA
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Cyanides (85-115%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?	X		
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	X		
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?	X		
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (80-120%)?		X	
Is mid-range standard within control limits for cyanide (80-120%)	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		

	YES	NO	NA
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	X		
Aqueous			
Are any spike recoveries:			
less than 30%?			X
between 30-74%?			X
between 126-150%?			X
greater then 150%?			X
Soil/Sediment			
Are any spike recoveries:			
less than 10%?		X	

	YES	NO	NA
between 10-74%?	X		
between 126-200%?		X	
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?		X	
If no, are all results outside the control limits flagged with an * on Form I's and VI?	X		
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?	X		
Field Duplicates			
Were field duplicates analyzed?		X	
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?			X

	YES	NO	NA
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?			X
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	X		
Aqueous LCS			
Is any LCS recovery:			
less than 50%?			X
between 50% and 79%?			X
between 121% and 150%?			X
greater than 150%?			X
Solid LCS			
Is LCS "Found" value higher than the control limits on Form VII?		X	
Is LCS "Found" lower than the control limits on Form VII?		X	
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	X		
each matrix type?	X		
Was field blank(s) used for Serial Dilution Analysis?		X	
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.			X
Are any required % difference values:			
> 10%?		X	
≥100%?		X	
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	X		

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?	X		
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?	X		
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or "+"?		X	
Was MSA required for any sample but not performed?		X	
Is the coefficient of correlation for MSA less than 0.995 for any sample?			X
Is the coefficient of correlation for MSA less than 0.990 for any sample?			X
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
Was proper quantitation procedure followed?			X
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if greater than CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?			X
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		

	YES	NO	NA
ICP Linear Ranges (quarterly)?	X		
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?		X	
< 10%?		X	

Corrected Sample Analysis Data Sheets

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BG-02 (0.0-6.0)

Contract: 9908000157

Lab Code: Case No.: SAS No.: SDG NO.: BG03 (0-6)

Matrix (soil/water): SOIL/SED Lab Sample ID: 315663

Level (low/med): LOW Date Received: 08/12/99

% Solids: 89.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17000			P
7440-36-0	Antimony	0.63	U	N J	P
7440-38-2	Arsenic	7.7			P
7440-39-3	Barium	209			P
7440-41-7	Beryllium	1.9			P
7440-43-9	Cadmium	1.4		* J	P
7440-70-2	Calcium	60000			P
7440-47-3	Chromium	41.6		*	P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	30.1			P
7439-89-6	Iron	27200			P
7439-92-1	Lead	70.7		N J	P
7439-95-4	Magnesium	10500			P
7439-96-5	Manganese	1390		*	P
7439-97-6	Mercury	0.10			CV
7440-02-0	Nickel	18.9			P
7440-09-7	Potassium	1660			P
7782-49-2	Selenium	1.5			P
7440-22-4	Silver	0.29	U		P
7440-23-5	Sodium	539	B		P
7440-28-0	Thallium	0.02		J W	P
7440-62-2	Vanadium	20.2			P
7440-66-6	Zinc	196			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0132

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BG-01 (0.0-6.0)

Contract: 9908000157

Lab Code: Case No.: SAS No.: SDG NO.: BG03 (0-6)

Matrix (soil/water): SOIL/SED Lab Sample ID: 315664

Level (low/med): LOW Date Received: 08/12/99

% Solids: 87.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18000			P
7440-36-0	Antimony	6.0	B	N	P
7440-38-2	Arsenic	0.74	U		P
7440-39-3	Barium	549			P
7440-41-7	Beryllium	0.86	B		P
7440-43-9	Cadmium	2.1		*	P
7440-70-2	Calcium	143000			P
7440-47-3	Chromium	1320		*	P
7440-48-4	Cobalt	2.6	B		P
7440-50-8	Copper	74.8			P
7439-89-6	Iron	72600			P
7439-92-1	Lead	306		N	P
7439-95-4	Magnesium	30500			P
7439-96-5	Manganese	17500		*	P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	18.0			P
7440-09-7	Potassium	2040			P
7782-49-2	Selenium	15.5			P
7440-22-4	Silver	0.29	U		P
7440-23-5	Sodium	372	B		P
7440-28-0	Thallium	0.44	B	W	F
7440-62-2	Vanadium	280			P
7440-66-6	Zinc	367			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: BG-03 (0.0-0.6)

Contract: 9908000157

Lab Code: Case No.: SAS No.: SDG NO.: BG03 (0-6)

Matrix (soil/water): SOIL/SED Lab Sample ID: 315662

Level (low/med): LOW Date Received: 08/12/99

% Solids: 91.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13900			P
7440-36-0	Antimony	1.8	B	N	P
7440-38-2	Arsenic	6.7			P
7440-39-3	Barium	123			P
7440-41-7	Beryllium	1.3			P
7440-43-9	Cadmium	0.92	B	*	P
7440-70-2	Calcium	59500			P
7440-47-3	Chromium	17.5		*	P
7440-48-4	Cobalt	4.3	B		P
7440-50-8	Copper	32.1			P
7439-89-6	Iron	16000			P
7439-92-1	Lead	133		N	P
7439-95-4	Magnesium	9990			P
7439-96-5	Manganese	1360		*	P
7439-97-6	Mercury	0.17			CV
7440-02-0	Nickel	12.2			P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	2.2			P
7440-22-4	Silver	0.27	U		P
7440-23-5	Sodium	188	B		P
7440-28-0	Thallium	0.31	U		F
7440-62-2	Vanadium	19.2			P
7440-66-6	Zinc	160			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0131

COLUMBIA ANALYTICAL SERVICES

Reported: 09/16/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTRK
Client Sample ID :BG-01 (0.0-6.0)

Date Sampled : 08/11/99 Order #: 315664 Sample Matrix: SOIL/SEDIMENT
Date Received: 08/12/99 Submission #:9908000157

ANALYTE	PQL	RESULT		DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	87.0		%	08/16/99	1.0
TOTAL CYANIDE	0.500	0.575	Ø [illegible]	MG/KG	08/19/99	1.0

0136

COLUMBIA ANALYTICAL SERVICES

Reported: 09/16/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :BG-02 (0.0-6.0)

Date Sampled : 08/11/99 Order #: 315663 Sample Matrix: SOIL/SEDIMENT
Date Received: 08/12/99 Submission #:9908000157

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	89.7	%	08/16/99	1.0
TOTAL CYANIDE	0.500	0.557 B	MG/KG	08/19/99	1.0

0135

COLUMBIA ANALYTICAL SERVICES

Reported: 09/16/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :BG-03 (0.0-0.6)

Date Sampled : 08/11/99 **Order #:** 315662 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 08/12/99 **Submission #:**9908000157

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	91.9	%	08/16/99	1.0
TOTAL CYANIDE	0.500	0.544 J	MG/KG	08/19/99	1.0

0134

Laboratory Narrative

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9908000157
SDG #BG03 (0-6)

BBL soil samples were collected on 08/11-12/99 and received at CAS on 08/12-13/99 in good condition. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

INORGANIC ANALYSIS

Three soil samples were analyzed for TAL inorganics by 95ASP methodology.

Matrix Spike/Duplicate was performed on BG03 (0.0-0.6') as requested. All Blank Spikes were within limits. All MS recoveries were within limits except Antimony, Lead and Cyanide and have been flagged with an "N". All RPD's were within limits except Cadmium, Calcium and Manganese and have been flagged with an "*". The Post Digestion Spike for Thallium for BG-02 (0.0-6.0) and BG-01(0.0-6.0) was outside control limits and the sample absorbance was less than 50% of the spike absorbance and has been flagged with a "W".

No other analytical or QC problems were encountered with these analyses.

VOLATILE ORGANICS

Seventeen soil samples were analyzed for the TCL volatiles by Method 95-1 by ASP methodology.

All Tuning criteria for BFB were met.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except SB-10 (6-8), SB-01 (2-4), SB-01 (4-6), SB-03 (6-8), SB-04 (6-8), SB-04 (2-4) and SB-10 (4-6). SB-10 (6-8), SB-03 (4-6), SB-04 (2-4) and SB-10 (4-6) were repeated and again the internal standards were outside limits and have been flagged with an "*". SB-01 (2-4), SB-01 (4-6), SB-03 (6-8) and SB-04 (6-8) were analyzed at dilutions due to overrange compounds or matrix interferences and the internal standards were within QC limits.

All surrogate standard recoveries were within acceptance limits except on sample SB-04 (6-8). The sample was repeated at a dilution and the surrogate recoveries were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on SB-10 (6-8) as requested. NYSASP requires a medium level MS/MSD when samples are analyzed at medium level so a second MS/MSD was performed on SB-06 (6-8). All MS/MSD's were within limits except Trichloroethene and Toluene for SB-10 (6-8) and have been flagged with an "*". All Blank Spike recoveries were within limits. All RPD's were within limits.

The Laboratory Blanks associated with these samples were free of contamination except VBLK01, VBLK01 and VBLK05 contained a small hit for Methylene Chloride. All affected data has been flagged with an "B".

0001

All samples were analyzed within required holding times.

No other analytical or QC problems were encoutered.

SEMIVOLATILE ORGANICS

Twenty soil samples were analyzed for TCL Semi-Volatiles by 95-2 by ASP methodology.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on BG-03 (0-6) and SB-10 (6-8). All MS/MSD recoveries were within limits except Pentachlorophenol and Pyrene and Acenaphthene for the MS for SB-10 (6-8) and have been flagged with an "*". All RPD's were within limits except Acenaphthene for BG-03 (0-6) and SB-10 (6-8) and have been flagged with an "*". All Blank Spike recoveries were within limits.

All samples were analyzed and extracted within required holding times.

The Laboratory blanks associated with these samples were free of contamination except SBLK1 and SBLK2 which contained a small hit for Di-n-Butylphthalate and Bis(2-Ethylhexyl)Phthalate. All affected samples have been flagged with a "B".

BG-02 (0-6), SB-04 (6-8), SB-01 (2-4), SB-10 (6-8) and SB-05 (6-8) were analyzed at dilutions due to matrix interferences.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

9/27/89
Date

NYSDEC Sample Preparation and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
BG-03 (0.0-6.0')	315662		X			X	X
BG-02 (0.0-6.0')	315663		X			X	X
BG-01 (0.0-0.6')	315664		X			X	X
BG-04 (0.0-6.0')	315955	X	X				
BG-05 (0.0-8.0')	315956	X	X				
SB-01 (2.0-4.0')	315958	X	X				
SB-01 (4.0-6.0')	315959	X	X				
SB-02 (2.0-4.0')	315960	X	X				
SB-02 (6.0-8.0')	315961	X	X				
SB-03 (4.0-6.0')	315962	X	X				
SB-03 (6.0-8.0')	315963	X	X				
SB-04 (2.0-4.0')	315975	X	X				
SB-04 (6.0-8.0')	315978	X	X				
SB-10 (4.0-6.0')	315979	X	X				
SB-10 (6.0-8.0')	315980	X	X				
FD081399	315981	X	X				
SB-05 (4.0-6.0')	315982	X	X				
SB-05 (6.0-8.0')	315983	X	X				
SB-06 (4.0-6.0')	315984	X	X				
SB-06 (6.0-8.0')	315985	X	X				

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
315955	SOIL	08/12/99	08/13/99	LOW	08/18/99
315956	SOIL	08/12/99	08/13/99	LOW	08/18/99
315958	SOIL	08/12/99	08/13/99	LOW	08/18,19/99
315959	SOIL	08/12/99	08/13/99	LOW	08/18,19/99
315960	SOIL	08/12/99	08/13/99	LOW	08/19/99
315961	SOIL	08/12/99	08/13/99	LOW	08/19/99
315962	SOIL	08/12/99	08/13/99	LOW	08/18,19/99
315963	SOIL	08/12/99	08/13/99	LOW	08/18/99
315975	SOIL	08/12/99	08/13/99	LOW	08/19/99
315978	SOIL	08/12/99	08/13/99	LOW	08/18,19/99
315979	SOIL	08/13/99	08/13/99	LOW	08/19/99
315980	SOIL	08/13/99	08/13/99	LOW	08/18/99
315981	SOIL	08/13/99	08/13/99	LOW	08/19/99
315982	SOIL	08/13/99	08/13/99	LOW	08/19/99
315983	SOIL	08/13/99	08/13/99	LOW	08/19/99
315984	SOIL	08/13/99	08/13/99	LOW, MED	08/19,23/99
315985	SOIL	08/13/99	08/13/99	LOW, MED	08/19,23/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
315955	SOIL	95-1			1.0
315956	SOIL	95-1			1.0
315958	SOIL	95-1			1.0
315959	SOIL	95-1			1.0
315960	SOIL	95-1			1.0
315961	SOIL	95-1			1.0
315962	SOIL	95-1			1.0
315963	SOIL	95-1			1.0
315975	SOIL	95-1			1.0
315978	SOIL	95-1			1.0
315979	SOIL	95-1			1.0
315980	SOIL	95-1			1.0
315981	SOIL	95-1			1.0
315982	SOIL	95-1			1.0
315983	SOIL	95-1			1.0
315984	SOIL	95-1			1.0
315985	SOIL	95-1			1.0

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
B/N-A
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	DATE EXTRACTED	DATE ANALYZED
315662	SOIL	08/11/99	08/12/99	08/17/99	08/24/99
315663	SOIL	08/11/99	08/12/99	08/17/99	08/24/99
315664	SOIL	08/11/99	08/12/99	08/17/99	08/24/99
315955	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315956	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315958	SOIL	08/12/99	08/13/99	08/17/99	08/25/99
315959	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315960	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315961	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315962	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315963	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315975	SOIL	08/12/99	08/13/99	08/17/99	08/24/99
315978	SOIL	08/12/99	08/13/99	08/17/99	08/25/99
315979	SOIL	08/13/99	08/13/99	08/18/99	08/25/99
315980	SOIL	08/13/99	08/13/99	08/18/99	08/27/99
315981	SOIL	08/13/99	08/13/99	08/18/99	08/25/99
315982	SOIL	08/13/99	08/13/99	08/18/99	08/25/99
315983	SOIL	08/13/99	08/13/99	08/18/99	08/27/99
315984	SOIL	08/13/99	08/13/99	08/18/99	08/25/99
315985	SOIL	08/13/99	08/13/99	08/18/99	08/25/99

NCF4 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
315662	SOIL	95-2			1.0
315663	SOIL	95-2			1.0
315664	SOIL	95-2			1.0
315955	SOIL	95-2			1.0
315956	SOIL	95-2			1.0
315958	SOIL	95-2			2.0
315959	SOIL	95-2			1.0
315960	SOIL	95-2			1.0
315961	SOIL	95-2			1.0
315962	SOIL	95-2			1.0
315963	SOIL	95-2			10
315975	SOIL	95-2			1.0
315978	SOIL	95-2			2.0
315979	SOIL	95-2			1.0
315980	SOIL	95-2			10
315981	SOIL	95-2			1.0
315982	SOIL	95-2			1.0
315983	SOIL	95-2			10
315984	SOIL	95-2			1.0
315985	SOIL	95-2			1.0

NCF2 9/89

0010

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
315662	SOIL	METALS	8/12/99	09/01,03,07,08/99
315663	SOIL	METALS	8/12/99	09/01,03,07,08/99
315664	SOIL	METALS	8/12/99	09/01,03,07,08/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
315662	SOIL	TL	8/12/99	9/7/99
315663	SOIL	TL	8/12/99	9/7/99
315664	SOIL	TL	8/12/99	9/7/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
315662	SOIL	HG	8/12/99	8/25/99
315663	SOIL	HG	8/12/99	8/25/99
315664	SOIL	HG	8/12/99	8/25/99

0013

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
315662	SOIL	CN	8/12/99	8/19/99
315663	SOIL	CN	8/12/99	8/19/99
315664	SOIL	CN	8/12/99	8/19/99

0014

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
BG03(0-6)	8/11/99	1995	BG-03(0-6)	soil	no	no	--	no	VOA - ms[2] BNA - cal[3] TAL - ms, dup, crdl, gfaa
BG03(0-6)	8/11/99	1995	BG-02(0-6)	soil	no	no	--	no	VOA - ms[2] BNA - cal[3] TAL - ms, dup, crdl, gfaa
BG03(0-6)	8/11/99	1995	BG-01(0-6)	soil	no	no	--	no	VOA - ms[2] BNA - cal[3] TAL - ms, dup
BG03(0-6)	8/12/99	1995	BG-04(0-6)	soil	no	no	--	--	VOA - ms[2], cal[3] BNA - cal[3]
BG03(0-6)	8/12/99	1995	BG-05(0-8)	soil	no	no	--	--	VOA - ms[2], cal[3] BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-01(2-4)	soil	no	no	--	--	VOA - ms[2], is BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-01(4-6)	soil	no	no	--	--	VOA - ms[2], is BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-02(2-4)	soil	no	no	--	--	VOA - ms[2] BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-02(6-8)	soil	no	no	--	--	VOA - ms[2] BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-03(4-6)	soil	no	no	--	--	VOA - ms[2], is BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-03(6-8)	soil	no	no	--	--	VOA - ms[2], is BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-04(2-4)	soil	no	no	--	--	VOA - ms[2], is BNA - cal[3]
BG03(0-6)	8/12/99	1995	SB-04(6-8)	soil	no	no	--	--	VOA - ms[2], surr, is BNA - cal[3], surr[2]

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
BG03(0-6)	**8/13/99**	**1995**	**SB-10(4-6)**	**soil**	**no**	**no**	**--**	**--**	**VOA - ms[2], is** BNA - ms[2], cal[3]
BG03(0-6)	8/13/99	1995	SB-10(6-8)	soil	no	no	--	--	VOA - ms[2], is, cal[3] BNA - ms[2], cal[3]
BG03(0-6)	8/13/99	1995	FD081399	soil	no	no	--	--	VOA - ms[2] BNA - ms[2], cal[3]
BG03(0-6)	8/13/99	1995	SB-05(4-6)	soil	no	no	--	--	VOA - ms[2] BNA - ms[2], cal[3]
BG03(0-6)	8/13/99	1995	SB-05(6-8)	soil	no	no	--	--	VOA - ms[2], cal[3] BNA - ms[2], cal[3]
BG03(0-6)	8/13/99	1995	SB-06(4-6)	soil	no	no	--	--	VOA - ms[2] BNA - ms[2], cal[3]
BG03(0-6)	8/13/99	1995	SB-06(6-8)	soil	no	no	--	--	VOA - ms[2] BNA - ms[2], cal[3]
									BNA - ms[2], cal[3]

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.
2 The non-compliance resulted in no qualification of data.
3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.

Appendix C-2
SDG BG-04

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

DATA REVIEW FOR

ENVIROTEK II SITE

SDG# BG04(0-6)

INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# BG04(0-6) for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
BG-04(0-6)	238358	soil	8/12/99				x
BG-05(0-8)	238359	soil	8/12/99				x

vlj2133

INORGANIC ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- M Duplicate injection precision not met.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the method of standard additions (MSA).
- W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- * Duplicate analysis not within control limits.
- + Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days

Inorganic analyses were not requested on the original chain of custody, but were added at a later date. The holding time for mercury had, however, already been exceeded prior to the request. Since the mercury analyses were performed 32 days over the specified holding time, all mercury data have been rejected. All other analyses were performed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRDL.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and the recoveries for all initial calibration verification standards were acceptable.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

All matrix spike recoveries were within control limits, with the following exceptions:

Antimony	24.9%
Arsenic	161.0%
Copper	138.6%
Mercury	138.3%

Based on the matrix spike recoveries, all data for antimony, arsenic and copper have been qualified as estimated. All mercury data have been previously rejected based on holding time violations.

4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits, with the following exceptions:

Calcium	40%
Mercury	48%

No data have been qualified based on the duplicate results.

5. Field Duplicate

No field duplicates were included in this data set.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

With the exception of manganese, all required serial dilution results were acceptable. All manganese data have been qualified as estimated based on the results.

8. Furnace QC

The relative percent differences between multiple injections were acceptable. The analytical spike recoveries for thallium were, however, outside control limits in samples BG-04(0-6) and BG-05(0-8). Thallium data for these samples have been qualified as estimated based on the recoveries.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?	X		
Is the distillation log for mercury present?	X		
Are pH values listed?			X
pH for metals analyses <2 (waters)?			X
Percent solids calculation present for soils/sediments?	X		
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA	X		
Mercury	X		
Is the data legible?	X		
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?		X	

	YES	NO	NA
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?			X
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Is a brief physical description of samples given on Form I's?	X		
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?	X		
Is one calibration standard at the CRDL level for all AA (except Hg) analyses?	X		
Is correlation coefficient greater than .995 for:			
Mercury Analysis?	X		
Atomic Absorption Analysis?	X		
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		

	YES	NO	NA
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	X		
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?	X		
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (60-120%)?	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		

	YES	NO	NA
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	X		
Aqueous			
Are any spike recoveries:			
less than 30%?			X
between 30-74%?			X
between 126-150%?			X
greater then 150%?			X
Soil/Sediment			
Are any spike recoveries:			
less than 10%?		X	
between 10-74%?	X		
between 126-200%?	X		
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for duplicate analysis?		X	

	YES	NO	NA
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?		X	
If no, are all results outside the control limits flagged with an * on Form I's and VI?	X		
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?		X	
Field Duplicates			
Were field duplicates analyzed?	X		
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?		X	
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	X		
Aqueous LCS			
Is any LCS recovery:			
less than 50%?			X

	YES	NO	NA
between 50% and 79%?			X
between 121% and 150%?			X
greater than 150%?			X
Solid LCS			
Is LCS "Found" value higher than the control limits on Form VII?		X	
Is LCS "Found" lower than the control limits on Form VII?		X	
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	X		
each matrix type?	X		
Was field blank(s) used for Serial Dilution Analysis?		X	
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.	X		
Are any required % difference values:			
> 10%?	X		
≥100%?		X	
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	X		
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?	X		
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?	X		
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or "+"?		X	
Was MSA required for any sample but not performed?		X	

	YES	NO	NA
Is the coefficient of correlation for MSA less than 0.995 for any sample?			X
Is the coefficient of correlation for MSA less than 0.990 for any sample?			X
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
Was proper quantitation procedure followed?			X
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if greater than CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?			X
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		
ICP Linear Ranges (quarterly)?	X		
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	

	YES	NO	NA
Was any sample result higher than the highest calibration standard for non-ICP parameters?	____	X	____
If yes for any of the above, was the sample diluted to obtain the result on Form I?	____	____	X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?	____	X	____
< 10%?	____	X	____

Corrected Sample Analysis Data Sheets

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BG-04 (0-6.0')

Contract: 9909000473

Lab Code: Case No.: SAS No.: SDG NO.: BG-04 (0-6)

Matrix (soil/water): SOIL/SED Lab Sample ID: 328358

Level (low/med): LOW Date Received: 08/13/99

% Solids: 88.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28000			P
7440-36-0	Antimony	0.65	~~U~~	UJ	P
7440-38-2	Arsenic	3.1		J	P
7440-39-3	Barium	310			P
7440-41-7	Beryllium	3.6			P
7440-43-9	Cadmium	0.63	B		P
7440-70-2	Calcium	152000			P
7440-47-3	Chromium	13.3			P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	9.9		J	P
7439-89-6	Iron	10800			P
7439-92-1	Lead	28.5			P
7439-95-4	Magnesium	17500			P
7439-96-5	Manganese	2550		E J	P
~~7439-97-6~~	~~Mercury~~	~~0.03~~	~~B~~	J	~~CV~~
7440-02-0	Nickel	8.2	B		P
7440-09-7	Potassium	1890			P
7782-49-2	Selenium	4.1			P
7440-22-4	Silver	0.29	U		P
7440-23-5	Sodium	1740			P
7440-28-0	Thallium	1.0	~~U~~	UJ W	F
7440-62-2	Vanadium	15.8			P
7440-66-6	Zinc	38.5			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0012

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BG-05 (0-8.0')

Contract: 9909000473

Lab Code: Case No.: SAS No.: SDG NO.: BG-04 (0-6)

Matrix (soil/water): SOIL/SED Lab Sample ID: 328359

Level (low/med): LOW Date Received: 08/13/99

Solids: 89.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16700			P
7440-36-0	Antimony	1.7	B	J	P
7440-38-2	Arsenic	4.0		J	P
7440-39-3	Barium	160			P
7440-41-7	Beryllium	0.98	B		P
7440-43-9	Cadmium	0.59	B		P
7440-70-2	Calcium	93300			P
7440-47-3	Chromium	292			P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	25.4		J	P
7439-89-6	Iron	33800			P
7439-92-1	Lead	132			P
7439-95-4	Magnesium	14400			P
7439-96-5	Manganese	7430		E J	P
~~7439-97-6~~	~~Mercury~~	~~0.21~~		~~U~~	~~CV~~
7440-02-0	Nickel	17.8			P
7440-09-7	Potassium	1690			P
7782-49-2	Selenium	0.93	U		P
7440-22-4	Silver	0.93	B		P
7440-23-5	Sodium	1120			P
7440-28-0	Thallium	1.1	U	J W	F
7440-62-2	Vanadium	90.5			P
7440-66-6	Zinc	102			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0013

Laboratory Narrative

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9909000473
SDG #BG-04 (0-6)

BBL soil samples were collected on 08/12/99 and received at CAS on 08/13/99 in good condition. TAL metals analysis was requested on 09/29/99. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

INORGANIC ANALYSIS

Two soil samples were analyzed for TAL inorganics by 95ASP methodology.

Site specific QC was not requested for these samples. All Blank Spikes were within limits. The Post Digestion Spike for Thallium was outside control limits and the sample absorbance was less than 50% of the spike absorbance and has been flagged with a "W". Manganese has been flagged with an "E" since the serial dilution (12.6 %) was slightly outside of the QC limit of 10 %. This was probably due to the presence of interferences.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

10/22/99
Date

0001

NYSDEC Sample Preparation and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
BG-04 (0-6.0')	328358					X	
BG-05 (0-8.0')	328359					X	

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
328358	SOIL	METALS	8/13/99	10/08,15/99
328359	SOIL	METALS	8/13/99	10/08,15/99

0097

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
328358	SOIL	TL	8/13/99	10/15/99
328359	SOIL	TL	8/13/99	10/15/99

0098

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
328358	SOIL	HG	8/13/99	10/11/99
328359	SOIL	HG	8/13/99	10/11/99

9099

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
BG04(0-6)	8/12/99	1995	BG-04(0-6)	soil	--	--	--	no	TAL - ms, dup[2], gfaa
BG04(0-6)	8/12/99	1995	BG-05(0-8)	soil	--	--	--	no	TAL - ms, dup[2], gfaa

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

2 The non-compliance resulted in no qualification of data.

3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.

Appendix C-3

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SDG SB-07

DATA REVIEW FOR

ENVIROTEK II SITE

SDG# SB07(4-6)

VOLATILE, SEMIVOLATILE
AND INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# SB07(4-6) for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
SB-07(4-6)	316621	soil	8/13/99	x	x		
SB-07(6-8)	316622	soil	8/13/99	x	x		
SB-08(6-8)	316623	soil	8/13/99	x	x		
SB-08(8-10)[1]	316624	soil	8/13/99	x	x		
SB-09(4-6)	316625	soil	8/13/99	x	x		
SB-09(6-8)	316626	soil	8/13/99	x	x		
TP-3[1]	316627	soil	8/18/99	x	x		
FD081899	316628	soil	8/18/99	x			
PIT5 (SB-03)	316629	soil	8/18/99				x
FD081999	316630	soil	8/19/99		x		x
TP-1(14)	316631	soil	8/19/99	x	x		x
TP-2(14)[1]	316632	soil	8/19/99	x	x		x

1 MS/MSD/DUP analysis performed on sample

VOLATILE ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for soils 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Acetone and xylenes were detected in the method blanks. Based on blank content, data for acetone in samples SB-07(4-6)RE, SB-07(6-8)DL, SB-08(8-10)DL and SB-09(4-6)DL and data for xylenes in sample TP-1(14) have been qualified as undetected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and all response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The responses for two compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All associated positive data for the compounds have been qualified as estimated based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries for one surrogate was above control limits in sample TP-3MSD. All positive data for the sample have been qualified as estimated based on the recovery. All remaining surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

The response for one or more internal standards were below established limits in samples SB-09(6-8), TP-3, TP-3MS, TP-3MSD, FD081899 and FD081899RE. Data for all compounds quantitated under the noncompliant standards have been qualified as estimated based on the deviations. All other internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Data for both low level and medium level matrix spikes were included in the data package. All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
TP-3 / FD081899	methylene chloride	7J	ND	NA
	tetrachloroethene	1J	2J	66.7%

ND Not detected.
NA Anayte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?	X		
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 20			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 10			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse blanks associated with every sample?		X	
Do any trip/field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Are the spectra and mass calibration acceptable?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		

	YES	NO	NA
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		

	YES	NO	NA
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?		X	
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
SB-07(4-6)							
SB-07(4-6)DL							
SB-07(6-8)							
SB-07(6-8)DL							
SB-08(6-8)							
SB-08(8-10)							
SB-08(8-10)MS							
SB-08(8-10)MSD							
SB-08(8-10)DL							
SB-09(4-6)							
SB-09(4-6)DL							
SB-09(6-8)							.
SB-09(6-8)DL							
TP-3							.
TP-3MS						.	.
TP-3MSD		.				.	.
FD081899					.	.	.
FD081899RE						.	.
TP-1(14)							
TP-2(14)							

Surrogates:
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
BCM Bromochloromethane
DFB 1,4-Difluorobenzene
CBZ Chlorobenzene-d5

Qualifiers:
D Diluted
. Recovery high
: Recovery low
.: Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: MS6
Matrix: soil (med)

Date/Time	8/13/99		8/23/99 0858							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										
bromomethane				35.3						
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone										
2-hexanone										
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										
chlorobenzene										

Volatile Calibration Outliers - Page 2

Date/Time	8/13/99		8/23/99 0858							
	Initial Cal.		Cont Cal		Cont Cal.		Cont. Cal		Cont Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
ethylbenzene										
styrene										
xylene (total)										
Affected Samples			sb07(4-6)dl							
			sb08(8-10)dl							
			sb09(4-6)dl							
			sb08(8-10)ms							
			sb08(8-20)m							
			sb07(6-8)dl							

Volatile Calibration Outliers - Page 3

Instrument: MS6
Matrix: soil (low)

Date/Time	8/17/99		8/20/99 0921		8/25/99 1015					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane						26.4				
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone										
2-hexanone										
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										

Volatile Calibration Outliers - Page 4

Date/Time	8/17/99		8/20/99 0921		8/25/99 1015					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chlorobenzene										
ethylbenzene										
styrene										
xylene (total)										

Affected Samples
fd081899re
tp-1(14)
tp-3
tp-3ms
tp-3msd

vlj2131

Corrected Sample Analysis Data Sheets

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-07 (4-6)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316621

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3862

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 20 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	11	J
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	13	
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	9	J
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	63	
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	SBOD 760	E D
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	5	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	3	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-07 (4-6)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316621

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3862

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 20 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.54	30	NJ
2.	96-14-0	PENTANE, 3-METHYL-	4.12	13	NJ
3.	110-54-3	HEXANE	4.57	38	NJ
4.	142-82-5	HEPTANE	7.60	12	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-07 (4-6)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316621DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3893

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 20 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1600	U
74-83-9	Bromomethane	1600	U
75-01-4	Vinyl Chloride	1600	U
75-00-3	Chloroethane	1600	U
75-09-2	Methylene Chloride	1600	U
67-64-1	Acetone	~~200~~	~~DJB~~
75-15-0	Carbon Disulfide	1600	U
75-35-4	1,1-Dichloroethene	1600	U
75-34-3	1,1-Dichloroethane	1600	U
540-59-0	1,2-Dichloroethene (total)	1600	U
67-66-3	Chloroform	1600	U
107-06-2	1,2-Dichloroethane	1600	U
78-93-3	2-Butanone	1600	U
71-55-6	1,1,1-Trichloroethane	1600	U
56-23-5	Carbon Tetrachloride	1600	U
75-27-4	Bromodichloromethane	1600	U
78-87-5	1,2-Dichloropropane	1600	U
10061-01-5	cis-1,3-Dichloropropene	1600	U
79-01-6	Trichloroethene	370	DJ
124-48-1	Dibromochloromethane	1600	U
79-00-5	1,1,2-Trichloroethane	1600	U
71-43-2	Benzene	1600	U
10061-02-6	trans-1,3-Dichloropropene	1600	U
75-25-2	Bromoform	1600	U
108-10-1	4-Methyl-2-Pentonone	1600	U
591-78-6	2-Hexanone	1600	U
127-18-4	Tetrachloroethene	5800	D
79-34-5	1,1,2,2-Tetrachloroethane	1600	U
108-88-3	Toluene	1600	U
108-90-7	Chlorobenzene	1600	U
100-41-4	Ethylbenzene	1600	U
100-42-5	Styrene	1600	U
1330-20-7	Xylene (Total)	1600	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: SB-07 (4-6)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316621DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3893

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 20 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.48	2500	NJBD
2.					
3.					
4.					
5.					
6.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-07 (6-8)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316622

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3867

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
74-87-3	Chloromethane		57	U
74-83-9	Bromomethane		57	U
75-01-4	Vinyl Chloride		57	U
75-00-3	Chloroethane		57	U
75-09-2	Methylene Chloride		10	J
67-64-1	Acetone		39	J
75-15-0	Carbon Disulfide		57	U
75-35-4	1,1-Dichloroethene		57	U
75-34-3	1,1-Dichloroethane		57	U
540-59-0	1,2-Dichloroethene (total)		21	J
67-66-3	Chloroform		57	U
107-06-2	1,2-Dichloroethane		57	U
78-93-3	2-Butanone		57	U
71-55-6	1,1,1-Trichloroethane		120	
56-23-5	Carbon Tetrachloride		57	U
75-27-4	Bromodichloromethane		57	U
78-87-5	1,2-Dichloropropane		57	U
10061-01-5	cis-1,3-Dichloropropene		57	U
79-01-6	Trichloroethene		240	
124-48-1	Dibromochloromethane		57	U
79-00-5	1,1,2-Trichloroethane		57	U
71-43-2	Benzene		57	U
10061-02-6	trans-1,3-Dichloropropene		57	U
75-25-2	Bromoform		57	U
108-10-1	4-Methyl-2-Pentonone		57	U
591-78-6	2-Hexanone		57	U
127-18-4	Tetrachloroethene	4600	~~6800~~	E D
79-34-5	1,1,2,2-Tetrachloroethane		57	U
108-88-3	Toluene		51	J
108-90-7	Chlorobenzene		57	U
100-41-4	Ethylbenzene		45	J
100-42-5	Styrene		57	U
1330-20-7	Xylene (Total)		320	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-07 (6-8)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316622

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3867

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-07 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316622DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3899

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 50(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	2800	U
74-83-9	Bromomethane	2800	U
75-01-4	Vinyl Chloride	2800	U
75-00-3	Chloroethane	2800	U
75-09-2	Methylene Chloride	2800	U
67-64-1	Acetone	~~1000~~ 2800	~~DJB~~ U
75-15-0	Carbon Disulfide	2800	U
75-35-4	1,1-Dichloroethene	2800	U
75-34-3	1,1-Dichloroethane	2800	U
540-59-0	1,2-Dichloroethene (total)	2800	U
67-66-3	Chloroform	2800	U
107-06-2	1,2-Dichloroethane	2800	U
78-93-3	2-Butanone	2800	U
71-55-6	1,1,1-Trichloroethane	2800	U
56-23-5	Carbon Tetrachloride	2800	U
75-27-4	Bromodichloromethane	2800	U
78-87-5	1,2-Dichloropropane	2800	U
10061-01-5	cis-1,3-Dichloropropene	2800	U
79-01-6	Trichloroethene	970	DJ
124-48-1	Dibromochloromethane	2800	U
79-00-5	1,1,2-Trichloroethane	2800	U
71-43-2	Benzene	2800	U
10061-02-6	trans-1,3-Dichloropropene	2800	U
75-25-2	Bromoform	2800	U
108-10-1	4-Methyl-2-Pentonone	2800	U
591-78-6	2-Hexanone	2800	U
127-18-4	Tetrachloroethene	46000	D
79-34-5	1,1,2,2-Tetrachloroethane	2800	U
108-88-3	Toluene	2800	U
108-90-7	Chlorobenzene	2800	U
100-41-4	Ethylbenzene	2800	U
100-42-5	Styrene	2800	U
1330-20-7	Xylene (Total)	860	DJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-07 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316622DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3899

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 12 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 50(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~109-66-0~~	~~PENTANE~~	~~2.51~~	~~2100~~	~~NJBD~~
2.					
3.					
4.					
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7.					
8.					
9.					
10.					
11.					
12.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-08 (6-8)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316623

Sample wt/vol: 2.0 (g/mL) G Lab File ID: Q3871

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 6 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	26	U
74-83-9	Bromomethane	26	U
75-01-4	Vinyl Chloride	26	U
75-00-3	Chloroethane	26	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	12	J
75-15-0	Carbon Disulfide	26	U
75-35-4	1,1-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
540-59-0	1,2-Dichloroethene (total)	39	
67-66-3	Chloroform	26	U
107-06-2	1,2-Dichloroethane	26	U
78-93-3	2-Butanone	26	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	26	U
75-27-4	Bromodichloromethane	26	U
78-87-5	1,2-Dichloropropane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
79-01-6	Trichloroethene	64	
124-48-1	Dibromochloromethane	26	U
79-00-5	1,1,2-Trichloroethane	26	U
71-43-2	Benzene	26	U
10061-02-6	trans-1,3-Dichloropropene	26	U
75-25-2	Bromoform	26	U
108-10-1	4-Methyl-2-Pentonone	26	U
591-78-6	2-Hexanone	26	U
127-18-4	Tetrachloroethene	380	
79-34-5	1,1,2,2-Tetrachloroethane	26	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	26	U
100-42-5	Styrene	26	U
1330-20-7	Xylene (Total)	10	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-08 (6-8)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316623

Sample wt/vol: 2.0 (g/mL) G Lab File ID: Q3871

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 6 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-08 (8-10)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316624

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3863

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
74-87-3	Chloromethane		55	U
74-83-9	Bromomethane		55	U
75-01-4	Vinyl Chloride		55	U
75-00-3	Chloroethane		55	U
75-09-2	Methylene Chloride		45	J
67-64-1	Acetone		48	J
75-15-0	Carbon Disulfide		21	J
75-35-4	1,1-Dichloroethene		55	U
75-34-3	1,1-Dichloroethane		55	U
540-59-0	1,2-Dichloroethene (total)		92	
67-66-3	Chloroform		55	U
107-06-2	1,2-Dichloroethane		6	J
78-93-3	2-Butanone		55	U
71-55-6	1,1,1-Trichloroethane		64	
56-23-5	Carbon Tetrachloride		55	U
75-27-4	Bromodichloromethane		55	U
78-87-5	1,2-Dichloropropane		55	U
10061-01-5	cis-1,3-Dichloropropene		55	U
79-01-6	Trichloroethene		110	
124-48-1	Dibromochloromethane		55	U
79-00-5	1,1,2-Trichloroethane		55	U
71-43-2	Benzene		55	U
10061-02-6	trans-1,3-Dichloropropene		55	U
75-25-2	Bromoform		55	U
108-10-1	4-Methyl-2-Pentonone		55	U
591-78-6	2-Hexanone		55	U
127-18-4	Tetrachloroethene	4300	~~1200~~	E D
79-34-5	1,1,2,2-Tetrachloroethane		55	U
108-88-3	Toluene		170	
108-90-7	Chlorobenzene		55	U
100-41-4	Ethylbenzene	6300	~~2000~~	E D
100-42-5	Styrene		55	U
1330-20-7	Xylene (Total)	30000	~~5600~~	E D

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-08 (8-10)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316624

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3863

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	142-82-5	HEPTANE	7.60	93	NJ
2.	108-87-2	CYCLOHEXANE, METHYL-	8.41	130	NJ
3.	111-84-2	NONANE	13.15	130	NJ
4.		UNKNOWN ALKANE	14.00	100	J
5.		UNKNOWN ALKANE	14.09	100	J
6.		UNKNOWN CYCLOALKANE	14.83	200	J
7.	103-65-1	BENZENE, PROPYL-	15.03	78	NJ
8.	611-14-3	BENZENE, 1-ETHYL-2-METHYL-	15.20	400	NJ
9.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	15.35	220	NJ
10.		UNKNOWN ALKANE	15.51	350	J
11.	611-14-3	BENZENE, 1-ETHYL-2-METHYL-	15.69	190	NJ
12.	108-67-8	BENZENE, 1,3,5-TRIMETHYL-	16.01	520	NJ
13.		UNKNOWN CYCLOALKANE	16.46	260	J
14.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	16.74	170	NJ
15.		UNKNOWN ALKANE	16.85	77	J
16.	135-98-8	BENZENE, (1-METHYLPROPYL)-	17.19	86	NJ
17.		UNKNOWN HYDROCARBON	17.32	200	J
18.		UNKNOWN ALKANE	17.67	140	J
19.		UNKNOWN HYDROCARBON	17.84	120	J
20.		UNKNOWN HYDROCARBON	17.98	87	J
21.					
22.					
23.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-08 (8-10)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316624DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3895

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1400	U
74-83-9	Bromomethane	1400	U
75-01-4	Vinyl Chloride	1400	U
75-00-3	Chloroethane	1400	U
75-09-2	Methylene Chloride	1400	U
67-64-1	Acetone	280	~~DJB~~ U
75-15-0	Carbon Disulfide	1400	U
75-35-4	1,1-Dichloroethene	1400	U
75-34-3	1,1-Dichloroethane	1400	U
540-59-0	1,2-Dichloroethene (total)	200	DJ
67-66-3	Chloroform	1400	U
107-06-2	1,2-Dichloroethane	1400	U
78-93-3	2-Butanone	1400	U
71-55-6	1,1,1-Trichloroethane	1400	U
56-23-5	Carbon Tetrachloride	1400	U
75-27-4	Bromodichloromethane	1400	U
78-87-5	1,2-Dichloropropane	1400	U
10061-01-5	cis-1,3-Dichloropropene	1400	U
79-01-6	Trichloroethene	390	DJ
124-48-1	Dibromochloromethane	1400	U
79-00-5	1,1,2-Trichloroethane	1400	U
71-43-2	Benzene	1400	U
10061-02-6	trans-1,3-Dichloropropene	1400	U
75-25-2	Bromoform	1400	U
108-10-1	4-Methyl-2-Pentonone	1400	U
591-78-6	2-Hexanone	1400	U
127-18-4	Tetrachloroethene	4300	D
79-34-5	1,1,2,2-Tetrachloroethane	1400	U
108-88-3	Toluene	280	DJ
108-90-7	Chlorobenzene	1400	U
100-41-4	Ethylbenzene	6500	D
100-42-5	Styrene	1400	U
1330-20-7	Xylene (Total)	30000	D

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-08 (8-10)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316624DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3895

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

Number TICs found: 15 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	~~PENTANE~~	~~2.48~~	~~1300~~	~~NJBD~~
2.		UNKNOWN ALKANE	13.15	930	JD
3.		UNKNOWN CYCLOALKANE	14.09	800	JD
4.	620-14-4	BENZENE, 1-ETHYL-3-METHYL-	15.20	2100	NJD
5.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	15.35	1700	NJD
6.		UNKNOWN ALKANE	15.51	2900	JD
7.	611-14-3	BENZENE, 1-ETHYL-2-METHYL-	15.68	1100	NJD
8.	95-63-6	BENZENE, 1,2,4-TRIMETHYL-	16.01	3700	NJD
9.		UNKNOWN CYCLOALKANE	16.46	1700	JD
10.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	16.74	950	NJD
11.		UNKNOWN HYDROCARBON	17.19	980	JD
12.	1758-88-9	BENZENE, 2-ETHYL-1,4-DIMETHY	17.32	1800	NJD
13.		UNKNOWN ALKANE	17.66	830	JD
14.	933-98-2	BENZENE, 1-ETHYL-2,3-DIMETHY	17.98	840	NJD
15.		UNKNOWN HYDROCARBON	18.26	730	JD
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-09 (4-6)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316625

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3865

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	56	U
74-83-9	Bromomethane	56	U
75-01-4	Vinyl Chloride	56	U
75-00-3	Chloroethane	56	U
75-09-2	Methylene Chloride	48	J
67-64-1	Acetone	33	J
75-15-0	Carbon Disulfide	16	J
75-35-4	1,1-Dichloroethene	56	U
75-34-3	1,1-Dichloroethane	56	U
540-59-0	1,2-Dichloroethene (total)	67	
67-66-3	Chloroform	56	U
107-06-2	1,2-Dichloroethane	56	U
78-93-3	2-Butanone	56	U
71-55-6	1,1,1-Trichloroethane	34	J
56-23-5	Carbon Tetrachloride	56	U
75-27-4	Bromodichloromethane	56	U
78-87-5	1,2-Dichloropropane	56	U
10061-01-5	cis-1,3-Dichloropropene	56	U
79-01-6	Trichloroethene	99	
124-48-1	Dibromochloromethane	56	U
79-00-5	1,1,2-Trichloroethane	56	U
71-43-2	Benzene	56	U
10061-02-6	trans-1,3-Dichloropropene	56	U
75-25-2	Bromoform	56	U
108-10-1	4-Methyl-2-Pentonone	56	U
591-78-6	2-Hexanone	56	U
127-18-4	Tetrachloroethene	760	
79-34-5	1,1,2,2-Tetrachloroethane	56	U
108-88-3	Toluene	73	
108-90-7	Chlorobenzene	56	U
100-41-4	Ethylbenzene	3500 ~~1200~~	E D
100-42-5	Styrene	56	U
1330-20-7	Xylene (Total)	19000 ~~4000~~	E D

FORM I VOA

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SB-09 (4-6)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316625

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3865

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 17 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN CYCLOALKANE	10.82	0.0	
2.		UNKNOWN ALKANE	11.32	0.0	
3.		UNKNOWN ALKANE	13.15	57	J
4.		UNKNOWN CYCLOALKANE	14.09	52	J
5.		UNKNOWN CYCLOALKANE	14.83	100	J
6.	611-14-3	BENZENE, 1-ETHYL-2-METHYL-	15.20	250	NJ
7.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	15.35	140	NJ
8.		UNKNOWN ALKANE	15.51	180	J
9.	611-14-3	BENZENE, 1-ETHYL-2-METHYL-	15.69	120	NJ
10.	95-63-6	BENZENE, 1,2,4-TRIMETHYL-	16.00	320	NJ
11.		UNKNOWN CYCLOALKANE	16.46	130	J
12.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	16.73	110	NJ
13.		UNKNOWN HYDROCARBON	17.19	58	J
14.		UNKNOWN HYDROCARBON	17.32	130	J
15.		UNKNOWN ALKANE	17.66	67	J
16.	535-77-3	BENZENE, 1-METHYL-3-(1-METHY	17.84	76	NJ
17.	527-84-4	BENZENE, 1-METHYL-2-(1-METHY	17.98	56	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-09 (4-6)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316625DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3896

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1400	U
74-83-9	Bromomethane	1400	U
75-01-4	Vinyl Chloride	1400	U
75-00-3	Chloroethane	1400	U
75-09-2	Methylene Chloride	390	DJ
67-64-1	Acetone	~~380~~	~~DJB~~
75-15-0	Carbon Disulfide	1400	U
75-35-4	1,1-Dichloroethene	1400	U
75-34-3	1,1-Dichloroethane	1400	U
540-59-0	1,2-Dichloroethene (total)	220	DJ
67-66-3	Chloroform	1400	U
107-06-2	1,2-Dichloroethane	1400	U
78-93-3	2-Butanone	1400	U
71-55-6	1,1,1-Trichloroethane	150	DJ
56-23-5	Carbon Tetrachloride	1400	U
75-27-4	Bromodichloromethane	1400	U
78-87-5	1,2-Dichloropropane	1400	U
10061-01-5	cis-1,3-Dichloropropene	1400	U
79-01-6	Trichloroethene	680	DJ
124-48-1	Dibromochloromethane	1400	U
79-00-5	1,1,2-Trichloroethane	1400	U
71-43-2	Benzene	1400	U
10061-02-6	trans-1,3-Dichloropropene	1400	U
75-25-2	Bromoform	1400	U
108-10-1	4-Methyl-2-Pentonone	1400	U
591-78-6	2-Hexanone	1400	U
127-18-4	Tetrachloroethene	4300	D
79-34-5	1,1,2,2-Tetrachloroethane	1400	U
108-88-3	Toluene	200	DJ
108-90-7	Chlorobenzene	1400	U
100-41-4	Ethylbenzene	3900	D
100-42-5	Styrene	1400	U
1330-20-7	Xylene (Total)	19000	D

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-09 (4-6)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316625DL

Sample wt/vol: 4.0 (g/mL) G Lab File ID: Q3896

Level: (low/med) MED Date Received: 08/13/99

% Moisture: not dec. 10 Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10(ML) Soil Aliquot Volume: 100(uL)

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~109-66-0~~	~~PENTANE~~	2.49	1100	~~NJBD~~
2.	620-14-4	BENZENE, 1-ETHYL-3-METHYL-	15.20	1200	NJD
3.	95-63-6	BENZENE, 1,2,4-TRIMETHYL-	15.35	1100	NJD
4.		UNKNOWN ALKANE	15.51	2000	JD
5.	95-63-6	BENZENE, 1,2,4-TRIMETHYL-	16.01	2500	NJD
6.	934-80-5	BENZENE, 4-ETHYL-1,2-DIMETHY	17.32	1100	NJD
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-09 (6-8)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316626

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3861

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 15 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	15	
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	5	J
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	3	J
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	2	J
71-55-6	1,1,1-Trichloroethane	17	
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	120	
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	4	J
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	SRO 420	E
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	11	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	17	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-09 (6-8)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316626

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3861

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 15 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	1.73	7	J
2.	109-66-0	PENTANE	2.54	10	NJ
3.	108-87-2	CYCLOHEXANE, METHYL-	8.41	9	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-09 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316626DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3872

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 15 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	59	U
74-83-9	Bromomethane	59	U
75-01-4	Vinyl Chloride	59	U
75-00-3	Chloroethane	59	U
75-09-2	Methylene Chloride	23	DJ
67-64-1	Acetone	59	U
75-15-0	Carbon Disulfide	8	DJ
75-35-4	1,1-Dichloroethene	59	U
75-34-3	1,1-Dichloroethane	59	U
540-59-0	1,2-Dichloroethene (total)	41	DJ
67-66-3	Chloroform	59	U
107-06-2	1,2-Dichloroethane	59	U
78-93-3	2-Butanone	59	U
71-55-6	1,1,1-Trichloroethane	25	DJ
56-23-5	Carbon Tetrachloride	59	U
75-27-4	Bromodichloromethane	59	U
78-87-5	1,2-Dichloropropane	59	U
10061-01-5	cis-1,3-Dichloropropene	59	U
79-01-6	Trichloroethene	190	D
124-48-1	Dibromochloromethane	59	U
79-00-5	1,1,2-Trichloroethane	59	U
71-43-2	Benzene	6	DJ
10061-02-6	trans-1,3-Dichloropropene	59	U
75-25-2	Bromoform	59	U
108-10-1	4-Methyl-2-Pentonone	59	U
591-78-6	2-Hexanone	59	U
127-18-4	Tetrachloroethene	590	D
79-34-5	1,1,2,2-Tetrachloroethane	59	U
108-88-3	Toluene	16	DJ
108-90-7	Chlorobenzene	59	U
100-41-4	Ethylbenzene	59	U
100-42-5	Styrene	59	U
1330-20-7	Xylene (Total)	23	DJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: SB-09 (6-8)DL

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316626DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: Q3872

Level: (low/med) LOW Date Received: 08/13/99

% Moisture: not dec. 15 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-1 (14)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316631

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3947

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. 19 Date Analyzed: 08/25/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	~~1~~ 13	JB

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP-1 (14)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316631

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3947

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. 19 Date Analyzed: 08/25/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2 (14)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316632

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3878

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. 18 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	5	J
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP-2 (14)

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316632

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3878

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. 18 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-3

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316627

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3948

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. 5 Date Analyzed: 08/25/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	1	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP-3

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316627

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3948

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. 5 Date Analyzed: 08/25/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	67-63-0	ISOPROPYL ALCOHOL	3.31	6	NJ
2.					
3.					
4.					
5.					
6.					
7.					
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30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD081899

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316628

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3875

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. 6 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	1	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD081899

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316628

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3875

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. 6 Date Analyzed: 08/20/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD081899RE

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316628RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3946

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. 6 Date Analyzed: 08/25/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD081899RE

Lab Name: CAS-ROC Contract: 99-8-209

Lab Code: 10145 Case No.: SAS No.: SDG No.: SB-07(4-6)

Matrix: (soil/water) SOIL Lab Sample ID: 316628RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q3946

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. 6 Date Analyzed: 08/25/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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SEMIVOLATILE ANALYSES

Introduction

Analyses were performed according to EPA SW-846 Method 8270 as referenced in the NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, and rinse blanks) are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

Bis(2-ethylhexyl)phthalate were detected in one of the method blanks. Based on the blank content, data for bis(2-ethylhexyl)phthalate data in samples SB-07(4-6), SB-07(6-8), SB-07(6-8)RE, SB-08(6-8), SB-08(6-8)RE, SB-08(8-10), SB-08(8-10)RE, SB-09(4-6), SB-09(4-6)RE and SB-09(6-8) have been qualified as undetected.

In addition to the listed target compound, several non-target compounds were detected in the method blanks. When common to the blanks and samples, their presence in the samples have been rejected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The response for one compound in the continuing calibration standards was outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All associated data for this compound have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

The response for one or more internal standards were below established limits in samples SB-07(6-8), SB-07(6-8)RE, SB-08(6-8), SB-08(6-8)RE, SB-08(8-10), SB-08(8-10)RE, SB-09(4-6) and SB-09(4-6)RE. Data for all compounds quantitated under the noncompliant standards have been qualified as estimated based on the deviations. All other internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
TP-1(14) / FD081999	bis(2-ethylhexyl)phthalate	200J	170J	16.2%

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Semi-Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits? 0 out of 22			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method blanks have positive results?	X		

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Are there field/rinse blanks associated with every sample?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		

	YES	NO	NA
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		

	YES	NO	NA
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every samples and blank within the upper and lower limits for each continuing calibration?		X	
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semi-Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*								Internal Standards*					
		NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	DCB	NPT	ANT	PHN	CRY	PRY
SB-07(4-6)															
SB-07(6-8)															
SB-07(6-8)RE															
SB-08(6-8)															
SB-08(6-8)RE															
SB-08(8-10)															
SB-08(8-10)RE															
SB-09(4-6)															
SB-09(4-6)RE															
SB-09(6-8)															
TP-3															
FD081999															
TP-1(14)															
TP-2(14)															
TP-2(14)MS															
TP-2(14)MSD															

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
DCB 1,2-Dichlorobenzene-d4
PHL Phenol-d6
2FP 2-Fluorophenol
TBP 2,4,6-Tribromophenol
2CP 2-Chlorophenol-d4

Internal Standards:
DCB 1,4-Dichlorobenzene-d4
NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12
PRY Perylene-d12

Qualifiers:
D Diluted
l Recovery low
h Recovery high
na not applicable

* Unless otherwise specified, all parameters are within acceptable limits.

vij2131

Semivolatile Calibration Outliers

Instrument: HP5973-A

Date/Time	8/30/99		8/30/99 1705		8/31/99 1350					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'oxybis(1-Chloropropane)						-25.5				
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene										
3-Nitroaniline										
Acenaphthene										
2,4-Dinitrophenol										

Semivolatile Calibration Outliers - Page 2

Date/Time	8/30/99		8/30/99 1705		8/31/99 1350					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
4-Nitrophenol										
Dibenzofuran										
2,4-Dinitrotoluene										
Diethylphthalate										
4-Nitroaniline										
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Anthracene										
Carbazole										
Di-n-butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate										
Di-n-octylphthalate										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										

Affected Samples:				
			sb07(6-8)	sb07(6-8)re
			sb08(6-8)	sb08(6-8)re
			sb08(8-10)	sb08(8-10)re
			sb09(4-6)	sb09(4-6)re
				sb09(6-8)

Corrected Sample Analysis Data Sheets

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-07(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316621

Sample wt/vol: 30 (g/ml) G Lab File ID: AC514.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 20 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(-2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
95-48-7	2-Methylphenol	420	U
621-24-7	N-Nitroso-Di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
106-44-5	4-Methylphenol	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(-2-Chloroethoxy)Methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	420	U
131-11-3	Dimethyl Phthalate	420	U
606-20-2	2,6-Dinitrotoluene	420	U
83-32-9	Acenaphthene	420	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
100-02-7	4-Nitrophenol	1000	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-07(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316621

Sample wt/vol: 30 (g/ml) G Lab File ID: AC514.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 20 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
84-66-2	Diethylphthalate	420	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	69	J
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-Butylphthalate	63	J
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	110	J
85-68-7	Butyl benzyl phthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)Anthracene	79	J
218-01-9	Chrysene	53	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	420 ~~200~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	420	U
205-99-2	Benzo(b)fluoranthene	420	U
207-08-9	Benzo(k)Fluoranthene	420	U
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
53-70-3	Dibenz(a,h)anthracene	420	U
191-24-2	Benzo(g,h,i)Perylene	420	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-07(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316621

Sample wt/vol: 30 (g/ml) G Lab File ID: AC514.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.4

Number TICs found: 16 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~unknown~~	~~4.12~~	~~160~~	~~JB~~
2.		~~unknown~~	~~4.94~~	~~330~~	~~JB~~
3.		unknown	~~5.22~~	~~86~~	~~JA~~
4.		~~unknown~~	~~5.34~~	~~840~~	~~JBA~~
5.		unknown	5.83	250	J
6.		~~unknown~~	~~6.06~~	~~150~~	~~JB~~
7.		unknown	6.53	350	J
8.		unknown	7.94	95	J
9.		unknown	13.11	220	J
10.		unknown	19.79	88	J
11.		unknown	21.62	180	J
12.		unknown	23.09	110	J
13.	000205-99-2	Benz[e]acephenanthrylene	23.35	130	JN
14.		unknown	24.24	94	J
15.		unknown	24.42	160	J
16.		unknown	28.87	110	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-07(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316622

Sample wt/vol: 30 (g/ml) G Lab File ID: AC528.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
95-48-7	2-Methylphenol	380	U
621-24-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	72	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl Phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	950	U
51-28-5	2,4-Dinitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	950	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-07(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316622

Sample wt/vol: 30 (g/ml) G Lab File ID: AC528.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	130	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	120	J
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	200	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	380 ~~68~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-07(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316622

Sample wt/vol: 30 (g/ml) G Lab File ID: AC528.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.7

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	15.79	4600	J
2.	unknown	15.86	3300	J
3.	unknown	16.45	4300	J
4.	unknown	23.16	3500	J
5.	unknown	25.38	3000	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-07(6-8)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316622RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC539.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(-2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
95-48-7	2-Methylphenol	380	U
621-24-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(-2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	77	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl Phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	950	U
51-28-5	2,4-Dinitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	950	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB-07(6-8)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316622RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC539.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
84-66-2	Diethylphthalate	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	120	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	110	J
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	220	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	350 ~~76~~	~~JB~~
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-07(6-8)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316622RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC539.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.7

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000593-45-3	Octadecane	16.28	2400	JN
2.	unknown	16.44	4500	J
3.	unknown	23.16	2100	J
4.	unknown	24.43	3100	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316623

Sample wt/vol: 30 (g/ml) G Lab File ID: AC529.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 5.8 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(-2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U U
95-48-7	2-Methylphenol	350	U
621-24-7	N-Nitroso-Di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
106-44-5	4-Methylphenol	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(-2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	890	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	890	U
208-96-8	Acenaphthylene	47	J
131-11-3	Dimethyl Phthalate	350	U
606-20-2	2,6-Dinitrotoluene	350	U
83-32-9	Acenaphthene	350	U
99-09-2	3-Nitroaniline	890	U
51-28-5	2,4-Dinitrophenol	890	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
100-02-7	4-Nitrophenol	890	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316623

Sample wt/vol: 30 (g/ml) G Lab File ID: AC529.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 5.8 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
84-66-2	Diethylphthalate	350	U
100-01-6	4-Nitroaniline	890	U
534-52-1	4,6-Dinitro-2-methylphenol	890	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	890	U
85-01-8	Phenanthrene	87	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-Butylphthalate	160	J
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	82	J
85-68-7	Butyl benzyl phthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)Anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	350 ~~320~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)Fluoranthene	350	U
50-32-8	Benzo(a)Pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	140	J
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)Perylene	170	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-08(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316623

Sample wt/vol: 30 (g/ml) G Lab File ID: AC529.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 5.8 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 21 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~5.35~~	~~630~~	~~JBA~~ R
2.	unknown	19.78	330	J
3.	unknown	19.88	630	J
4.	unknown	19.97	650	J
5.	unknown	20.05	540	J
6.	unknown	20.09	370	J
7.	unknown	20.13	450	J
8.	unknown	20.17	550	J
9.	unknown	20.22	820	J
10.	unknown	20.27	620	J
11.	unknown	20.91	350	J
12.	unknown	21.02	390	J
13.	unknown	21.33	430	J
14.	unknown	21.70	960	J
15.	unknown	22.18	460	J
16.	unknown	23.10	590	J
17.	unknown	23.84	840	J
18.	unknown	24.33	670	J
19.	unknown	27.71	940	J
20.	unknown	29.36	600	J
21.	unknown	30.72	380	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(6-8)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316623RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC540.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 6 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(-2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
95-48-7	2-Methylphenol	350	U
621-24-7	N-Nitroso-Di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
106-44-5	4-Methylphenol	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(-2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	890	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	890	U
208-96-8	Acenaphthylene	62	J
131-11-3	Dimethyl Phthalate	350	U
606-20-2	2,6-Dinitrotoluene	350	U
83-32-9	Acenaphthene	350	U
99-09-2	3-Nitroaniline	890	U
51-28-5	2,4-Dinitrophenol	890	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
100-02-7	4-Nitrophenol	890	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(6-8)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316623RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC540.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 6 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
84-66-2	Diethylphthalate	350	U
100-01-6	4-Nitroaniline	890	U
534-52-1	4,6-Dinitro-2-methylphenol	890	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	890	U
85-01-8	Phenanthrene	89	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-Butylphthalate	160	J
206-44-0	Fluoranthene	210	J
129-00-0	Pyrene	80	J
85-68-7	Butyl benzyl phthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)Anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	370	B
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)Fluoranthene	350	U
50-32-8	Benzo(a)Pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	150	J
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)Perylene	82	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-08(6-8)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316623RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC540.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.96	260	J
2.	~~unknown~~	~~5.30~~	~~620~~	~~J~~ BA 12
3.	unknown	5.85	370	J
4.	unknown	6.56	430	J
5.	unknown	19.06	590	J
6.	unknown	19.10	330	J
7.	unknown	19.17	580	J
8.	unknown	19.41	250	J
9.	unknown	19.62	260	J
10.	unknown	19.75	310	J
11.	unknown	19.81	330	J
12.	unknown	20.30	340	J
13.	unknown	21.36	300	J
14.	unknown	21.71	650	J
15.	unknown	22.03	300	J
16.	unknown	22.20	300	J
17.	unknown	22.45	340	J
18.	unknown	23.14	260	J
19.	unknown	23.55	240	J
20.	unknown	24.38	1100	J
21.	unknown	27.75	750	J
22.	unknown	29.37	380	J
23.	unknown	29.64	280	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(8-10)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316624

Sample wt/vol: 30 (g/ml) G Lab File ID: AC530.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	47	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(8-10)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316624

Sample wt/vol: 30 (g/ml) G Lab File ID: AC530.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	86	J
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	89	J
206-44-0	Fluoranthene	94	J
129-00-0	Pyrene	81	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	66	J
218-01-9	Chrysene	140	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~230~~	JB U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SB-08(8-10)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316624

Sample wt/vol: 30 (g/ml) G Lab File ID: AC530.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 11 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000622-96-8	Benzene, 1-ethyl-4-methyl-	5.56	1100	JN
2.	001074-43-7	Benzene, 1-methyl-3-propyl-	6.55	1800	JN
3.	000095-93-2	Benzene, 1,2,4,5-tetramethyl-	6.63	1200	JN
4.		unknown	15.78	840	J
5.		unknown	16.43	980	J
6.	000629-94-7	Heneicosane	16.78	1400	JN
7.		unknown	23.14	1700	J
8.		unknown	24.89	740	J
9.		unknown	25.34	2000	J
10.		unknown	27.75	930	J
11.		unknown	29.43	1600	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(8-10)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316624RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC541.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	47	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-08(8-10)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316624RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC541.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	86	J
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	100	J
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	70	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	63	J
218-01-9	Chrysene	150	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	~~370~~ ~~220~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	370	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-08(8-10)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316624RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC541.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 10 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000622-96-8	Benzene, 1-ethyl-4-methyl-	5.55	960	JN
2.	000124-18-5	Decane	5.87	2100	JN
3.		unknown	6.30	1300	J
4.	001074-43-7	Benzene, 1-methyl-3-propyl-	6.55	1900	JN
5.	000527-53-7	Benzene, 1,2,3,5-tetramethyl-	6.63	1100	JN
6.		unknown	15.78	710	J
7.		unknown	16.43	880	J
8.		unknown	23.14	1300	J
9.		unknown	25.35	1300	J
10.		unknown	27.78	1100	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-09(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316625

Sample wt/vol: 30 (g/ml) G Lab File ID: AC531.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	91	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	54	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-09(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316625

Sample wt/vol: 30 (g/ml) G Lab File ID: AC531.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	59	J
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	84	J
206-44-0	Fluoranthene	300	J
129-00-0	Pyrene	150	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	290	J
218-01-9	Chrysene	370	
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~340~~	~~JB~~ U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	230	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	180	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-09(4-6)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316625

Sample wt/vol: 30 (g/ml) G Lab File ID: AC531.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

Number TICs found: 14 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~unknown~~	~~5.35~~	~~840~~	~~JBA~~ R
2.	000620-14-4	Benzene, 1-ethyl-3-methyl-	5.56	690	JN
3.	000526-73-8	Benzene, 1,2,3-trimethyl-	6.31	1000	JN
4.	025340-17-4	Benzene, diethyl-	6.55	1500	JN
5.	000535-77-3	Benzene, 1-methyl-3-(1-methylet	6.63	840	JN
6.		unknown	7.11	620	J
7.		unknown	15.79	780	J
8.		unknown	16.44	840	J
9.		unknown	22.21	620	J
10.		unknown	23.15	1900	J
11.		unknown	24.39	2200	J
12.		unknown	26.52	1000	J
13.		unknown	27.79	1200	J
14.		unknown	29.45	910	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-09(4-6)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316625RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC542.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	90	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	56	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	930	U
51-28-5	2,4-Dinitrophenol	930	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	930	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-09(4-6)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316625RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC542.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	52	J
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	77	J
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	160	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	290	J
218-01-9	Chrysene	350	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~330~~	JB
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	270	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	130	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-09(4-6)RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316625RE

Sample wt/vol: 30 (g/ml) G Lab File ID: AC542.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

Number TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~unknown~~	~~5.36~~	~~730~~	~~JBA~~
2.	000620-14-4	Benzene, 1-ethyl-3-methyl-	5.56	640	JN
3.		unknown	6.56	1500	J
4.	001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	6.63	870	JN
5.		unknown	11.24	640	J
6.		unknown	15.79	750	J
7.		unknown	16.45	830	J
8.		unknown	22.23	1000	J
9.		unknown	24.42	770	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-09(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316626

Sample wt/vol: 30 (g/ml) G Lab File ID: AC543.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 15.4 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(-2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
95-48-7	2-Methylphenol	390	U
621-24-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(-2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	45	J
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	980	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	980	U
208-96-8	Acenaphthylene	390	U
131-11-3	Dimethyl Phthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
83-32-9	Acenaphthene	390	U
99-09-2	3-Nitroaniline	980	U
51-28-5	2,4-Dinitrophenol	980	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	980	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SB-09(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316626

Sample wt/vol: 30 (g/ml) G Lab File ID: AC543.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 15.4 decanted:(Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	980	U
534-52-1	4,6-Dinitro-2-methylphenol	980	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-Butylphthalate	56	J
206-44-0	Fluoranthene	160	J
129-00-0	Pyrene	83	J
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	96	J
218-01-9	Chrysene	110	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	390 ~~130~~	JB-U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	390	U
207-08-9	Benzo(k)Fluoranthene	390	U
50-32-8	Benzo(a)Pyrene	390	U
193-39-5	Indeno(1,2,3-cd)Pyrene	390	U
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	390	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SB-09(6-8)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316626

Sample wt/vol: 30 (g/ml) G Lab File ID: AC543.D

Level: (low/med) LOW Date Received: 8/13/99

% Moisture: 15.4 decanted: (Y/N) N Date Extracted: 8/18/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.6

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~unknown~~	~~4.12~~	~~160~~	~~JB~~
2.		~~unknown~~	~~4.96~~	~~280~~	~~JB~~
3.		unknown	5.14	150	J
4.		~~unknown~~	~~5.36~~	~~770~~	~~JBA~~
5.		~~unknown~~	~~5.49~~	~~170~~	~~JBA~~
6.		unknown	6.56	130	J
7.		unknown	10.93	170	J
8.		unknown	13.13	320	J
9.		unknown	16.23	130	J
10.		unknown	16.43	190	J
11.		unknown	17.59	150	J
12.		unknown	18.83	370	J
13.		unknown	19.02	430	J
14.		unknown	19.05	270	J
15.		unknown	19.11	200	J
16.		unknown	19.43	140	J
17.		unknown	19.76	230	J
18.		unknown	20.00	190	J
19.		unknown	20.95	160	J
20.		unknown	22.20	310	J
21.		unknown	23.12	200	J
22.		unknown	24.50	320	J
23.		unknown	27.13	170	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-1(14)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316631

Sample wt/vol: 30 (g/ml) G Lab File ID: AC510.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 18.5 decanted:(Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(-2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
95-48-7	2-Methylphenol	410	U
621-24-7	N-Nitroso-Di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(-2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethyl Phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-1(14)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316631

Sample wt/vol: 30 (g/ml) G Lab File ID: AC510.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 18.5 decanted:(Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	200	J
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)Fluoranthene	410	U
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1,2,3-cd)Pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)Perylene	410	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
TP-1(14)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316631

Sample wt/vol: 30 (g/ml) G Lab File ID: AC510.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 18.5 decanted: (Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 28 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~4.94~~	~~130~~	~~JB~~
2.	~~unknown~~	~~5.34~~	~~910~~	~~JBA~~
3.	~~unknown~~	~~5.47~~	~~150~~	~~JA~~
4.	~~unknown~~	~~6.05~~	~~200~~	~~JB~~
5.	unknown	6.40	170	J
6.	unknown	6.53	200	J
7.	unknown	13.11	210	J
8.	unknown	15.76	200	J
9.	unknown	18.25	160	J
10.	unknown	18.84	170	J
11.	unknown	19.24	210	J
12.	unknown	19.32	160	J
13.	unknown	21.20	220	J
14.	unknown	21.62	300	J
15.	unknown	21.73	130	J
16.	unknown	21.89	250	J
17.	unknown	22.15	720	J
18.	unknown	22.39	230	J
19.	unknown	22.54	160	J
20.	unknown	23.09	250	J
21.	unknown	23.52	210	J
22.	unknown	23.76	120	J
23.	unknown	24.31	260	J
24.	unknown	25.25	160	J
25.	unknown	26.42	280	J
26.	unknown	26.73	120	J
27.	unknown	27.66	780	J
28.	unknown	29.32	220	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-2(14)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316632

Sample wt/vol: 30 (g/ml) G Lab File ID: AC511.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 18 decanted:(Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(-2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
95-48-7	2-Methylphenol	410	U
621-24-7	N-Nitroso-Di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(-2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethyl Phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-2(14)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316632

Sample wt/vol: 30 (g/ml) G Lab File ID: AC511.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 18 decanted:(Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	64	J
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)Fluoranthene	410	U
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1,2,3-cd)Pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)Perylene	410	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
TP-2(14)

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316632

Sample wt/vol: 30 (g/ml) G Lab File ID: AC511.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 18 decanted: (Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

Number TICs found: 12 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~unknown~~	~~4.94~~	~~150~~	~~JB~~
2.	~~unknown~~	~~5.47~~	~~1700~~	~~JA~~
3.	~~unknown~~	~~6.05~~	~~240~~	~~JB~~
4.	unknown	6.66	120	J
5.	unknown	13.11	220	J
6.	unknown	16.19	84	J
7.	unknown	17.89	93	J
8.	unknown	18.33	190	J
9.	unknown	20.42	98	J
10.	unknown	21.62	190	J
11.	unknown	22.14	540	J
12.	unknown	22.84	92	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD081999A

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316630

Sample wt/vol: 30 (g/ml) G Lab File ID: AC509.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 19 decanted:(Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(-2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
95-48-7	2-Methylphenol	410	U
621-24-7	N-Nitroso-Di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(-2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethyl Phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD081999A

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316630

Sample wt/vol: 30 (g/ml) G Lab File ID: AC509.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 19 decanted:(Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	170	J
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)Fluoranthene	410	U
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1,2,3-cd)Pyrene	410	U
53-70-3	Dibenz(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)Perylene	410	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FD081999A

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-209 SAS No.: SDG No.: SB-07(4-6

Matrix: (soil/water) SOIL Lab Sample ID: 316630

Sample wt/vol: 30 (g/ml) G Lab File ID: AC509.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 8/23/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7

Number TICs found: 28 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.95	160	JB
2.	unknown	5.47	1800	JA
3.	unknown	6.06	230	JB
4.	unknown	6.67	130	J
5.	unknown	12.13	110	J
6.	unknown	12.28	110	J
7.	unknown	13.12	220	J
8.	unknown	15.75	130	J
9.	unknown	18.28	210	J
10.	unknown	18.34	130	J
11.	unknown	19.03	98	J
12.	unknown	19.25	230	J
13.	unknown	19.33	120	J
14.	unknown	20.00	260	J
15.	unknown	21.21	100	J
16.	unknown	21.63	230	J
17.	unknown	21.91	110	J
18.	unknown	22.16	310	J
19.	unknown	22.41	200	J
20.	unknown	22.67	99	J
21.	unknown	23.10	280	J
22.	unknown	23.26	130	J
23.	unknown	24.10	100	J
24.	unknown	25.26	140	J
25.	unknown	26.41	170	J
26.	unknown	27.67	230	J
27.	unknown	29.31	110	J
28.	unknown	30.15	110	J

INORGANIC ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

E The reported value is estimated due to the presence of interference.

M Duplicate injection precision not met.

N Spiked sample recovery not within control limits.

S Reported value was determined by the method of standard additions (MSA).

W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.

* Duplicate analysis not within control limits.

\+ Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days
Cyanide	12 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days
Cyanide	14 days

All samples were analyzed within specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRDL.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and the recoveries for all initial calibration verification standards were acceptable.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits, with the following exception:

CRI#2	Zinc	127.3%

No data fell in the affected range; therefore, no data qualification was necessary.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

All matrix spike recoveries were within control limits, with the following exceptions:

Antimony	20.8%
Barium	133.3%
Chromium	68.6%
Copper	0.3%
Lead	272.2%
Selenium	47.7%
Zinc	61.5%
Cyanide	3.5%

Based on the matrix spike recoveries, all data for antimony, barium, chromium, lead, selenium and zinc and all positive data for copper and cyanide have been qualified as estimated and all nondetect data for copper and cyanide have been rejected.

4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits, with the following exceptions:

Chromium	64.8%
Lead	46.0%
Manganese	32.9%

Cyanide 46.0%

No data have been qualified based on the duplicate results.

5. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
TP-1(14) / FD081999	aluminum	17800	31200	11.5%
	antimony	1.6B	0.69U	<CRDL
	arsenic	20.8	15.8	27.3%
	barium	601	836	32.7%
	beryllium	4.0	4.4	9.5%
	cadmium	1.2B	1.1B	<CRDL
	calcium	146000	169000	14.6%
	chromium	75.5	54.6	32.1%
	cobalt	4.5B	4.4B	<CRDL
	copper	137	101	30.2%
	iron	119000	96100	21.3%
	lead	96.5	80.9	17.6%
	magnesium	16300	13200	21.0%
	manganese	5480	9940	57.8%
	mercury	0.04	0.05	<CRDL
	nickel	38.5	25.0	42.5%
	potassium	2940	2490	1.8%
	selenium	2.6	3.4	26.7%
	sodium	1560	1420	9.4%
	thallium	0.33U	0.53B	<CRDL
	vanadium	44.0	56.1	24.2%
	zinc	303	267	12.6%
	cyanide	7.47	7.72	3.3%

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

All required serial dilution results were acceptable.

8. Furnace QC

The relative percent differences between multiple injections were acceptable. The analytical spike recovery for thallium was, however, outside control limits in sample FD081999. Thallium data for this sample has been qualified as estimated based on the recovery.

9. Method of Standard Additions (MSA)

All method of standard additions results were properly calculated.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?	X		
Is the distillation log for mercury present?	X		
Is the distillation log for cyanides present?	X		
Are pH values listed?			X
pH for metals analyses <2 (waters)?			X
pH for cyanide analyses >12 (waters)?			X
Percent solids calculation present for soils/sediments?	X		
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA	X		
Mercury	X		
Cyanides	X		
Is the data legible?	X		

	YES	NO	NA
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	X		
Were cyanide distillations performed within 14 days?	X		
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?			X
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Is a brief physical description of samples given on Form I's?	X		
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?	X		
Cyanides?	X		
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
Is correlation coefficient greater than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?	X		
Atomic Absorption Analysis?	X		
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		

	YES	NO	NA
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Cyanides (85-115%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?	X		
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	X		
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?	X		
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (60-120%)?		X	
Is mid-range standard within control limits for cyanide (80-120%)	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		

	YES	NO	NA
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	X		
Aqueous			
Are any spike recoveries:			
less than 30%?			X
between 30-74%?			X
between 126-150%?			X
greater then 150%?			X
Soil/Sediment			
Are any spike recoveries:			
less than 10%?	X		

	YES	NO	NA
between 10-74%?	X		
between 126-200%?	X		
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?		X	
If no, are all results outside the control limits flagged with an * on Form I's and VI?	X		
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?		X	
Field Duplicates			
Were field duplicates analyzed?	X		
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?		X	

	YES	NO	NA
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?		X	
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	X		
Aqueous LCS			
Is any LCS recovery:			
less than 50%?			X
between 50% and 79%?			X
between 121% and 150%?			X
greater than 150%?			X
Solid LCS			
Is LCS "Found" value higher than the control limits on Form VII?		X	
Is LCS "Found" lower than the control limits on Form VII?		X	
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	X		
each matrix type?	X		
Was field blank(s) used for Serial Dilution Analysis?		X	
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.			X
Are any required % difference values:			
> 10%?		X	
≥100%?		X	
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	X		

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?	X		
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?	X		
Form VIII (Method of Standard Addition Results)			
Present?	X		
If no, is any Form I result coded with "S" or "+"?			X
Was MSA required for any sample but not performed?		X	
Is the coefficient of correlation for MSA less than 0.995 for any sample?		X	
Is the coefficient of correlation for MSA less than 0.990 for any sample?		X	
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?	X		
Was proper quantitation procedure followed?	X		
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if greater than CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?			X
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		

	YES	NO	NA
ICP Linear Ranges (quarterly)?	X		
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?		X	
< 10%?		X	

Corrected Sample Analysis Data Sheets

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

PIT5 (SB-03)

Contract: 9908000209

Lab Code: Case No.: SAS No.: SDG NO.: SB-07

Matrix (soil/water): SOIL/SED Lab Sample ID: 316629

Level (low/med): LOW Date Received: 08/19/99

% Solids: 93.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	34400			P
7440-36-0	Antimony	3.1	B	NJ	P
7440-38-2	Arsenic	12.4			P
7440-39-3	Barium	112		NJ	P
7440-41-7	Beryllium	0.80	B		P
7440-43-9	Cadmium	2.9			P
7440-70-2	Calcium	101000			P
7440-47-3	Chromium	163		*NJ	P
7440-48-4	Cobalt	4.1	B		P
7440-50-8	Copper	486		NJ	P
7439-89-6	Iron	67300			P
7439-92-1	Lead	506		*NJ	P
7439-95-4	Magnesium	6910			P
7439-96-5	Manganese	1480		*	P
7439-97-6	Mercury	0.49			CV
7440-02-0	Nickel	55.3			P
7440-09-7	Potassium	850	B		P
7782-49-2	Selenium	1.9		JS	F
7440-22-4	Silver	0.72	U		P
7440-23-5	Sodium	704	B		P
7440-28-0	Thallium	0.30	U		F
7440-62-2	Vanadium	33.0			P
7440-66-6	Zinc	1260		NJ	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

0088

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

TP-1 (14')

Contract: 9908000209

Lab Code: Case No.: SAS No.: SDG NO.: SB-07

Matrix (soil/water): SOIL/SED Lab Sample ID: 316631

Level (low/med): LOW Date Received: 08/20/99

% Solids: 81.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	27800			P
7440-36-0	Antimony	1.6	B	N J	P
7440-38-2	Arsenic	20.8			P
7440-39-3	Barium	601		N J	P
7440-41-7	Beryllium	4.0			P
7440-43-9	Cadmium	1.2	B		P
7440-70-2	Calcium	146000			P
7440-47-3	Chromium	75.5		*N J	P
7440-48-4	Cobalt	4.5	B		P
7440-50-8	Copper	137		N J	P
7439-89-6	Iron	119000			P
7439-92-1	Lead	96.5		*N J	P
7439-95-4	Magnesium	16300			P
7439-96-5	Manganese	5480		*	P
7439-97-6	Mercury	0.04			CV
7440-02-0	Nickel	38.5			P
7440-09-7	Potassium	2940			P
7782-49-2	Selenium	2.6		J S	F
7440-22-4	Silver	0.81	U		P
7440-23-5	Sodium	1560			P
7440-28-0	Thallium	0.33	U		F
7440-62-2	Vanadium	44.0			P
7440-66-6	Zinc	303		N J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

0090

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

TP-2 (14')

Contract: 9908000209

Lab Code: Case No.: SAS No.: SDG NO.: SB-07

Matrix (soil/water): SOIL/SED Lab Sample ID: 316632

Level (low/med): LOW Date Received: 08/20/99

% Solids: 82.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19300			P
7440-36-0	Antimony	1.2	B	NJ	P
7440-38-2	Arsenic	21.3			P
7440-39-3	Barium	342		NJ	P
7440-41-7	Beryllium	3.1			P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	100000			P
7440-47-3	Chromium	62.3		*NJ	P
7440-48-4	Cobalt	2.2	B		P
7440-50-8	Copper	126		NJ	P
7439-89-6	Iron	192000			P
7439-92-1	Lead	73.2		*NJ	P
7439-95-4	Magnesium	9880			P
7439-96-5	Manganese	4580		*	P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	35.3			P
7440-09-7	Potassium	1850			P
7782-49-2	Selenium	2.2		JS	F
7440-22-4	Silver	0.82	U		P
7440-23-5	Sodium	1000	B		P
7440-28-0	Thallium	0.32	U		F
7440-62-2	Vanadium	55.6			P
7440-66-6	Zinc	286		NJ	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

0091

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

FD081999A

Contract: 9908000209

Lab Code: Case No.: SAS No.: SDG NO.: SB-07

Matrix (soil/water): SOIL/SED Lab Sample ID: 316630

Level (low/med): LOW Date Received: 08/20/99

% Solids: 80.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	31200			P
7440-36-0	Antimony	0.69	B	N J	P
7440-38-2	Arsenic	15.8			P
7440-39-3	Barium	836		N J	P
7440-41-7	Beryllium	4.4			P
7440-43-9	Cadmium	1.1	B		P
7440-70-2	Calcium	169000			P
7440-47-3	Chromium	54.6		*N J	P
7440-48-4	Cobalt	4.4	B		P
7440-50-8	Copper	101		N J	P
7439-89-6	Iron	96100			P
7439-92-1	Lead	80.9		*N J	P
7439-95-4	Magnesium	13200			P
7439-96-5	Manganese	9940		*	P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	25.0			P
7440-09-7	Potassium	2490			P
7782-49-2	Selenium	3.4		J S	F
7440-22-4	Silver	0.81	U		P
7440-23-5	Sodium	1420			P
7440-28-0	Thallium	0.53	B	J W	F
7440-62-2	Vanadium	56.1			P
7440-66-6	Zinc	267		N J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

0089

COLUMBIA ANALYTICAL SERVICES

Reported: 09/29/99

Blasland Bouck & Lee, Inc.
Project Reference: ENVIROTEK
Client Sample ID : PIT5 (SB-03)

Date Sampled : 08/18/99
Date Received: 08/19/99
Order #: 316629
Submission #: 9908000209
Sample Matrix: SOIL/SEDIMENT

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	93.6	%	08/23/99	1.0
TOTAL CYANIDE	~~0.500~~	~~0.534 U~~	MG/KG	08/27/99	1.0

0100

COLUMBIA ANALYTICAL SERVICES

Reported: 09/29/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :TP-1 (14')

Date Sampled : 08/19/99
Date Received: 08/20/99
Order #: 316631
Submission #:9908000209
Sample Matrix: SOIL/SEDIMENT

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	81.5	%	08/23/99	1.0
TOTAL CYANIDE	0.500	7.47 J	MG/KG	08/27/99	1.0

0102

COLUMBIA ANALYTICAL SERVICES

Reported: 09/29/99

Blasland Bouck & Lee, Inc.
Project Reference: ENVIROTEK
Client Sample ID : TP-2 (14')

Date Sampled : 08/19/99
Date Received: 08/20/99
Order #: 316632
Submission #: 9908000209
Sample Matrix: SOIL/SEDIMENT

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	82.2	%	08/23/99	1.0
TOTAL CYANIDE	0.500	0.617 J	MG/KG	08/27/99	1.0

0103

COLUMBIA ANALYTICAL SERVICES

Reported: 09/29/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :FD081999A

Date Sampled : 08/19/99
Date Received: 08/20/99

Order #: 316630
Submission #:9908000209

Sample Matrix: SOIL/SEDIMENT

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	80.7	%	08/23/99	1.0
TOTAL CYANIDE	0.500	7.72 J	MG/KG	08/27/99	1.0

0101

Laboratory Narrative

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9908000209
SDG #sb-07 (4.0-6.0)

BBL soil samples were collected on 08/13-19/99 and received at CAS on 08/13-20/99 in good condition. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

INORGANIC ANALYSIS

Four soil samples were analyzed for TAL inorganics by 95ASP methodology.

Matrix Spike/Duplicate was performed on TP-2 (14') as requested. All Blank Spikes were within limits. All MS recoveries were within limits except Antimony, Barium, Chromium, Copper, Selenium, Zinc, Lead and Cyanide and have been flagged with an "N". All RPD's were within limits except Chromium, Lead, Cyanide and Manganese and have been flagged with an "*". The Post Digestion Spike for Thallium for FD081899 was outside control limits and the sample absorbance was less than 50% of the spike absorbance and has been flagged with a "W". Selenium was analyzed by the method of Standard Additions and has been flagged with an "S".

No other analytical or QC problems were encountered with these analyses.

VOLATILE ORGANICS

Ten soil samples were analyzed for the TCL volatiles by Method 95-1 by ASP methodology.

All Tuning criteria for BFB were met.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except SB-09 (6-8), FD081899 and TP-3. FD081899 and TP-3 were repeated and again the internal standards were outside limits and have been flagged with an "*". SB-09 (6-8) was analyzed at a dilution due to overrange compounds or matrix interferences and the internal standards were within QC limits.

All surrogate standard recoveries were within acceptance limits except on sample TP-3MSD and has been flagged with an "*".

Matrix Spike/Matrix Spike Duplicate was performed on TP-3 as requested. NYSASP requires a medium level MS/MSD when samples are analyzed at medium level so a second MS/MSD was performed on SB-08 (8-10). All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

The Laboratory Blanks associated with these samples were free of contamination except VBLK02 contained a small hit for Acetone and VBLK03 contained a small hit for Xylene. All affected data has been flagged with an "B".

All samples were analyzed within required holding times.

0001

Several samples were reanalyzed at higher dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with target analytes over the calibration range flagged with an "E".

No other analytical or QC problems were encoutered.

SEMIVOLATILE ORGANICS

Nine soil samples were analyzed for TCL Semi-Volatiles by 95-2 by ASP methodology.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except SB-07(6-8), SB-08(6-8), SB-08(8-10) and SB-09(4-6). The samples were repeated and again the internal standards were outside limits and have been flagged with an "*".

All surrogate standard recoveries were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on TP-2(14) as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

All samples were analyzed and extracted within required holding times.

The Laboratory blanks associated with these samples were free of contamination except SBLK1 which contained a small hit for Bis(2-Ethylhexyl)Phthalate. All affected samples have been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

10/7/99
Date

NYSDEC Sample Preparation and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
SB-07(4.0-6.0')	316621	X	X				
SB-07(6.0-8.0')	316622	X	X				
SB-08(6.0-8.0')	316623	X	X				
SB-08(8.0-10.0')	316624	X	X				
SB-09(4.0-6.0')	316625	X	X				
SB-09(6.0-8.0')	316626	X	X				
TP-3	316627	X					
FD081899	316628	X					
PIT5(SB-03)	316629					X	X
FD081999A	316630		X			X	X
TP-1(14')	316631	X	X			X	X
TP-2(14')	316632	X	X			X	X

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
316621	SOIL	08/13/99	08/13/99	LOW, MED	08/20,23/99
316622	SOIL	08/13/99	08/13/99	LOW, MED	08/20,23/99
316623	SOIL	08/13/99	08/13/99	LOW	08/20/99
316624	SOIL	08/13/99	08/13/99	LOW, MED	08/20,23/99
316625	SOIL	08/13/99	08/13/99	LOW, MED	08/20,23/99
316626	SOIL	08/13/99	08/13/99	LOW	08/20/99
316627	SOIL	08/18/99	08/19/99	LOW	08/25/99
316628	SOIL	08/18/99	08/19/99	LOW	08/20,25/99
316631	SOIL	08/19/99	08/20/99	LOW	08/25/99
316632	SOIL	08/19/99	08/20/99	LOW	08/20/99

NCF5 5/91

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
316621	SOIL	95-1			1.0
316622	SOIL	95-1			1.0
316623	SOIL	95-1			1.0
316624	SOIL	95-1			1.0
316625	SOIL	95-1			1.0
316626	SOIL	95-1			1.0
316627	SOIL	95-1			1.0
316628	SOIL	95-1			1.0
316631	SOIL	95-1			1.0
316632	SOIL	95-1			1.0

0006

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
B/N-A
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	DATE EXTRACTED	DATE ANALYZED
316621	SOIL	08/13/99	08/13/99	08/18/99	08/31/99
316622	SOIL	08/13/99	08/13/99	08/18/99	8/31,9/1/99
316623	SOIL	08/13/99	08/13/99	08/18/99	8/31,9/1/99
316624	SOIL	08/13/99	08/13/99	08/18/99	8/31,9/1/99
316625	SOIL	08/13/99	08/13/99	08/18/99	09/01/99
316626	SOIL	08/13/99	08/13/99	08/18/99	09/01/99
316630	SOIL	08/19/99	08/20/99	08/23/99	08/31/99
316631	SOIL	08/19/99	08/20/99	08/23/99	08/31/99
316632	SOIL	08/19/99	08/20/99	08/23/99	08/31/99

NCF4 9/89

0007

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
316621	SOIL	95-2			1.0
316622	SOIL	95-2			1.0
316623	SOIL	95-2			1.0
316624	SOIL	95-2			1.0
316625	SOIL	95-2			1.0
316626	SOIL	95-2			1.0
316630	SOIL	95-2			1.0
316631	SOIL	95-2			1.0
316632	SOIL	95-2			1.0

NCF2 9/89

0008

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
316629	SOIL	METALS	8/19/99	09/09,14,15/99
316630	SOIL	METALS	8/20/99	09/09,14,15/99
316631	SOIL	METALS	8/20/99	09/09,14,15/99
316632	SOIL	METALS	8/20/99	09/09,14,15/99

0809

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
316629	SOIL	SE	8/19/99	9/21/99
316630	SOIL	SE	8/20/99	9/21/99
316631	SOIL	SE	8/20/99	9/24/99
316632	SOIL	SE	8/20/99	9/22/99

0010

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
316629	SOIL	TL	8/19/99	9/15/99
316630	SOIL	TL	8/20/99	9/15/99
316631	SOIL	TL	8/20/99	9/15/99
316632	SOIL	TL	8/20/99	9/15/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
316629	SOIL	HG	8/19/99	9/1/99
316630	SOIL	HG	8/20/99	9/1/99
316631	SOIL	HG	8/20/99	9/1/99
316632	SOIL	HG	8/20/99	9/1/99

0012

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
316629	SOIL	CN	8/19/99	8/27/99
316630	SOIL	CN	8/20/99	8/27/99
316631	SOIL	CN	8/20/99	8/27/99
316632	SOIL	CN	8/20/99	8/27/99

0013

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
SB07(4-6)	8/13/99	1995	SB-07(4-6)	soil	yes	yes	--	--	
SB07(4-6)	8/13/99	1995	SB-07(6-8)	soil	yes	no	--	--	BNA - is, cal[3]
SB07(4-6)	8/13/99	1995	SB-08(6-8)	soil	yes	no	--	--	BNA - is, cal[3]
SB07(4-6)	8/13/99	1995	SB-08(8-10)	soil	yes	no	--	--	BNA - is, cal[3]
SB07(4-6)	8/13/99	1995	SB-09(4-6)	soil	yes	no	--	--	BNA - is, cal[3]
SB07(4-6)	8/13/99	1995	SB-09(6-8)	soil	no	no	--	--	VOA - is BNA - cal[3]
SB07(4-6)	8/18/99	1995	TP-3	soil	no	yes	--	--	VOA - is
SB07(4-6)	8/18/99	1995	FD081899	soil	no	--	--	--	VOA - is
SB07(4-6)	8/19/99	1995	PIT5 (SB-03)	soil	--	--	--	no	TAL - ms, dup[2]
SB07(4-6)	8/19/99	1995	FD081999	soil	--	yes	--	no	TAL - ms, dup[2], gfaa
SB07(4-6)	8/19/99	1995	TP-1(14)	soil	yes	yes	--	no	TAL - ms, dup[2]
SB07(4-6)	8/19/99	1995	TP-2(14)	soil	yes	yes	--	no	TAL - ms, dup[2]

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.
2 The non-compliance resulted in no qualification of data.
3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.

vlj2131

Appendix C-4

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SDG TP-1

DATA REVIEW FOR

ENVIROTEK II SITE

SDG# TP1

VOLATILE, SEMIVOLATILE
AND INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# TP1 for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
TP-1	317219	water	8/18/99	x	x		
TP-2	317220	water	8/18/99	x	x		
CPT-1	317221	water	8/18/99	x	x		
CPT-2	317222	water	8/18/99	x			
CPT-3[1]	317223	water	8/18/99	x			
TRIP BLANK 1	317224	water	--	x			
EB082099	318304	water	8/20/99	x	x		x
CTP-9[1]	318307	water	8/20/99	x	x		
CPT-10	318308	water	8/20/99	x	x		
FD082099	318309	water	8/20/99	x	x		
EB0820991	318310	water	8/20/99	x	x		x
TRIP BLANK 2	318311	water	--	x			

1 MS/MSD analysis performed on sample

VOLATILE ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP method 95-1.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for preserved waters 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Acetone was detected in the method, trip and equipment blanks. Based on blank content, data for acetone have been qualified as undetected in samples TP-1, TP-2, CPT-1, CPT-2, CPT-9, CPT-10 and FD082099.

In addition to the target compound listed above, several non-target compounds were detected in the blanks. When common to the blank and samples, their presence in the samples have been rejected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and all response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

All compounds were within 25%D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Recoveries for toluene were below control limits in both the matrix spike and matrix spike duplicate. However, since the concentration of toluene in the unspiked sample was more than five times that in the spike and since the final concentration was above the compound calibrated range, the recoveries are considered unreliable and, as such, no data have been qualified based on the results. All other matrix spike and matrix spike duplicate recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
CPT-10 / FD082099	carbon disulfide	4J	5J	22.2%
	1,1-dichloroethane	2J	2J	0.0%
	1,2-dichloroethene	8J	8J	0.0%
	1,2-dichloroethane	3J	3J	0.0%
	tetrachloroethene	6J	8J	28.6%

The duplicate results are acceptable.

11. General Comments

The temperature of the cooler for the samples collected on 8/20 was outside control limits (at 7.7°C) when received at the laboratory. No data have been qualified based on the deviation.

The pH of several samples were above 2 when analyzed by the laboratory. Since all samples were analyzed within the unpreserved sample holding times, the deviation has no impact on the reported data.

12. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
2 out of 10			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
1 out of 5			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?	X		
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Are the spectra and mass calibration acceptable?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		

	YES	NO	NA
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		

	YES	NO	NA
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
TP-1							
TP-2							
CPT-1							
CPT-2							
CPT-3							
CPT-3 MS							
CPT-3 MSD							
CPT-3 DL							
TRIP BLANK 1							
EB082099							
CPT-9							
CPT-10							
FD082099							
EB0820991							
TRIP BLANK 2							

Surrogates:
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
BCM Bromochloromethane
DFB 1,4-Difluorobenzene
CBZ Chlorobenzene-d5

Qualifiers:
D Diluted
: Recovery high
: Recovery low
.! Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

vlj2123

Volatile Calibration Outliers

Instrument: MS6
Matrix: water

Date/Time	8/13/99		8/23/99 1641		8/24/99 0858					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone										
2-hexanone										
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										
chlorobenzene										

Volatile Calibration Outliers - Page 2

Date/Time	8/13/99		8/23/99 1641		8/24/99 0858					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
ethylbenzene										
styrene										
xylene (total)										

Affected Samples					

vlj2123

Corrected Sample Analysis Data Sheets

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-1

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317221

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3907

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 4	~~JB~~ U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CPT-1

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317221

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3907

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-2

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317222

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3908

Level: (low/med) LOW Date Received: 08/18/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	17	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	1	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-2

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317222

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3908

Level: (low/med) LOW Date Received: 08/18/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	1.45	6	J
2.	78-78-4	BUTANE, 2-METHYL-	2.26	9	J
3.	109-66-0	PENTANE	2.54	7	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-3

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317223

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3909

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	1100 ~~1100~~	E D
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	24	
67-64-1	Acetone	27	B
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	6	J
75-34-3	1,1-Dichloroethane	250 ~~210~~	E D
540-59-0	1,2-Dichloroethene (total)	4400 ~~1500~~	E D
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	510 ~~420~~	E D
78-93-3	2-Butanone	41	
71-55-6	1,1,1-Trichloroethane	12	
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	86	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	46	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	190	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	350 ~~350~~	E D
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	2000 ~~720~~	E D
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	1800 ~~1800~~	E D

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-3

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317223

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3909

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-3DL

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317223DL

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3923

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 25.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	250	U
74-83-9	Bromomethane	250	U
75-01-4	Vinyl Chloride	1600	D
75-00-3	Chloroethane	250	U
75-09-2	Methylene Chloride	45	DJ
67-64-1	Acetone	86	DJ
75-15-0	Carbon Disulfide	250	U
75-35-4	1,1-Dichloroethene	250	U
75-34-3	1,1-Dichloroethane	250	D
540-59-0	1,2-Dichloroethene (total)	4400	D
67-66-3	Chloroform	250	U
107-06-2	1,2-Dichloroethane	520	D
78-93-3	2-Butanone	81	DJ
71-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	250	U
75-27-4	Bromodichloromethane	250	U
78-87-5	1,2-Dichloropropane	250	U
10061-01-5	cis-1,3-Dichloropropene	250	U
79-01-6	Trichloroethene	100	DJ
124-48-1	Dibromochloromethane	250	U
79-00-5	1,1,2-Trichloroethane	250	U
71-43-2	Benzene	250	U
10061-02-6	trans-1,3-Dichloropropene	250	U
75-25-2	Bromoform	250	U
108-10-1	4-Methyl-2-Pentonone	49	DJ
591-78-6	2-Hexanone	250	U
127-18-4	Tetrachloroethene	240	DJ
79-34-5	1,1,2,2-Tetrachloroethane	250	U
108-88-3	Toluene	590	D
108-90-7	Chlorobenzene	250	U
100-41-4	Ethylbenzene	2000	D
100-42-5	Styrene	250	U
1330-20-7	Xylene (Total)	6800	D

9/15/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-3DL

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317223DL

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3923

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 25.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-9

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318307

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3929

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	6	J
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	46	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	2	J
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	2	J
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-9

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318307

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3929

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-10

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318308

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3930

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~10~~ 4	~~U~~ J
75-15-0	Carbon Disulfide	4	J
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	3	J
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	6	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-10

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318308

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3930

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD082099

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318309

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3931

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	5	J
75-15-0	Carbon Disulfide	5	J
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	3	J
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	8	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD082099

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318309

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3931

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-1

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317219

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3905

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	12	
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 7 JB	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	22	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	2	J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	3	J
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP-1

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317219

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3905

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3906

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	12	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	2	J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	3	J
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TP-2

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3906

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/23/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 1

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317224

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3925

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK 1

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317224

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3925

Level: (low/med) LOW Date Received: 08/19/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB082099

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318304

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3932

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB082099

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318304

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3932

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKANE	14.38	7	J
2.		UNKNOWN ALKANE	15.32	8	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB0820991

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318310

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3933

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EB0820991

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318310

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3933

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 2

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318311

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3934

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 2

Lab Name: CAS-ROC Contract: 99-8-246

Lab Code: 10145 Case No.: SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318311

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q3934

Level: (low/med) LOW Date Received: 08/20/99

% Moisture: not dec. _____ Date Analyzed: 08/24/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	PENTANE	2.55	5	NJ
2.		UNKNOWN	11.13	32	J
3.		UNKNOWN	15.24	46	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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SEMIVOLATILE ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP method 95-2.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, and rinse blanks) are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

Di-n-butyl phthalate was detected in both the method and equipment blanks. Based on the blank content, data for di-n-butyl phthalate have been qualified as undetected in samples CPT-1, CPT-9, CPT-10, FD082099, TP-1, TP-2 and TP-2RE.

In addition to the target compound listed above, several non-target compounds were detected in the blanks. When common to the blank and samples, their presence in the samples have been rejected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The response for several compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All data for compounds with decreasing responses and all positive data for compounds with increasing responses have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was below control limits in samples CPT-1 and TP-2. Since recoveries for the remaining surrogates were within control limits, no data have been qualified based on the deviations. All other surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

The response for one internal standard was above established limits in samples TP-2 and TP-2RE. Since no positive data was reported for compounds quantitated under the noncompliant standards, the deviations resulted in no qualification of data. All other internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
CPT-10 / FD082099	bis(2-ethylhexyl)phthalate	1J	2J	66.7%

The duplicate results are acceptable.

11. General Comments

The temperature of the cooler for the samples collected on 8/20 was outside control limits (at 7.7°C) when received at the laboratory. No data have been qualified based on the deviation.

12. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Semi-Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 22			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method blanks have positive results?	X		

	YES	NO	NA
Do any field/rinse blanks have positive results?	X		
Are there field/rinse blanks associated with every sample?	X		
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		

	YES	NO	NA
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?	X		
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		

	YES	NO	NA
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every samples and blank within the upper and lower limits for each continuing calibration?		X	
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semi-Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*								Internal Standards*					
		NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	DCB	NPT	ANT	PHN	CRY	PRY
TP-1															
TP-2															
TP-2RE															
CPT-1															
CPT-2															
CPT-3															
EB082099															
CPT-9															
CPT-9 MS															
CPT-9 MSD															
CPT-10															
FB082099															
EB0820991															

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
DCB 1,2-Dichlorobenzene-d4
PHL Phenol-d6
2FP 2-Fluorophenol
TBP 2,4,6-Tribromophenol
2CP 2-Chlorophenol-d4

Internal Standards:
DCB 1,4-Dichlorobenzene-d4
NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12
PRY Perylene-d12

Qualifiers:
D Diluted
↓ Recovery low
↑ Recovery high
na not applicable

* Unless otherwise specified, all parameters are within acceptable limits.

Semivolatile Calibration Outliers

Instrument: HP5973-A

Date/Time	8/30/99		8/31/99 1350		9/1/99 1157					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'oxybis(1-Chloropropane)				-25.5		-30.4				
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene										
3-Nitroaniline										
Acenaphthene										
2,4-Dinitrophenol										

Semivolatile Calibration Outliers - Page 2

Date/Time	8/30/99		8/31/99 1350		9/1/99 1157					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
4-Nitrophenol										
Dibenzofuran										
2,4-Dinitrotoluene										
Diethylphthalate										
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Anthracene										
Carbazole										
Di-n-butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate										
Di-n-octylphthalate										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										

Affected Samples:					
		TP1	CPT1-		
		CPT1	FD082099		
		EB082099	EB0820991		
		CPT9	TP2		
		CPT9MS	TP2RE		
		CPT9MSD			

vlj2123

Corrected Sample Analysis Data Sheets

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317221

Sample wt/vol: 975 (g/ml) ML Lab File ID: AC523.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	5	J
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	3	J
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	26	U
51-28-5	2,4-Dinitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	26	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317221

Sample wt/vol: 975 (g/ml) ML Lab File ID: AC523.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	4	J
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10 4	JB U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
CPT-1

Lab Name: Columbia Analytical Services Contract: B&L

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317221

Sample wt/vol: 975 (g/ml) ML Lab File ID: AC523.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 21 (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000109-52-4	Pentanoic acid	4.53	8	JN
2.	000111-76-2	Ethanol, 2-butoxy-	4.78	6	JN
3.	000111-90-0	Ethanol, 2-(2-ethoxyethoxy)-	5.96	12	JN
4.	000104-76-7	1-Hexanol, 2-ethyl-	6.23	8	JN
5.	000111-14-8	Heptanoic acid	6.62	3	JN
6.	000065-85-0	Benzoic Acid	7.70	25	JN
~~7.~~	~~000112-34-5~~	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~7.93~~	~~5~~	~~JN~~
8.	000112-05-0	Nonanoic acid	8.71	160	JN
9.	000105-60-2	Caprolactam	8.97	2	JN
10.	000501-52-0	Benzenepropanoic acid	9.54	61	JN
11.		unknown	9.86	10	J
12.	074367-34-3	Propanoic acid, 2-methyl-, 3-hydr	10.02	7	JN
13.		unknown	11.00	3	J
14.	000143-07-7	Dodecanoic acid	11.72	2	JN
15.		unknown	12.29	3	J
16.		unknown	12.52	3	J
17.		unknown	17.11	13	J
18.		unknown	17.60	15	J
19.		unknown	18.76	14	J
20.		unknown	20.87	4	J
21.		unknown	21.97	2	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-9

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318307

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC525.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U,J
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	28	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	28	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	28	U
51-28-5	2,4-Dinitrophenol	28	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	28	U

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-9

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318307

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC525.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	28	U
534-52-1	4,6-Dinitro-2-methylphenol	28	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	28	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	2	JB
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
CPT-9

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318307

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC525.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000822-67-3	2-Cyclohexen-1-ol	4.56	3	JN
2.	000112-05-0	Nonanoic acid	8.59	11	JN
3.		unknown	21.20	3	J
4.		unknown	26.92	21	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-10

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318308

Sample wt/vol: 910 (g/ml) ML Lab File ID: AC535.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	27	U
51-28-5	2,4-Dinitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	27	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-10

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318308

Sample wt/vol: 910 (g/ml) ML Lab File ID: AC535.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	4,6-Dinitro-2-methylphenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	8	JB
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	1	J
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
CPT-10

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318308

Sample wt/vol: 910 (g/ml) ML Lab File ID: AC535.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000638-36-8	Hexadecane, 2,6,10,14-tetrameth	14.20	17	JN
2.	unknown	27.66	15	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EB082099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318304

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC524.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U UJ
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EB082099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318304

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC524.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	7	JB
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EB082099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318304

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC524.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000112-34-5	Ethanol, 2-(2-butoxyethoxy)-	7.91	4	JN

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EB0820991

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318310

Sample wt/vol: 930 (g/ml) ML Lab File ID: AC537.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	27	U
51-28-5	2,4-Dinitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	27	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EB0820991

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318310

Sample wt/vol: 930 (g/ml) ML Lab File ID: AC537.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	4,6-Dinitro-2-methylphenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	8	JB
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EB0820991

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318310

Sample wt/vol: 930 (g/ml) ML Lab File ID: AC537.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000112-34-5	Ethanol, 2-(2-butoxyethoxy)-	7.93	2	JN
2.	unknown	10.01	3	J
3.	unknown	19.02	3	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD082099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318309

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC536.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U J
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	28	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	28	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	28	U
51-28-5	2,4-Dinitrophenol	28	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	28	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD082099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318309

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC536.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	28	U
534-52-1	4,6-Dinitro-2-methylphenol	28	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	28	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	~~5~~ 11	JB
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FD082099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: _____ SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 318309

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC536.D

Level: (low/med) LOW Date Received: 8/20/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 8/24/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

Number TICs found: 5 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000629-92-5	Nonadecane	15.02	26	JN
2. 003892-00-0	Pentadecane, 2,6,10-trimethyl-	16.55	18	JN
3.	unknown	21.52	12	J
4.	unknown	21.73	13	J
5.	unknown	22.38	10	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317219

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC521.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317219

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC521.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	2	JB
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317219

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC521.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 8/31/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000585-34-2	Phenol, m-tert-butyl-	9.09	3	JN
2.	unknown	11.04	3	J
3.	unknown	11.16	2	J
4.	unknown	17.67	3	J
5.	unknown	17.96	4	J
6.	unknown	19.17	2	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC538.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC538.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10 3	JB
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
TP-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC538.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted: (Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 25 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000138-86-3	Limonene	6.31	12	JN
2.		unknown	19.81	11	J
3.		unknown	20.54	12	J
4.		unknown	21.65	17	J
5.		unknown	21.77	27	J
6.		unknown	21.93	17	J
7.		unknown	22.43	31	J
8.		unknown	22.80	37	J
9.		unknown	23.14	71	J
10.		unknown	23.56	67	J
11.		unknown	23.68	41	J
12.		unknown	24.12	17	J
13.		unknown	24.34	13	J
14.		unknown	24.39	73	J
15.		unknown	25.04	49	J
16.		unknown	25.29	12	J
17.		unknown	25.33	74	J
18.		unknown	26.52	30	J
19.		unknown	26.60	30	J
20.		unknown	26.98	13	J
21.		unknown	27.68	26	J
22.		unknown	27.76	150	J
23.		unknown	29.42	32	J
24.		unknown	30.33	12	J
25.		unknown	32.02	11	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-2RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220RE

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC544.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TP-2RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220RE

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC544.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: decanted:(Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	JB U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	1	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
TP-2RE

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-8-246 SAS No.: _____ SDG No.: TP1

Matrix: (soil/water) WATER Lab Sample ID: 317220RE

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC544.D

Level: (low/med) LOW Date Received: 8/19/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 8/19/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/1/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

Number TICs found: 27 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 00013**8**-86-3	Limonene	6.33	12	JN
2.	unknown	16.30	5	J
3.	unknown	16.44	8	J
4.	unknown	17.24	6	J
5.	unknown	17.74	5	J
6.	unknown	18.53	5	J
7.	unknown	19.37	4	J
8.	unknown	19.62	5	J
9.	unknown	20.04	25	J
10.	unknown	20.16	10	J
11.	unknown	20.28	10	J
12.	unknown	20.58	10	J
13.	unknown	20.97	5	J
14.	unknown	21.27	11	J
15.	unknown	21.42	5	J
16.	unknown	21.69	20	J
17.	unknown	21.81	29	J
18.	unknown	21.98	22	J
19.	unknown	22.49	30	J
20.	unknown	23.19	13	J
21.	unknown	23.36	9	J
22.	unknown	23.75	6	J
23.	unknown	24.45	8	J
24.	unknown	25.42	16	J
25.	unknown	26.61	5	J
26.	unknown	27.89	26	J
27.	unknown	29.56	9	J

INORGANIC ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP CLP-M methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

E The reported value is estimated due to the presence of interference.

M Duplicate injection precision not met.

N Spiked sample recovery not within control limits.

S Reported value was determined by the method of standard additions (MSA).

W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.

* Duplicate analysis not within control limits.

\+ Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days
Cyanide	12 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days
Cyanide	14 days

All samples were analyzed within specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRDL. Several compounds were, however, detected below the CRDL. Based on the similarity between blank and sample concentrations, data for all analytes except zinc should be considered highly suspect.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and the recoveries for all initial calibration verification standards were acceptable.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

No matrix spike analyses were performed on the samples in this data set.

4.2 Laboratory Duplicate

No laboratory duplicate results were provided in the data package.

5. Field Duplicate

No inorganic field duplicates were included in this data set.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

No serial dilution analysis was required on the samples in this data set.

8. Furnace QC

No furnace analyses were performed on the samples.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

11. General Comments

The temperature of the cooler for the samples collected on 8/20 was outside control limits (at 7.7°C) when received at the laboratory. No data have been qualified based on the deviation.

12. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?			X
Is the distillation log for mercury present?	X		
Is the distillation log for cyanides present?	X		
Are pH values listed?	X		
pH for metals analyses <2 (waters)?	X		
pH for cyanide analyses >12 (waters)?	X		
Percent solids calculation present for soils/sediments?			X
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA			X
Mercury	X		
Cyanides	X		
Is the data legible?	X		

	YES	NO	NA
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	X		
Were cyanide distillations performed within 14 days?	X		
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?			X
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Is a brief physical description of samples given on Form I's?	X		
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?			X
Cyanides?	X		
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
Is correlation coefficient greater than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?	X		
Atomic Absorption Analysis?			X
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		

	YES	NO	NA
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Cyanides (85-115%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?	X		
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?			X
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?	X		
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (60-120%)?	X		
Is mid-range standard within control limits for cyanide (80-120%)	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		

	YES	NO	NA
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each SDG?		X	
each matrix type?		X	
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?			X
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?			X
Aqueous			
Are any spike recoveries:			
less than 30%?			X
between 30-74%?			X
between 126-150%?			X
greater then 150%?			X
Soil/Sediment			
Are any spike recoveries:			
less than 10%?			X

	YES	NO	NA
between 10-74%?			X
between 126-200%?			X
greater than 200%?			X
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?		X	
each matrix type?		X	
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?			X
If no, are all results outside the control limits flagged with an * on Form I's and VI?			X
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?			X
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?			X
Field Duplicates			
Were field duplicates analyzed?		X	
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?			X

	YES	NO	NA
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?	____	____	X
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X	____	____
each batch samples digested/distilled?	X	____	____
Aqueous LCS			
Is any LCS recovery:			
less than 50%?	____	X	____
between 50% and 79%?	____	X	____
between 121% and 150%?	____	X	____
greater than 150%?	____	X	____
Solid LCS			
Is LCS "Found" value higher than the control limits on Form VII?	____	____	X
Is LCS "Found" lower than the control limits on Form VII?	____	____	X
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	____	X	____
each matrix type?	____	X	____
Was field blank(s) used for Serial Dilution Analysis?	____	X	____
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.	____	____	X
Are any required % difference values:			
> 10%?	____	____	X
≥100%?	____	____	X
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	____	____	X

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?			X
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?			X
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or "+"?		X	
Was MSA required for any sample but not performed?		X	
Is the coefficient of correlation for MSA less than 0.995 for any sample?			X
Is the coefficient of correlation for MSA less than 0.990 for any sample?			X
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
Was proper quantitation procedure followed?			X
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if greater than CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?	X		
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		

	YES	NO	NA
ICP Linear Ranges (quarterly)?	X		
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?			X
< 10%?			X

Corrected Sample Analysis Data Sheets

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

EB082099

Contract: 9908000246

Lab Code: Case No.: SAS No.: SDG NO.: TP1

Matrix (soil/water): WATER Lab Sample ID: 318304

Level (low/med): LOW Date Received: 08/20/99

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20.0	U		P
7440-36-0	Antimony	2.9	U		P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	6.2	U		P
7440-41-7	Beryllium	0.33	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	187	B		P
7440-47-3	Chromium	0.60	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	4.1	B		P
7439-89-6	Iron	36.6	B		P
7439-92-1	Lead	2.9	U		P
7439-95-4	Magnesium	39.7	B		P
7439-96-5	Manganese	0.57	B		P
7439-97-6	Mercury	0.05	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	857	U		P
7782-49-2	Selenium	4.2	U		P
7440-22-4	Silver	0.65	U		P
7440-23-5	Sodium	173	U		P
7440-28-0	Thallium	8.5	B		P
7440-62-2	Vanadium	1.5	U		P
7440-66-6	Zinc	9.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

0068

INORGANIC CLP

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

EB0820991

Contract: 9908000246

Lab Code: Case No.: SAS No.: SDG NO.: TP1

Matrix (soil/water): WATER Lab Sample ID: 318310

Level (low/med): LOW Date Received: 08/20/99

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20.0	U		P
7440-36-0	Antimony	2.9	U		P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	6.2	U		P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	138	B		P
7440-47-3	Chromium	1.2	B		P
7440-48-4	Cobalt	1.8	B		P
7440-50-8	Copper	4.5	B		P
7439-89-6	Iron	28.5	B		P
7439-92-1	Lead	2.9	U		P
7439-95-4	Magnesium	41.1	B		P
7439-96-5	Manganese	0.50	B		P
7439-97-6	Mercury	0.05	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	857	U		P
7782-49-2	Selenium	4.2	U		P
7440-22-4	Silver	0.65	U		P
7440-23-5	Sodium	173	U		P
7440-28-0	Thallium	7.4	B		P
7440-62-2	Vanadium	1.5	U		P
7440-66-6	Zinc	14.1	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

0069

COLUMBIA ANALYTICAL SERVICES

Reported: 09/21/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :EB082099

Date Sampled :08/20/99 Order #:318304 Sample Matrix:WATER
Date Received:08/20/99 Submission #:9908000246

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	08/27/99	1.00

0782

COLUMBIA ANALYTICAL SERVICES

Reported: 09/21/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :EB0820991

Date Sampled :08/20/99 Order #:318310 Sample Matrix:WATER
Date Received:08/20/99 Submission #:9908000246

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	08/27/99	1.00

0783

Laboratory Narrative

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9908000246
SDG #TP1

BBL water samples were collected on 08/18-20/99 and received at CAS on 08/19-20/99 in good condition. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

INORGANIC ANALYSIS

Two water samples were analyzed for TAL inorganics by 95ASP methodology.

Site specific QC was not requested for these samples. All Blank Spikes were within limits.

No other analytical or QC problems were encountered with these analyses.

VOLATILE ORGANICS

Ten water samples and two trip blanks were analyzed for the TCL volatiles by Method 95-1 by ASP methodology.

All Tuning criteria for BFB were met.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within acceptance limits.

Matrix Spike/Matrix Spike Duplicate was performed on CPT-3 as requested. All MS/MSD's were within limits except Toluene and has been flagged with an "*". All Blank Spike recoveries were within limits. All RPD's were within limits except Trichloroethene and Toluene and have been flagged with an "*".

CPT-3 was originally analyzed at a 1:1 dilution, however several compounds were outside the calibration range of the instrument and have been flagged with an "E" and the sample was repeated at a dilution.

The Laboratory Blanks associated with these samples were free of contamination except VBLK01 which contained a small hit for Acetone. All affected data has been flagged with an "B".

All samples were analyzed within required holding times.

No other analytical or QC problems were encoutered.

0001

SEMIVOLATILE ORGANICS

Five water samples were analyzed for TCL Semi-Volatiles by 95-2 by ASP methodology.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except IS6 for TP-2. The sample was repeated and again the internal standard was outside limits and has been flagged with an "*".

All surrogate standard recoveries were within limits except Terphenyl-d14 for CPT-1 and TP-2 and has been flagged with an "*".

Matrix Spike/Matrix Spike Duplicate was performed on CPT-9 as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

All samples were analyzed and extracted within required holding times.

The Laboratory blanks associated with these samples were free of contamination except SBLK1 and SBLK2 which contained a small hit for Di-n-Butylphthalate All affected samples have been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

9/30/99
Date

NYSDEC Sample Preparation and Analysis Summary Sheets

CAS ASP/CLP BATCHING FORM

SDG #: TP1 | BATCH COMPLETE: ____Y_____ | DATE REVISED:
SUBMISSIO 9908000246 | DISKETTE REQUESTED: Y___ N__X__ | DATE DUE: 9/17
CLIENT: Blasland Bouck & Lee, Inc. | DATE: 8/24/99 | PROTOCOL 95ASP
CLIENT REP: Janice Jaeger
PROJECT: ENVIROTEK

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLE	DATE RECEIVE	pH (SOLIDS)	% SOLIDS
317219	TP-1	WATER	95-1,95-2	8/18/99	8/19/99		
317220	TP-2	WATER	95-1,95-2	8/18/99	8/19/99		
317221	CPT-1	WATER	95-1,95-2	8/18/99	8/19/99		
317222	CPT-2	WATER	95-1	8/18/99	8/19/99		
317223QC	CPT-3	WATER	95-1	8/18/99	8/19/99		
317224	TRIP BLANK	WATER	95-1	8/18/99	8/19/99		
317225	COOLER BLANK	WATER	95-1	8/18/99	8/19/99		
318304	EB082099	WATER	95-1,95-2,TAL MET,TCN	8/20/99	8/20/99		
318307QC	CPT-9	WATER	95-1,95-2	8/20/99	8/20/99		
318308	CPT-10	WATER	95-1,95-2	8/20/99	8/20/99		
318309	FD082099	WATER	95-1,95-2	8/20/99	8/20/99		
318310	EB0820991	WATER	95-1,95-2,TAL MET,TCN	8/20/99	8/20/99		
318311	TRIP BLANK	WATER	95-1	8/20/99	8/20/99		
			318307 QC FOR 95-2 ONLY				

0003

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
TP-1	317219	X	X				
TP-2	317220	X	X				
CPT-1	317221	X	X				
CPT-2	317222	X					
CPT-3	317223	X					
TRIP BLANK	317224	X					
EB082099	318304	X	X			X	X
CPT-9	318307	X	X				
CPT-10	318308	X	X				
FB082099	318309	X	X				
EB0820991	318310	X	X			X	X
TRIP BLANK	318311	X					

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
317219	WATER	08/18/99	08/19/99	LOW	08/23/99
317220	WATER	08/18/99	08/19/99	LOW	08/23/99
317221	WATER	08/18/99	08/19/99	LOW	08/23/99
317222	WATER	08/18/99	08/19/99	LOW	08/23/99
317223	WATER	08/18/99	08/19/99	LOW	08/23, 24/99
317224	WATER	08/18/99	08/19/99	LOW	08/24/99
318304	WATER	08/20/99	08/20/99	LOW	08/24/99
318307	WATER	08/20/99	08/20/99	LOW	08/24/99
318308	WATER	08/20/99	08/20/99	LOW	08/24/99
318309	WATER	08/20/99	08/20/99	LOW	08/24/99
318310	WATER	08/20/99	08/20/99	LOW	08/24/99
318311	WATER	08/20/99	08/20/99	LOW	08/24/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
317219	WATER	95-1			1.0
317220	WATER	95-1			1.0
317221	WATER	95-1			1.0
317222	WATER	95-1			1.0
317223	WATER	95-1			1.0, 25
317224	WATER	95-1			1.0
318304	WATER	95-1			1.0
318307	WATER	95-1			1.0
318308	WATER	95-1			1.0
318309	WATER	95-1			1.0
318310	WATER	95-1			1.0
318311	WATER	95-1			1.0

NCF2 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
B/N-A
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	DATE EXTRACTED	DATE ANALYZED
317219	WATER	08/18/99	08/19/99	08/19/99	08/31/99
317220	WATER	08/18/99	08/19/99	08/19/99	09/01/99
317221	WATER	08/18/99	08/19/99	08/19/99	08/31/99
318304	WATER	08/20/99	08/20/99	08/24/99	08/31/99
318307	WATER	08/20/99	08/20/99	08/24/99	08/31/99
318308	WATER	08/20/99	08/20/99	08/24/99	09/01/99
318309	WATER	08/20/99	08/20/99	08/24/99	09/01/99
318310	WATER	08/20/99	08/20/99	08/24/99	09/01/99

NCF4 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
317219	WATER	95-2			1.0
317220	WATER	95-2			1.0
317221	WATER	95-2			1.0
318304	WATER	95-2			1.0
318307	WATER	95-2			1.0
318308	WATER	95-2			1.0
318309	WATER	95-2			1.0
318310	WATER	95-2			1.0

NCF2 9/89

0008

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
318304	WATER	METALS	8/20/99	09/08,13,17/99
318310	WATER	METALS	8/20/99	09/08,13,17/99

0009

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
318304	WATER	HG	8/20/99	8/31/99
318310	WATER	HG	8/20/99	8/31/99

0010

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
318304	WATER	CN	8/20/99	8/27/99
318310	WATER	CN	8/20/99	8/27/99

0011

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

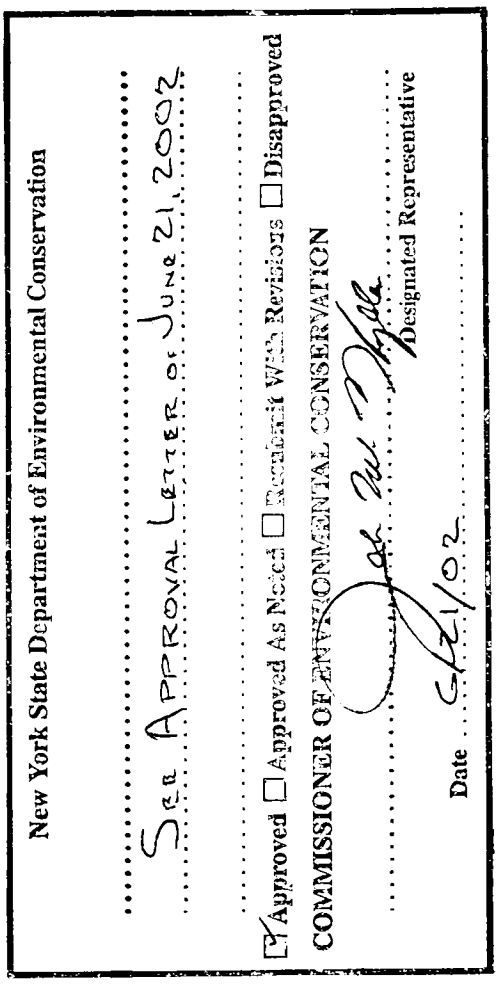
Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
TP1	8/19/99	1995	TP-1	water	no	no	--	--	VOA - ms[2] BNA - cal[3]
TP1	8/19/99	1995	TP-2	water	no	no	--	--	VOA - ms[2] BNA - cal[3], surr[2], is[2]
TP1	8/19/99	1995	CPT-1	water	no	no	--	--	VOA - ms[2] BNA - cal[3], surr[2]
TP1	8/19/99	1995	CPT-2	water	no	--	--	--	VOA - ms[2]
TP1	8/19/99	1995	CPT-3	water	no	--	--	--	VOA - ms[2]
TP1	--	1995	TRIP BLANK 1	water	yes	--	--	--	
TP1	8/20/99	1995	EB082099	water	yes	no	--	yes	BNA - cal[3]
TP1	8/20/99	1995	CPT-9	water	no	no	--	--	VOA - ms[2] BNA - cal[3]
TP1	8/20/99	1995	CPT-10	water	no	no	--	--	VOA - ms[2] BNA - cal[3]
TP1	8/20/99	1995	FD082099	water	no	no	--	--	VOA - ms[2] BNA - cal[3]
TP1	8/20/99	1995	EB082091	water	yes	no	--	--	BNA - cal[3]
TP1	--	1995	TRIP BLANK 2	water	yes	--	--	yes	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.
2 The non-compliance resulted in no qualification of data.
3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.

Entered

REPORT

Remedial Investigation Report
Envirotek II Site



Volume IIB of III
Appendices C5 through C7

Technical Committee
Participating Potentially
Responsible Parties

Tonawanda, New York

August 2001
Revised May 2002

Appendix C-5

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SDG SS-102

DATA REVIEW FOR

ENVIROTEK II SITE

SDG# SS102

VOLATILE, SEMIVOLATILE
AND INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# SS102 for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
SS-102	323324	soil	9/10/99	x	x		x
SS-103[1]	323325	soil	9/10/99	x	x		x
SS-104	323326	soil	9/10/99	x	x		x
SS-105	323327	soil	9/10/99	x	x		x
FD091099	323328	soil	9/10/99	x	x		x

1 MS/MSD/DUP analysis performed on sample

VOLATILE ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for soils 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blank.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and all response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The responses for several compounds in the continuing calibration standard were outside 25% difference (%D) of the initial calibration, as summarized

on the attached calibration summary sheets. All associated positive data for the compounds have been qualified as estimated based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was above control limits in samples FD091099 and FD091099RE. All positive data for the samples have been qualified as estimated based on the recovery. All remaining surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

The response for one or more internal standards were below established limits in samples SS-103, SS-103MS, SS-104, SS-104RE, SS-105, SS-105RE, FD091099 and FD091099TR. Data for all compounds quantitated under the noncompliant standards have been qualified as estimated based on the deviations. All other internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SS-102 / FD091099	methylene chloride	2J	2J	0.0%

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?	X		
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 10			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 5			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?		X	
Are there trip/field/rinse blanks associated with every sample?		X	
Do any trip/field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Are the spectra and mass calibration acceptable?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		

	YES	NO	NA
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		

	YES	NO	NA
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?		X	
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
SS-102							
SS-103							.
SS-103MS							.
SS-103MSD							
SS-104							.
S-104RE							.
SS-105							:
SS-105RE						.	.
FD091099		.				.	.
FD091099RE		:				.	.

Surrogates:
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
BCM Bromochloromethane
DFB 1,4-Difluorobenzene
CBZ Chlorobenzene-d5

Qualifiers:
D Diluted
: Recovery high
! Recovery low
.. Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: MS6
Matrix: soil (low)

Date/Time	9/15/99		9/16/99 0946							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone				35.8						
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone				40.2						
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone				28.5						
2-hexanone				43.9						
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										
chlorobenzene										

Volatile Calibration Outliers - Page 2

Date/Time	9/15/99		9/16/99 0946							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
ethylbenzene										
styrene										
xylene (total)										

Affected Samples	
	ss102
	ss103
	ss104
	fd091099
	ss105
	ss103ms
	ss103md
	ss104re
	ss105re
	fd091099re

Corrected Sample Analysis Data Sheets

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS102

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323324

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4328

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 15 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SS102

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323324

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4328

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 15 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS103

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323325

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4329

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 11 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentonone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SS103

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323325

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4329

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 11 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS104

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4330

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 19 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SS104

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4330

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 19 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS104RE

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4335

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 19 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SS104RE

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4335

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 19 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS105

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4332

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 17 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	6	J
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	100	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SS105

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4332

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 17 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS105RE

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4336

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 17 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	140	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SS105RE

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4336

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 17 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD091099

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4331

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 14 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD091099

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4331

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 14 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD091099RE

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4337

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 14 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentonone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD091099RE

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Q4337

Level: (low/med) LOW Date Received: 09/10/99

% Moisture: not dec. 14 Date Analyzed: 09/16/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	71-23-8	1-PROPANOL	4.99	6	NJ
2.					
3.					
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SEMIVOLATILE ANALYSES

Introduction

Analyses were performed according to EPA SW-846 Method 8270 as referenced in the NYSDEC-ASP.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, and rinse blanks) are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

Bis(2-ethylhexyl)phthalate were detected in the method blank. Based on the blank content, data for bis(2-ethylhexyl)phthalate data in samples SS-103, SS-104 and FD091099 have been qualified as undetected.

In addition to the listed target compound, several non-target compounds were detected in the method blanks. When common to the blanks and samples, their presence in the samples have been rejected.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The response for one compound in the continuing calibration standards was outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All associated data for this compound have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SS-102 / FD091099	2-methylnaphthalene	ND	43J	NA
	acenaphthylene	52J	51J	1.9%
	dimethyl phthalate	ND	130J	NA
	phenanthrene	190J	150J	23.5%
	anthracene	71J	64J	10.4%
	fluoranthene	460	330J	32.9%
	pyrene	460	360J	24.4%
	benzo(a)anthracene	280J	270J	3.6%
	chrysene	380J	330J	14.1%
	bis(2-ethylhexyl)phthalate	1100B	390U	NA
	benzo(b)fluoranthene	260J	250J	3.9%
	benzo(k)fluoranthene	290J	280J	3.5%
	benzo(a)pyrene	110J	290J	90.0%
	indeno(1,2,3-cd)pyrene	310J	310J	0.0%
	benzo(g,h,i)perylene	410	410	0.0%

ND Not detected.
NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Semi-Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits? 0 out of 22			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method blanks have positive results?	X		

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Are there field/rinse blanks associated with every sample?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		

	YES	NO	NA
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		

	YES	NO	NA
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every samples and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semi-Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*								Internal Standards*					
		NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	DCB	NPT	ANT	PHN	CRY	PRY
SS-102															
SS-103															
SS-103MS															
SS-103MSD															
SS-104															
SS-105															
FD091099															

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
DCB 1,2-Dichlorobenzene-d4
PHL Phenol-d6
2FP 2-Fluorophenol
TBP 2,4,6-Tribromophenol
2CP 2-Chlorophenol-d4

Internal Standards:
DCB 1,4-Dichlorobenzene-d4
NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12
PRY Perylene-d12

Qualifiers:
D Diluted
l Recovery low
h Recovery high
na not applicable

* Unless otherwise specified, all parameters are within acceptable limits.

vlj2132

Semivolatile Calibration Outliers

Instrument: HP5973-A

Date/Time	9/23/99		9/27/99 1437		9/28/99 1223					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'oxybis(1-Chloropropane)										
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene										
3-Nitroaniline										
Acenaphthene										
2,4-Dinitrophenol										

Semivolatile Calibration Outliers - Page 2

Date/Time	9/23/99		9/27/99 1437		9/28/99 1223					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
4-Nitrophenol										
Dibenzofuran										
2,4-Dinitrotoluene										
Diethylphthalate										
4-Nitroaniline										
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Anthracene										
Carbazole										
Di-n-butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate										
Di-n-octylphthalate				-28.0						
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										

Affected Samples:			
	ss102		
	ss103		
	ss103ms		
	ss103md		
	fd091099		

Corrected Sample Analysis Data Sheets

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS102

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323324

Sample wt/vol: 30 (g/ml) G Lab File ID: AC764.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 15 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(-2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
95-48-7	2-Methylphenol	390	U
621-24-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(-2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	980	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	980	U
208-96-8	Acenaphthylene	52	J
131-11-3	Dimethyl Phthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
83-32-9	Acenaphthene	390	U
99-09-2	3-Nitroaniline	980	U
51-28-5	2,4-Dinitrophenol	980	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	980	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS102

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323324

Sample wt/vol: 30 (g/ml) G Lab File ID: AC764.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 15 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	980	U
534-52-1	4,6-Dinitro-2-methylphenol	980	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	190	J
120-12-7	Anthracene	71	J
86-74-8	Carbazole	390	U
84-74-2	Di-n-Butylphthalate	390	U
206-44-0	Fluoranthene	460	
129-00-0	Pyrene	460	
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	280	J
218-01-9	Chrysene	380	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	1100	B
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)Fluoranthene	290	J
50-32-8	Benzo(a)Pyrene	110	J
193-39-5	Indeno(1,2,3-cd)Pyrene	310	J
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	410	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SS102

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323324

Sample wt/vol: 30 (g/ml) G Lab File ID: AC764.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 15 decanted: (Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2

CONCENTRATION UNITS:

Number TICs found: 7 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.52	110	J
~~2.~~	~~unknown~~	~~5.32~~	~~1100~~	~~JAB~~
3. 000629-92-5	Nonadecane	13.60	97	JN
4.	unknown	19.16	100	J
5.	unknown	24.57	83	J
6. 000192-97-2	Benzo[e]pyrene	25.20	450	JN
7.	unknown	28.91	120	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS103

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323325

Sample wt/vol: 30 (g/ml) G Lab File ID: AC765.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(-2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
95-48-7	2-Methylphenol	370	U
621-24-7	N-Nitroso-Di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
106-44-5	4-Methylphenol	38	J
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(-2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	43	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	76	J
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	940	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl Phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	940	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS103

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323325

Sample wt/vol: 30 (g/ml) G Lab File ID: AC765.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 11 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
84-66-2	Diethylphthalate	370	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	94	J
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	60	J
129-00-0	Pyrene	66	J
85-68-7	Butyl benzyl phthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	370	U
56-55-3	Benzo(a)Anthracene	53	J
218-01-9	Chrysene	77	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	370 ~~72~~	~~JB~~
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
193-39-5	Indeno(1,2,3-cd)Pyrene	85	J
53-70-3	Dibenz(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	120	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SS103

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323325

Sample wt/vol: 30 (g/ml) G Lab File ID: AC765.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.6

CONCENTRATION UNITS:

Number TICs found: 20 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.51	92	J
2.	~~unknown~~	~~5.32~~	~~930~~	~~JAB~~
3. 000095-49-8	Benzene, 1-chloro-2-methyl-	5.86	320	JN
4.	unknown	8.42	80	J
5. 000582-16-1	Naphthalene, 2,7-dimethyl-	11.06	92	JN
6.	unknown	11.37	81	J
7.	unknown	16.37	76	J
8.	unknown	16.57	77	J
9.	unknown	18.81	150	J
10.	unknown	20.09	110	J
11.	unknown	22.09	120	J
12.	unknown	22.18	170	J
13.	unknown	22.57	110	J
14.	unknown	22.66	92	J
15.	unknown	23.24	370	J
16.	unknown	23.41	95	J
17.	unknown	23.52	120	J
18.	unknown	23.75	210	J
19.	unknown	25.18	130	J
20.	unknown	27.67	85	J

12

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS104

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326

Sample wt/vol: 30 (g/ml) G Lab File ID: AC784.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 19.2 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(-2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
95-48-7	2-Methylphenol	410	U
621-24-7	N-Nitroso-Di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(-2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	620	
131-11-3	Dimethyl Phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS104

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326

Sample wt/vol: 30 (g/ml) G Lab File ID: AC784.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 19.2 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
84-66-2	Diethylphthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	730	
120-12-7	Anthracene	800	
86-74-8	Carbazole	130	J
84-74-2	Di-n-Butylphthalate	92	J
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	2600	
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	1500	
218-01-9	Chrysene	1800	
117-81-7	Bis(2-Ethylhexyl)Phthalate	410 ~~81~~	~~JB~~
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo(b)fluoranthene	1600	
207-08-9	Benzo(k)Fluoranthene	1600	
50-32-8	Benzo(a)Pyrene	1600	
193-39-5	Indeno(1,2,3-cd)Pyrene	2200	
53-70-3	Dibenz(a,h)anthracene	790	
191-24-2	Benzo(g,h,i)Perylene	2500	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SS104

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323326

Sample wt/vol: 30 (g/ml) G Lab File ID: AC784.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 19.2 decanted: (Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~unknown~~	~~5.32~~	~~1200~~	~~JAS~~
2.	000613-12-7	Anthracene, 2-methyl-	16.30	230	JN
3.	000610-48-0	Anthracene, 1-methyl-	16.58	260	JN
4.	000084-65-1	9,10-Anthracenedione	17.04	180	JN
5.	003674-66-6	Phenanthrene, 2,5-dimethyl-	17.54	320	JN
6.	005737-13-3	Cyclopenta(def)phenanthrenone	17.80	290	JN
7.		unknown	18.14	320	J
8.		unknown	18.91	190	J
9.	002381-21-7	Pyrene, 1-methyl-	19.16	240	JN
10.	003442-78-2	Pyrene, 2-methyl-	19.64	170	JN
11.	000082-05-3	7H-Benz[de]anthracen-7-one	20.33	290	JN
12.		unknown	20.58	270	J
13.		unknown	20.73	170	J
14.	000082-05-3	7H-Benz[de]anthracen-7-one	20.79	220	JN
15.		unknown	21.60	240	J
16.	003351-31-3	Chrysene, 3-methyl-	22.20	220	JN
17.		unknown	22.32	190	J
18.		unknown	23.75	530	J
19.		unknown	24.02	530	J
20.	000192-97-2	Benzo[e]pyrene	24.60	980	JN
21.		unknown	24.87	270	J
22.	000198-55-0	Perylene	25.23	2100	JN
23.		unknown	25.71	460	J
24.		unknown	28.31	250	J
25.		unknown	28.93	680	J
26.		unknown	29.64	250	J
27.		unknown	29.93	590	J
28.		unknown	30.88	770	J
29.		unknown	31.11	410	J
30.		unknown	32.61	220	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS105

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327

Sample wt/vol: 30 (g/ml) G Lab File ID: AC785.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 14.4 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(-2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
95-48-7	2-Methylphenol	390	U
621-24-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(-2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	970	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	970	U
208-96-8	Acenaphthylene	120	J
131-11-3	Dimethyl Phthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
83-32-9	Acenaphthene	390	U
99-09-2	3-Nitroaniline	970	U
51-28-5	2,4-Dinitrophenol	970	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	970	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SS105

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327

Sample wt/vol: 30 (g/ml) G Lab File ID: AC785.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 14.4 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	970	U
534-52-1	4,6-Dinitro-2-methylphenol	970	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	970	U
85-01-8	Phenanthrene	270	J
120-12-7	Anthracene	240	J
86-74-8	Carbazole	51	J
84-74-2	Di-n-Butylphthalate	74	J
206-44-0	Fluoranthene	540	
129-00-0	Pyrene	500	
85-68-7	Butyl benzyl phthalate	140	J
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	350	J
218-01-9	Chrysene	420	
117-81-7	Bis(2-Ethylhexyl)Phthalate	1700	B
117-84-0	Di-n-octyl phthalate	43	J
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)Fluoranthene	330	J
50-32-8	Benzo(a)Pyrene	350	J
193-39-5	Indeno(1,2,3-cd)Pyrene	430	
53-70-3	Dibenz(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)Perylene	550	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SS105

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323327

Sample wt/vol: 30 (g/ml) G Lab File ID: AC785.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 14.4 decanted: (Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.51	140	J
2.	unknown	5.32	930	JAB
3.	unknown	6.21	99	J
4.	unknown	8.42	81	J
5.	unknown	11.38	96	J
6.	unknown acid	16.09	100	J
7.	unknown	16.30	100	J
8.	unknown	18.82	94	J
9.	unknown	20.35	79	J
10.	unknown	23.57	1500	J
11.	unknown	23.75	270	J
12.	unknown	24.02	140	J
13.	unknown	24.62	510	J
14.	000198-55-0 Perylene	25.24	1400	JN
15.	unknown	26.44	86	J
16.	unknown	26.70	120	J
17.	unknown	26.78	730	J
18.	unknown	27.26	88	J
19.	unknown	27.33	98	J
20.	unknown	28.15	140	J
21.	unknown	28.94	310	J
22.	unknown	31.21	200	J
23.	unknown	32.69	93	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD091099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328

Sample wt/vol: 30 (g/ml) G Lab File ID: AC768.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 14.4 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(-2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
95-48-7	2-Methylphenol	390	U
621-24-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
106-44-5	4-Methylphenol	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(-2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	43	J
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	970	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	970	U
208-96-8	Acenaphthylene	51	J
131-11-3	Dimethyl Phthalate	130	J
606-20-2	2,6-Dinitrotoluene	390	U
83-32-9	Acenaphthene	390	U
99-09-2	3-Nitroaniline	970	U
51-28-5	2,4-Dinitrophenol	970	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
100-02-7	4-Nitrophenol	970	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD091099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328

Sample wt/vol: 30 (g/ml) G Lab File ID: AC768.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 14.4 decanted:(Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
86-73-7	Fluorene	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
84-66-2	Diethylphthalate	390	U
100-01-6	4-Nitroaniline	970	U
534-52-1	4,6-Dinitro-2-methylphenol	970	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	970	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	64	J
86-74-8	Carbazole	390	U
84-74-2	Di-n-Butylphthalate	390	U
206-44-0	Fluoranthene	330	J
129-00-0	Pyrene	360	J
85-68-7	Butyl benzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)Anthracene	270	J
218-01-9	Chrysene	330	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	~~140~~ 350	~~JB~~ U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)Fluoranthene	280	J
50-32-8	Benzo(a)Pyrene	290	J
193-39-5	Indeno(1,2,3-cd)Pyrene	310	J
53-70-3	Dibenz(a,h)anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	410	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FD091099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-124 SAS No.: SDG No.: SS102

Matrix: (soil/water) SOIL Lab Sample ID: 323328

Sample wt/vol: 30 (g/ml) G Lab File ID: AC768.D

Level: (low/med) LOW Date Received: 9/10/99

% Moisture: 14.4 decanted: (Y/N) N Date Extracted: 9/13/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 9/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.52	120	J
2.	~~unknown~~	~~4.82~~	~~82~~	~~JA~~
3.	~~unknown~~	~~5.33~~	~~1100~~	~~JAB~~
4.	unknown	8.42	82	J
5.	unknown	16.38	110	J
6.	unknown	24.57	130	J
7. 000192-97-2	Benzo[e]pyrene	25.20	440	JN

INORGANIC ANALYSES

Introduction

Analyses were performed according to USEPA SW-846 methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- M Duplicate injection precision not met.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the method of standard additions (MSA).
- W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- * Duplicate analysis not within control limits.
- + Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days
Cyanide	12 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days
Cyanide	14 days

All samples were analyzed within specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRDL. Several analytes were, however, detected below the CRDL. Based on the similarity between the sample and blank, the presence of antimony in sample SS-102 should be considered highly suspect.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and the recoveries for all initial calibration verification standards were acceptable.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits, with the following exception:

CRA	Lead	155.0%

No data fell in the affected range; therefore, no data qualification was necessary.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

All matrix spike recoveries were within control limits, with the following exceptions:

Antimony	34.8%
Copper	160.7%
Selenium	53.0%
Zinc	172.3%
Cyanide	42.5%

Based on the matrix spike recoveries, all data for antimony, copper, selenium, zinc and cyanide have been qualified as estimated.

4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits, with the following exceptions:

Iron	20.4%
Selenium	>CRDL

No data have been qualified based on the duplicate results.

5. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SS-102 / FD091099	aluminum	19100	26500	29.1%
	antimony	1.0B	0.65U	<CRDL
	arsenic	4.9	9.6	64.8%
	barium	13.9	176	23.5%
	beryllium	1.2	2.4	66.7%
	cadmium	1.2	1.9	45.2%
	calcium	85800	5290	47.4%
	chromium	40.8	61.5	40.5%
	cobalt	2.1B	3.3B	<CRDL
	copper	122	206	51.2%
	iron	29000	36000	21.5%
	lead	148	139	6.3%
	magnesium	35300	7570	129.4%
	manganese	1130	7850	48.3%
	mercury	0.06	0.08	28.6%
	nickel	20.5	30.7	39.8%
	potassium	1200	841B	<CRDL
	selenium	1.8	1.4	25.0%
	sodium	392B	297B	<CRDL
	vanadium	19.1	28.4	39.2%
	zinc	152	202	28.2%

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

All required serial dilution results were acceptable.

8. Furnace QC

The relative percent differences between multiple injections were acceptable. The analytical spike recovery for thallium was, however, outside control limits in sample FD091099. Since the recovery was above control limits and since no thallium was detected in the sample, no data have been qualified based on the deviation.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?	X		
Is the distillation log for mercury present?	X		
Is the distillation log for cyanides present?	X		
Are pH values listed?			X
pH for metals analyses <2 (waters)?			X
pH for cyanide analyses >12 (waters)?			X
Percent solids calculation present for soils/sediments?	X		
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA	X		
Mercury	X		
Cyanides	X		
Is the data legible?	X		

	YES	NO	NA
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	X		
Were cyanide distillations performed within 14 days?	X		
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?			X
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Is a brief physical description of samples given on Form I's?	X		
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?	X		
Cyanides?	X		
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
Is correlation coefficient greater than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?	X		
Atomic Absorption Analysis?			X
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		

	YES	NO	NA
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Cyanides (85-115%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?	X		
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	X		
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?	X		
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (60-120%)?		X	
Is mid-range standard within control limits for cyanide (80-120%)	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		

	YES	NO	NA
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	X		
Aqueous			
Are any spike recoveries:			
less than 30%?			X
between 30-74%?			X
between 126-150%?			X
greater then 150%?			X
Soil/Sediment			
Are any spike recoveries:			
less than 10%?		X	

	YES	NO	NA
between 10-74%?	X		
between 126-200%?	X		
greater than 200%?		X	
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?		X	
If no, are all results outside the control limits flagged with an * on Form I's and VI?	X		
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?		X	
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?		X	
Field Duplicates			
Were field duplicates analyzed?	X		
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?			X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?			X
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?		X	

	YES	NO	NA
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?		X	
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	X		
Aqueous LCS			
Is any LCS recovery:			
less than 50%?			X
between 50% and 79%?			X
between 121% and 150%?			X
greater than 150%?			X
Solid LCS			
Is LCS "Found" value higher than the control limits on Form VII?		X	
Is LCS "Found" lower than the control limits on Form VII?		X	
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	X		
each matrix type?	X		
Was field blank(s) used for Serial Dilution Analysis?		X	
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.			X
Are any required % difference values:			
> 10%?		X	
≥100%?		X	
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	X		

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?	X		
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?	X		
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or "+"?		X	
Was MSA required for any sample but not performed?		X	
Is the coefficient of correlation for MSA less than 0.995 for any sample?			X
Is the coefficient of correlation for MSA less than 0.990 for any sample?			X
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
Was proper quantitation procedure followed?			X
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if greater than CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?			X
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		

	YES	NO	NA
ICP Linear Ranges (quarterly)?	X		
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?		X	
< 10%?		X	

Corrected Sample Analysis Data Sheets

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS102

Contract: 9909000124

Lab Code: Case No.: SAS No.: SDG NO.: SS102

Matrix (soil/water): SOIL/SED Lab Sample ID: 323324

Level (low/med): LOW Date Received: 09/10/99

% Solids: 85.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19100			P
7440-36-0	Antimony	1.0	B	N J	P
7440-38-2	Arsenic	4.9			P
7440-39-3	Barium	139			P
7440-41-7	Beryllium	1.2			P
7440-43-9	Cadmium	1.2			P
7440-70-2	Calcium	85800			P
7440-47-3	Chromium	40.8			P
7440-48-4	Cobalt	2.1	B		P
7440-50-8	Copper	122		N J	P
7439-89-6	Iron	29000		*	P
7439-92-1	Lead	148			F
7439-95-4	Magnesium	35300		J	P
7439-96-5	Manganese	1130			P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	20.5			P
7440-09-7	Potassium	1200			P
7782-49-2	Selenium	1.8		N J	P
7440-22-4	Silver	0.27	U		P
7440-23-5	Sodium	392	B		P
7440-28-0	Thallium	0.33	U		F
7440-62-2	Vanadium	19.1			P
7440-66-6	Zinc	152		N J	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: GREY Clarity After: CLEAR Artifacts:

Comments:

0038

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS103

Contract: 9909000124

Lab Code: Case No.: SAS No.: SDG NO.: SS102

Matrix (soil/water): SOIL/SED Lab Sample ID: 323325

Level (low/med): LOW Date Received: 09/10/99

% Solids: 89.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8390			P
7440-36-0	Antimony	4.4	B	N	P
7440-38-2	Arsenic	3.8			P
7440-39-3	Barium	139			P
7440-41-7	Beryllium	0.76	B		P
7440-43-9	Cadmium	1.9			P
7440-70-2	Calcium	47400			P
7440-47-3	Chromium	69.5			P
7440-48-4	Cobalt	1.2	B		P
7440-50-8	Copper	37.0		N	P
7439-89-6	Iron	16400		*	P
7439-92-1	Lead	83.5			F
7439-95-4	Magnesium	1170			P
7439-96-5	Manganese	1840			P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	18.6			P
7440-09-7	Potassium	614	B		P
7782-49-2	Selenium	2.3		N	P
7440-22-4	Silver	0.28	U		P
7440-23-5	Sodium	271	B		P
7440-28-0	Thallium	0.31	U		F
7440-62-2	Vanadium	6.5	B		P
7440-66-6	Zinc	221		N	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS104

Contract: 9909000124

Lab Code: Case No.: SAS No.: SDG NO.: SS102

Matrix (soil/water): SOIL/SED Lab Sample ID: 323326

Level (low/med): LOW Date Received: 09/10/99

% Solids: 80.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12200			P
7440-36-0	Antimony	2.5	B	N	P
7440-38-2	Arsenic	17.5			P
7440-39-3	Barium	223			P
7440-41-7	Beryllium	1.3			P
7440-43-9	Cadmium	4.6			P
7440-70-2	Calcium	70900			P
7440-47-3	Chromium	200			P
7440-48-4	Cobalt	3.2	B		P
7440-50-8	Copper	148		N	P
7439-89-6	Iron	77300		*	P
7439-92-1	Lead	399			F
7439-95-4	Magnesium	13900			P
7439-96-5	Manganese	6120			P
7439-97-6	Mercury	0.16			CV
7440-02-0	Nickel	62.3			P
7440-09-7	Potassium	1470			P
7782-49-2	Selenium	4.3		N	P
7440-22-4	Silver	0.31	U		P
7440-23-5	Sodium	583	B		P
7440-28-0	Thallium	0.58	B		F
7440-62-2	Vanadium	69.4			P
7440-66-6	Zinc	436		N	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0040

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS105

Contract: 9909000124

Lab Code: Case No.: SAS No.: SDG NO.: SS102

Matrix (soil/water): SOIL/SED Lab Sample ID: 323327

Level (low/med): LOW Date Received: 09/10/99

% Solids: 83.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18800			P
7440-36-0	Antimony	5.0	B	N J	P
7440-38-2	Arsenic	17.1			P
7440-39-3	Barium	171			P
7440-41-7	Beryllium	2.4			P
7440-43-9	Cadmium	5.7			P
7440-70-2	Calcium	67700			P
7440-47-3	Chromium	46.2			P
7440-48-4	Cobalt	3.8	B		P
7440-50-8	Copper	132		N J	P
7439-89-6	Iron	58000		*	P
7439-92-1	Lead	1210			F
7439-95-4	Magnesium	9930		J	P
7439-96-5	Manganese	1970			P
7439-97-6	Mercury	0.96			CV
7440-02-0	Nickel	25.0			P
7440-09-7	Potassium	969	B		P
7782-49-2	Selenium	1.9		N J	P
7440-22-4	Silver	0.29	U		P
7440-23-5	Sodium	1020	B		P
7440-28-0	Thallium	0.33	U	W	F
7440-62-2	Vanadium	24.3			P
7440-66-6	Zinc	2600		N J	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0041

Columbia Analytical Services, Inc

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

FD091099

Contract: 9909000124

Lab Code: Case No.: SAS No.: SDG NO.: SS102

Matrix (soil/water): SOIL/SED Lab Sample ID: 323328

Level (low/med): LOW Date Received: 09/10/99

% Solids: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26500			P
7440-36-0	Antimony	0.65	U	N	P
7440-38-2	Arsenic	9.6			P
7440-39-3	Barium	176			P
7440-41-7	Beryllium	2.4			P
7440-43-9	Cadmium	1.9			P
7440-70-2	Calcium	52900			P
7440-47-3	Chromium	61.5			P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	206		N	P
7439-89-6	Iron	36000		*	P
7439-92-1	Lead	139			F
7439-95-4	Magnesium	7570			P
7439-96-5	Manganese	1850			P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	30.7			P
7440-09-7	Potassium	841	B		P
7782-49-2	Selenium	1.4		N	P
7440-22-4	Silver	0.30	U		P
7440-23-5	Sodium	297	B		P
7440-28-0	Thallium	0.31	U	W	F
7440-62-2	Vanadium	28.4			P
7440-66-6	Zinc	202		N	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0042

COLUMBIA ANALYTICAL SERVICES

Reported: 10/12/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :SS102

Date Sampled :09/10/99 **Order #**:323324 **Sample Matrix**:SOIL/SEDIMENT
Date Received:09/10/99 **Submission #**:9909000124

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	85.1	%	09/14/99	1.0
TOTAL CYANIDE	0.500	0.588 B	MG/KG	09/17/99	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :SS103

Date Sampled :09/10/99 Order #:323325 Sample Matrix:SOIL/SEDIMENT
Date Received:09/10/99 Submission #:9909000124

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	89.0	%	09/14/99	1.0
TOTAL CYANIDE	0.500	6.35 N J	MG/KG	09/24/99	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/12/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :SS104

Date Sampled :09/10/99 **Order #**:323326 **Sample Matrix**:SOIL/SEDIMENT
Date Received:09/10/99 **Submission #**:9909000124

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	80.8	%	09/14/99	1.0
TOTAL CYANIDE	0.500	0.619 Ø UJ	MG/KG	09/17/99	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/12/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :SS105

Date Sampled :09/10/99 Order #:323327 Sample Matrix:SOIL/SEDIMENT
Date Received:09/10/99 Submission #:9909000124

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	83.3	%	09/14/99	1.0
TOTAL CYANIDE	0.500	0.600	MG/KG	09/17/99	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/12/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :FD091099

Date Sampled :09/10/99 Order #:323328 Sample Matrix:SOIL/SEDIMENT
Date Received:09/10/99 Submission #:9909000124

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
PERCENT SOLIDS	1.0	85.6	%	09/14/99	1.0
TOTAL CYANIDE	0.500	0.584 B UJ	MG/KG	09/17/99	1.0

0047

Laboratory Narrative

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9909000224
SDG #SS102

BBL soil samples were collected on 09/10/99 and received at CAS on 09/10/99 in good condition. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

INORGANIC ANALYSIS

Four soil samples were analyzed for TAL inorganics by 95ASP methodology.

Matrix Spike/Duplicate was performed on SS103 as requested. All Blank Spikes were within limits. All MS recoveries were within limits except Antimony, Copper, Selenium, Zinc and Cyanide and have been flagged with an "N". All RPD's were within limits except Iron which has been flagged with an "*". The Post Digestion Spike for Thallium for SS105 was outside control limits and the sample absorbance was less than 50% of the spike absorbance and has been flagged with a "W".

No other analytical or QC problems were encountered with these analyses.

VOLATILE ORGANICS

Five soil samples were analyzed for the TCL volatiles by Method 95-1 by ASP methodology.

All Tuning criteria for BFB were met.

All the initial and continuing calibration criteria were met for all analytes.

All soil samples except SS102 had internal standard areas that were outside QC limits. Each sample was repeated and again the internal standards were outside limits and have been flagged with an "*".

All surrogate standard recoveries were within acceptance limits except on sample FD091099, which was reanalyzed as FD091099RE to confirm the QC outlier, and both have been flagged with an "*".

Matrix Spike/Matrix Spike Duplicate was performed on SS-103 as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

The Laboratory Blanks associated with these samples were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encoutered.

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SEMIVOLATILE ORGANICS

Five soil samples were analyzed for TCL Semi-Volatiles by 95-2 by ASP methodology.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on SS-103 as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

All samples were analyzed and extracted within required holding times.

The Laboratory blanks associated with these samples were free of contamination except SBLK1 which contained a small hit for Bis(2-Ethylhexyl)Phthalate. All affected samples have been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Susan Klyza for
Michael K. Perry
Laboratory Manager

10/15/99
Date

NYSDEC Sample Preparation and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
SS102	323324	X	X			X	X
SS103	323325	X	X			X	X
SS104	323326	X	X			X	X
SS105	323327	X	X			X	X
FD091099	323328	X	X			X	X
							X

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
323324	SOIL	09/10/99	09/10/99	LOW	09/16/99
323325	SOIL	09/10/99	09/10/99	LOW	09/16/99
323326	SOIL	09/10/99	09/10/99	LOW	09/16/99
323327	SOIL	09/10/99	09/10/99	LOW	09/16/99
323328	SOIL	09/10/99	09/10/99	LOW	09/16/99

NCF5 5/91

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
323324	SOIL	95-1			1.0
323325	SOIL	95-1			1.0
323326	SOIL	95-1			1.0
323327	SOIL	95-1			1.0
323328	SOIL	95-1			1.0

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
B/N-A
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	DATE EXTRACTED	DATE ANALYZED
323324	SOIL	09/10/99	09/10/99	09/13/99	09/27/99
323325	SOIL	09/10/99	09/10/99	09/13/99	09/27/99
323326	SOIL	09/10/99	09/10/99	09/13/99	09/28/99
323327	SOIL	09/10/99	09/10/99	09/13/99	09/28/99
323328	SOIL	09/10/99	09/10/99	09/13/99	09/28/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
323324	SOIL	95-2			1.0
323325	SOIL	95-2			1.0
323326	SOIL	95-2			1.0
323327	SOIL	95-2			1.0
323328	SOIL	95-2			1.0

NCF2 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
323324	SOIL	METALS	9/10/99	10/1,5/99
323325	SOIL	METALS	9/10/99	10/1,5/99
323326	SOIL	METALS	9/10/99	10/1,5/99
323327	SOIL	METALS	9/10/99	10/1,5/99
323328	SOIL	METALS	9/10/99	10/1,5/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
323324	SOIL	PB	9/10/99	10/5/99
323325	SOIL	PB	9/10/99	10/5/99
323326	SOIL	PB	9/10/99	10/5/99
323327	SOIL	PB	9/10/99	10/5/99
323328	SOIL	PB	9/10/99	10/5/99

0023

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
323324	SOIL	TL	9/10/99	10/4/99
323325	SOIL	TL	9/10/99	10/4/99
323326	SOIL	TL	9/10/99	10/4/99
323327	SOIL	TL	9/10/99	10/4/99
323328	SOIL	TL	9/10/99	10/5/99

9324

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
323324	SOIL	HG	9/10/99	9/15/99
323325	SOIL	HG	9/10/99	9/15/99
323326	SOIL	HG	9/10/99	9/15/99
323327	SOIL	HG	9/10/99	9/15/99
323328	SOIL	HG	9/10/99	9/15/99

0025

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
323324	SOIL	CN	9/10/99	9/17/99
323325	SOIL	CN	9/10/99	9/24/99
323326	SOIL	CN	9/10/99	9/17/99
323327	SOIL	CN	9/10/99	9/17/99
323328	SOIL	CN	9/10/99	9/17/99

9826

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
SS102	9/10/99	1995	SS-102	soil	yes	no	--	no	BNA - cal[3] TAL - ms, dup[2]
SS102	9/10/99	1995	SS-103	soil	no	no	--	no	VOA - is BNA - cal[3] TAL - ms, dup[2]
SS102	9/10/99	1995	SS-104	soil	no	no	--	no	VOA - is BNA - cal[3] TAL - ms, dup[2]
SS102	9/10/99	1995	SS-105	soil	no	yes	--	no	VOA - is TAL - ms, dup[2]
SS102	9/10/99	1995	FD091099	soil	no	yes	--	no	VOA - is, surr TAL - ms, dup[2], gfaa[2]

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

2 The non-compliance resulted in no qualification of data.

3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.

Appendix C-6

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SDG CPT-4

DATA REVIEW FOR

ENVIROTEK II SITE

SDG# CPT4

VOLATILE AND
SEMIVOLATILE ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# CPT4 for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
CPT-4	321688	water	9/2/99	x	x		
CPT-5	321689	water	9/2/99	x			
TRIP BLANK 1	321690	water	--	x			
CPT-6	321902	water	9/3/99	x			
CPT-7	321903	water	9/3/99	x			
CPT-8[1]	321904	water	9/3/99	x	x		
FD090399	321905	water	9/3/99	x	x		
TRIP BLANK 2	321906	water	--	x			
CPT-11	322310	water	9/7/99	x			
CPT-12	322311	water	9/7/99	x	x		
CPT-13	322312	water	9/7/99	x			
TRIP BLANK 3	322313	water	--	x			
CPT-14	322577	water	9/8/99	x			
CPT-15	322578	water	9/8/99	x			
CPT-16	322579	water	9/8/99	x			
CPT-17	322580	water	9/8/99	x			
CPT-18	322581	water	9/8/99	x			
TRIP BLANK 4	322582	water	--	x			

1 MS/MSD analysis performed on sample

VOLATILE ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP method 95-1.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for preserved waters 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Acetone was detected in the method and trip. Based on blank content, data for acetone have been qualified as undetected in samples CPT-4, CPT-5, CPT-6, CPT-7, CPT-8, FD090399, CPT-11, CPT-12, CPT-13, CPT-13DL, CPT-14, CPT-15, CPT-16, CPT-17 and CPT-18.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and all response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The response for several compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All data for compounds with decreasing responses and all positive data for compounds with increasing responses have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was above control limits in sample CPT-13. All positive data for the sample have been qualified as estiamted based on the recovery. All other surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
CPT-8 / FD090399	benzene	1J	2J	66.7%

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?	X		
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 10			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 5			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		

Volatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?	X		
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Are the spectra and mass calibration acceptable?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		

	YES	NO	NA
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		

	YES	NO	NA
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
CPT-4							
CPT-5							
TRIP BLANK 1							
CPT-6							
CPT-7							
CPT-8							
CPT-8 MS							
CPT-8 MSD							
FD090399							
TRIP BLANK 2							
CPT-11							
CPT-12							
CPT-13							
CPT-13 DL							
TRIP BLANK 3							
CPT-14							
CPT-15							
CPT-16							
CPT-18							
TRIP BLANK 4							

Surrogates:
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
BCM Bromochloromethane
DFB 1,4-Difluorobenzene
CBZ Chlorobenzene-d5

Qualifiers:
D Diluted
: Recovery high
; Recovery low
!. Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: MS6
Matrix: water

Date/Time	9/9/99		9/11/99 1026		9/13/99 0953		9/13/99 1652		9/14/99 1036	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										-27.6
bromomethane										
vinyl chloride								-25.3		-28.7
chloroethane										
methylene chloride										
acetone				-56.0						
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone				-38.2						
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone										
2-hexanone				-36.0						
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										
chlorobenzene										

Volatile Calibration Outliers - Page 2

Date/Time	9/9/99		9/11/99 1026		9/13/99 0953		9/13/99 1652		9/14/99 1036	
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
ethylbenzene										
styrene										
xylene (total)										

Affected Samples				
TB1			CPT11	CPT13DL
TB2			CPT12	TB3
			CPT13	
			CPT14	
			CPT15	
			CPT16	
			CPT17	
			CPT18	
			TB4	

Corrected Sample Analysis Data Sheets

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321688

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4243

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~3~~ ~~JB~~ U	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321688

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4243

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321689

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4244

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~3~~	~~JB~~
75-15-0	Carbon Disulfide	1	J
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321689

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4244

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-6

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321902

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4245

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	14	
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~4~~ 10	~~JB~~ U
75-15-0	Carbon Disulfide	1	J
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	49	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	1	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-6

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321902

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4245

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKANE	13.59	6	J
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-7

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321903

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4246

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~5~~ 10	JB U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-7

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321903

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4246

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-8

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321904

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4247

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 4	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-8

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321904

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4247

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	12.66	5	J
2.		UNKNOWN HYDROCARBON	16.84	9	J
3.		UNKNOWN HYDROCARBON	17.16	13	J
4.		UNKNOWN HYDROCARBON	17.83	8	J
5.		UNKNOWN HYDROCARBON	18.06	18	J
6.		UNKNOWN HYDROCARBON	18.28	12	J
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD009399

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321905

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4250

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~2~~ JB	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD009399

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321905

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4250

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-11

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322310

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4256

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~5~~ 10 ~~JB~~ U	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	15	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	5	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	3	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-11

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322310

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4256

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-12

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322311

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4257

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	~~U~~ UJ
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~8~~ ~~JB~~ UJ	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-12

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322311

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4257

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-13

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322312

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4258

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	150	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~4~~ JB	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	~~430~~ 430	E
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	1	J
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	14	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	7	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-13

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322312

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4258

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKANE	11.27	37	J
2.		UNKNOWN ALKANE	12.84	29	J
3.		UNKNOWN ALKANE	12.99	40	J
4.		UNKNOWN ALKANE	13.88	170	J
5.		UNKNOWN CYCLOALKANE	14.31	70	J
6.		UNKNOWN ALKANE	14.73	32	J
7.		UNKNOWN CYCLOALKANE	14.85	94	J
8.		UNKNOWN ALKANE	14.96	26	J
9.		UNKNOWN ALKANE	15.42	33	J
10.		UNKNOWN ALKANE	15.60	95	J
11.		UNKNOWN CYCLOALKANE	15.97	39	J
12.		UNKNOWN CYCLOALKANE	16.08	62	J
13.		UNKNOWN ALKANE	16.25	220	J
14.		UNKNOWN ALKANE	16.76	120	J
15.		UNKNOWN CYCLOALKANE	17.21	71	J
16.		UNKNOWN ALKANE	17.50	32	J
17.		UNKNOWN ALKANE	17.64	44	J
18.		UNKNOWN ALKANE	17.79	27	J
19.		UNKNOWN HYDROCARBON	17.98	54	J
20.		UNKNOWN HYDROCARBON	18.06	28	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-13DL

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322312DL

Sample wt/vol: 1.000 (g/mL) ML Lab File ID: Q4276

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/14/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	~~U~~ UJ
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	150	D J
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	10 ~~9~~	~~DJB~~ J
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichloroethene (total)	450	D
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	8	DJ
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentonone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	9	DJ
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (Total)	50	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-13DL

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322312DL

Sample wt/vol: 1.000 (g/mL) ML Lab File ID: Q4276

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/14/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	95-63-6	BENZENE, 1,2,4-TRIMETHYL-	16.75	38	NJD
2.	2870-04-4	BENZENE, 2-ETHYL-1,3-DIMETHY	18.05	28	NJD
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-14

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322577

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4260

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	75	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~7~~ ~~JB~~ 4	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	31	
540-59-0	1,2-Dichloroethene (total)	160	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	6	J
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	19	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	91	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	3	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	16	
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	16	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-14

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322577

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4260

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 19 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	1.87	66	J
2.	75-28-5	ISOBUTANE	2.09	14	NJ
3.	115-11-7	1-PROPENE, 2-METHYL-	2.35	16	NJ
4.	106-98-9	1-BUTENE	2.46	15	NJ
5.	563-46-2	1-BUTENE, 2-METHYL-	2.74	12	NJ
6.	78-78-4	BUTANE, 2-METHYL-	2.89	31	NJ
7.	109-67-1	1-PENTENE	3.16	14	NJ
8.	109-66-0	PENTANE	3.24	54	NJ
9.	627-20-3	2-PENTENE, (Z)-	3.43	25	NJ
10.	627-20-3	2-PENTENE, (Z)-	3.58	13	NJ
11.	513-35-9	2-BUTENE, 2-METHYL-	3.66	13	NJ
12.	760-20-3	1-PENTENE, 3-METHYL-	4.46	13	NJ
13.	107-83-5	PENTANE, 2-METHYL-	4.63	19	NJ
14.	592-41-6	1-HEXENE	5.30	15	NJ
15.	110-54-3	HEXANE	5.45	27	NJ
16.	3769-23-1	1-HEXENE, 4-METHYL-	7.49	12	NJ
17.	142-82-5	HEPTANE	8.39	6	NJ
18.	3744-02-3	4-PENTEN-2-ONE, 4-METHYL-	9.20	6	NJ
19.	629-50-5	TRIDECANE	16.34	6	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-15

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322578

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4261

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	8	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~4~~	~~JB~~
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	
540-59-0	1,2-Dichloroethene (total)	180	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	19	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-15

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322578

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4261

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 7

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	115-07-1	PROPENE	1.87	21	NJ
2.	78-78-4	BUTANE, 2-METHYL-	2.89	20	NJ
3.	109-66-0	PENTANE	3.24	21	NJ
4.	107-83-5	PENTANE, 2-METHYL-	4.62	10	NJ
5.	110-54-3	HEXANE	5.45	14	NJ
6.	3769-23-1	1-HEXENE, 4-METHYL-	7.49	9	NJ
7.	589-34-4	HEXANE, 3-METHYL-	7.68	5	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-16

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322579

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4262

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	1	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~4~~ 10 ~~JB~~ U	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	3	J
540-59-0	1,2-Dichloroethene (total)	37	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	4	J
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-16

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322579

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4262

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 16 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	115-07-1	PROPENE	1.87	20	NJ
2.	75-28-5	ISOBUTANE	2.08	7	NJ
3.	627-20-3	2-PENTENE, (Z)-	2.73	8	NJ
4.	78-78-4	BUTANE, 2-METHYL-	2.88	33	NJ
5.	109-67-1	1-PENTENE	3.14	5	NJ
6.	109-66-0	PENTANE	3.24	30	NJ
7.	2402-06-4	CYCLOPROPANE, 1,2-DIMETHYL-,	3.42	12	NJ
8.	563-46-2	1-BUTENE, 2-METHYL-	3.57	6	NJ
9.	930-18-7	CYCLOPROPANE, 1,2-DIMETHYL-,	3.66	8	NJ
10.	760-21-4	PENTANE, 3-METHYLENE-	4.45	19	NJ
11.	107-83-5	PENTANE, 2-METHYL-	4.62	8	NJ
12.	110-82-7	CYCLOHEXANE	5.29	12	NJ
13.	110-54-3	HEXANE	5.44	11	NJ
14.	4050-45-7	2-HEXENE, (E)-	5.71	7	NJ
15.	7642-09-3	3-HEXENE, (Z)-	6.01	8	NJ
16.	3404-62-4	5-METHYL-2-HEXENE,C&T	7.49	12	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-17

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322580

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4263

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	~~U~~ UJ
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~5~~	~~JB~~ U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	4	J
540-59-0	1,2-Dichloroethene (total)	36	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	13	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-17

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322580

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4263

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 18 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	1.86	44	J
2.	75-28-5	ISOBUTANE	2.08	17	NJ
3.	106-97-8	BUTANE	2.25	55	NJ
4.	106-98-9	1-BUTENE	2.34	12	NJ
5.	115-11-7	1-PROPENE, 2-METHYL-	2.45	9	NJ
6.	563-45-1	1-BUTENE, 3-METHYL-	2.73	11	NJ
7.	78-78-4	BUTANE, 2-METHYL-	2.89	31	NJ
8.	109-67-1	1-PENTENE	3.15	14	NJ
9.	109-66-0	PENTANE	3.24	47	NJ
10.	563-46-2	1-BUTENE, 2-METHYL-	3.42	26	NJ
11.	627-20-3	2-PENTENE, (Z)-	3.57	14	NJ
12.	930-18-7	CYCLOPROPANE, 1,2-DIMETHYL-,	3.66	12	NJ
13.	760-20-3	1-PENTENE, 3-METHYL-	4.46	16	NJ
14.	763-29-1	1-PENTENE, 2-METHYL-	5.30	16	NJ
15.	110-54-3	HEXANE	5.45	11	NJ
16.	13269-52-8	3-HEXENE, (E)-	5.70	9	NJ
17.	4050-45-7	2-HEXENE, (E)-	6.01	12	NJ
18.	3769-23-1	1-HEXENE, 4-METHYL-	7.49	6	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CPT-18

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322581

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4264

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	34	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	6	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	19	
540-59-0	1,2-Dichloroethene (total)	170	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	24	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	49	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	1	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	2	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CPT-18

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322581

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4264

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321690

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4227

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/11/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	4	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321690

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4227

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/11/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321906

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4234

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/11/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	5	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321906

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4234

Level: (low/med) LOW Date Received: 09/03/99

% Moisture: not dec. _____ Date Analyzed: 09/11/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 3

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322313

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4278

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/14/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~ UJ
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	~~U~~ UJ
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 3

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322313

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4278

Level: (low/med) LOW Date Received: 09/08/99

% Moisture: not dec. _____ Date Analyzed: 09/14/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322582

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4265

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U UJ
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322582

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4265

Level: (low/med) LOW Date Received: 09/09/99

% Moisture: not dec. _____ Date Analyzed: 09/13/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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SEMIVOLATILE ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP method 95-2.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, and rinse blanks) are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

Di-n-butyl phthalate was detected in the method blanks. Based on the blank content, data for di-n-butyl phthalate have been qualified as undetected in samples CPT-4, CPT-8, FD090399 and CPT-12.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The response for di-n-octyl phthalate was outside the 25% difference (%D) limit in the continuing calibration standard, as summarized on the attached

calibration summary sheets. All data for the compound have been qualified as estimated based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
CPT-8 / FD090399	naphthalene	5J	5J	0.0%
	2-methylnaphthalene	ND	1J	NA
	diethyl phthalate	1J	ND	NA
	phenanthrene	1J	2J	66.7%
	fluoroanthene	1J	1J	0.0%
	pyrene	ND	1J	NA
	bis(2-ethylhexyl)phthalate	ND	2J	NA

ND Not detected.
NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

11. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Semi-Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 22			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method blanks have positive results?	X		

Semi-Volatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Are there field/rinse blanks associated with every sample?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		

	YES	NO	NA
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?	X		
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		

	YES	NO	NA
Are there any transcription/calculation errors in reporting of RF or %D?	____	X	____
Internal Standards			
Are internal standard areas of every samples and blank within the upper and lower limits for each continuing calibration?	X	____	____
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X	____	____
Field Duplicates			
Were field duplicates submitted with the samples?	X	____	____

Semi-Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*								Internal Standards*					
		NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	DCB	NPT	ANT	PHN	CRY	PRY
CPT-4															
CPT-8															
CPT-8 MS															
CPT-8 MSD															
FD090399															
CPT-12															

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
DCB 1,2-Dichlorobenzene-d4
PHL Phenol-d6
2FP 2-Fluorophenol
TBP 2,4,6-Tribromophenol
2CP 2-Chlorophenol-d4

Internal Standards:
DCB 1,4-Dichlorobenzene-d4
NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12
PRY Perylene-d12

Qualifiers:
D Diluted
l Recovery low
i Recovery high
na not applicable

* Unless otherwise specified, all parameters are within acceptable limits.

Semivolatile Calibration Outliers

Instrument: HP5973-A

Date/Time	9/23/88		9/27/99 1437							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'oxybis(1-Chloropropane)										
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene										
3-Nitroaniline										
Acenaphthene										
2,4-Dinitrophenol										

Semivolatile Calibration Outliers - Page 2

Date/Time	9/23/88		9/27/99 1437							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
4-Nitrophenol										
Dibenzofuran										
2,4-Dinitrotoluene										
Diethylphthalate										
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Anthracene										
Carbazole										
Di-n-butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate										
Di-n-octylphthalate										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										

Affected Samples:			
	CPT4		
	CPT8		
	CPT8MS		
	CPT8MSD		
	FD090399		
	CPT12		

Corrected Sample Analysis Data Sheets

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321688

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC756.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	28	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	28	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	28	U
51-28-5	2,4-Dinitrophenol	28	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	28	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321688

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC756.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	28	U
534-52-1	4,6-Dinitro-2-methylphenol	28	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	28	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11 ~~2~~	JB
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
CPT-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: _____ SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321688

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC756.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-8

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321904

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC757.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	5	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-8

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321904

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC757.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	1	J
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	1	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10 ~~5~~	~~JB~~ U
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
CPT-8

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321904

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC757.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted: (Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 8 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000111-76-2	Ethanol, 2-butoxy-	5.14	5	JN
2.		unknown acid	5.93	3	J
3.		unknown	6.44	3	J
4.		unknown	8.15	2	J
~~5.~~	~~000112-34-5~~	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.33~~	~~8~~	~~JNB~~
6.		unknown acid	10.31	4	J
7.		unknown acid	10.47	6	J
8.	000571-58-4	Naphthalene, 1,4-dimethyl-	11.25	2	JN

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-12

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322311

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC761.D

Level: (low/med) LOW Date Received: 9/8/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	6	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CPT-12

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322311

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC761.D

Level: (low/med) LOW Date Received: 9/8/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	2	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	1	J
84-74-2	Di-n-Butylphthalate	~~3~~ 10	~~JB~~ U
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	1	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
CPT-12

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 322311

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC761.D

Level: (low/med) LOW Date Received: 9/8/99

% Moisture: decanted: (Y/N) N Date Extracted: 9/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	4.48	4	J
2.	000289-16-7	1,2,4-Trithiolane	7.67	2	JN
3.		unknown	19.55	2	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD090399

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321905

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC760.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	5	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	1	J
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD090399

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321905

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC760.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted:(Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	2	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	~~10~~ 3	~~JB~~ U
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	1	J
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FD090399

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-9-42 SAS No.: SDG No.: CPT4

Matrix: (soil/water) WATER Lab Sample ID: 321905

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC760.D

Level: (low/med) LOW Date Received: 9/3/99

% Moisture: decanted: (Y/N) N Date Extracted: 9/7/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 9/27/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	8.15	2	J
2.	~~000112-34-5~~	~~Ethanol, 2-(2-butoxyethoxy)-~~	~~8.33~~	~~3~~	~~JN~~
3.	000090-12-0	Naphthalene, 1-methyl-	10.07	2	JN
4.		unknown	10.30	2	J
5.		unknown	10.48	5	J
6.	000581-42-0	Naphthalene, 2,6-dimethyl-	11.25	3	JN

Laboratory Narrative

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9909000042
SDG #CPT4

BBL water samples were collected on 09/02-08/99 and received at CAS on 09/03-09/99 in good condition. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

VOLATILE ORGANICS

Fourteen water samples and four trip blanks were analyzed for the TCL volatiles by Method 95-1 by ASP methodology.

All Tuning criteria for BFB were met.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within acceptance limits except on sample CPT-13. The sample was repeated at a dilution due to an overrange compound and all surrogates were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on CPT-8 as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

The Laboratory Blanks associated with these samples were free of contamination except VBLK01, VBLK02, VBLK03 and VBLK04 contained a small hit for Acetone. All affected data has been flagged with an "B".

All samples were analyzed within required holding times.

No other analytical or QC problems were encoutered.

SEMIVOLATILE ORGANICS

Four water samples were analyzed for TCL Semi-Volatiles by 95-2 by ASP methodology.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on CPT-8 as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

0001

All samples were analyzed and extracted within required holding times.

The Laboratory blanks associated with these samples were free of contamination except SBLK1 which contained a small hit for Di-n-Butylphthalate. All affected samples have been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

10/7/99
Date

NYSDEC Sample Preparation and Analysis Summary Sheets

SDG #: CPT4 | BATCH COMPLETE: _____Y_____ | DATE REVISED:
SUBMISSIO 9909000042 | DISKETTE REQUESTED: Y___ N_X___ | DATE DUE: 10/07
CLIENT: Blasland Bouck & Lee, Inc. | DATE: 09/09/99 | PROTOCOL ASP
CLIENT REP: Janice Jaeger
PROJECT: ENVIROTEK

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLE	DATE RECEIVE	pH (SOLIDS)	% SOLIDS
321688	CPT-4	WATER	95-1,95-2	9/2/99	9/3/99		
321689	CPT-5	WATER	95-1	9/2/99	9/3/99		
321690	TRIP BLANK 1	WATER	95-1	9/2/99	9/3/99		
321691	COOLER BLANK	WATER	95-1	9/2/99	9/3/99		
321902	CPT-6	WATER	95-1	9/3/99	9/3/99		
321903	CPT-7	WATER	95-1	9/3/99	9/3/99		
321904QC	CPT-8	WATER	95-1,95-2	9/3/99	9/3/99		
321905	FD090399	WATER	95-1,95-2	9/3/99	9/3/99		
321906	TRIP BLANK 2	WATER	95-1	9/3/99	9/3/99		
322310	CPT-11	WATER	95-1	9/7/99	9/8/99		
322311	CPT-12	WATER	95-1,95-2	9/7/99	9/8/99		
322312	CPT-13	WATER	95-1	9/7/99	9/8/99		
322313	TRIP BLANK 3	WATER	95-1	9/7/99	9/8/99		
322577	CPT-14	WATER	95-1	9/8/99	9/9/99		
322578	CPT-15	WATER	95-1	9/8/99	9/9/99		
322579	CPT-16	WATER	95-1	9/8/99	9/9/99		
322580	CPT-17	WATER	95-1	9/8/99	9/9/99		
322581	CPT-18	WATER	95-1	9/8/99	9/9/99		
322582	TRIP BLANK 4	WATER	95-1	9/8/99	9/9/99		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
CPT-4	321688	X	X				
CPT-5	321689	X					
TRIP BLANK 1	321690	X					
CPT-6	321902	X					
CPT-7	321903	X					
CPT-8	321904	X	X				
FD090399	321905	X	X				
TRIP BLANK 2	321906	X					
CPT-11	322310	X					
CPT-12	322311	X	X				
CPT-13	322312	X					
TRIP BLANK 3	322313	X					
CPT-14	322577	X					
CPT-15	322578	X					
CPT-16	322579	X					
CPT-17	322580	X					
CPT-18	322581	X					
TRIP BLANK 4	322582	X					

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
321688	WATER	09/02/99	09/03/99	LOW	09/13/99
321689	WATER	09/02/99	09/03/99	LOW	09/13/99
321690	WATER	09/02/99	09/03/99	LOW	09/11/99
321902	WATER	09/03/99	09/03/99	LOW	09/13/99
321903	WATER	09/03/99	09/03/99	LOW	09/13/99
321904	WATER	09/03/99	09/03/99	LOW	09/13/99
321905	WATER	09/03/99	09/03/99	LOW	09/13/99
321906	WATER	09/03/99	09/03/99	LOW	09/11/99
322310	WATER	09/07/99	09/08/99	LOW	09/13/99
322311	WATER	09/07/99	09/08/99	LOW	09/13/99
322312	WATER	09/07/99	09/08/99	LOW	09/13,14/99
322313	WATER	09/07/99	09/08/99	LOW	09/14/99
322577	WATER	09/08/99	09/09/99	LOW	09/13/99
322578	WATER	09/08/99	09/09/99	LOW	09/13/99
322579	WATER	09/08/99	09/09/99	LOW	09/13/99
322580	WATER	09/08/99	09/09/99	LOW	09/13/99
322581	WATER	09/08/99	09/09/99	LOW	09/13/99
322582	WATER	09/08/99	09/09/99	LOW	09/13/99

NCF5 5/91

0005

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
321688	WATER	95-1			1.0
321688	WATER	95-1			1.0
321690	WATER	95-1			1.0
321902	WATER	95-1			1.0
321903	WATER	95-1			1.0
321904	WATER	95-1			1.0
321905	WATER	95-1			1.0
321906	WATER	95-1			1.0
322310	WATER	95-1			1.0
322311	WATER	95-1			1.0
322312	WATER	95-1			1.0
322313	WATER	95-1			1.0
322577	WATER	95-1			1.0
322578	WATER	95-1			1.0
322579	WATER	95-1			1.0
322580	WATER	95-1			1.0
322581	WATER	95-1			1.0
322582	WATER	95-1			1.0

NCF2 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
B/N-A
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	DATE EXTRACTED	DATE ANALYZED
321688	WATER	09/02/99	09/03/99	09/07/99	09/27/99
321904	WATER	09/03/99	09/03/99	09/07/99	09/27/99
321905	WATER	09/03/99	09/03/99	09/07/99	09/27/99
322311	WATER	09/07/99	09/08/99	09/09/99	09/27/99

NCF4 9/89

0007

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
321688	WATER	95-2			1.0
321904	WATER	95-2			1.0
321905	WATER	95-2			1.0
322311	WATER	95-2			1.0

NCF2 9/89

0008

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
CPT4	9/2/99	1995	CPT-4	water	yes	no	--	--	BNA - cal[3]
CPT4	9/2/99	1995	CPT-5	water	yes	--	--	--	
CPT4	--	1995	TRIP BLANK 1	water	no	--	--	--	VOA - cal[3]
CPT4	9/3/99	1995	CPT-6	water	yes	--	--	--	
CPT4	9/3/99	1995	CPT-7	water	yes	--	--	--	
CPT4	9/3/99	1995	CPT-8	water	yes		--	--	
CPT4	9/3/99	1995	FD090399	water	yes	no	--	--	BNA - cal[3]
CPT4	--	1995	TRIP BLANK 2	water	no	--	--	--	VOA - cal[3]
CPT4	9/7/99	1995	CPT-11	water	no	--	--	--	VOA - cal[3]
CPT4	9/7/99	1995	CPT-12	water	no	no	--	--	VOA - cal[3] BNA - cal[3]
CPT4	9/7/99	1995	CPT-13	water	no	--	--	--	VOA - cal[3], surr
CPT4	--	1995	TRIP BLANK 3	water	no	--	--	--	VOA - cal[3]
CPT4	9/8/99	1995	CPT-14	water	no	--	--	--	VOA - cal[3]
CPT4	9/8/99	1995	CPT-15	water	no	--	--	--	VOA - cal[3]
CPT4	9/8/99	1995	CPT-16	water	no	--	--	--	VOA - cal[3]
CPT4	9/8/99	1995	CPT-17	water	no	--	--	--	VOA - cal[3]
CPT4	9/8/99	1995	CPT-18	water	no	--	--	--	VOA - cal[3]
CPT4	--	1995	TRIP BLANK 4	water	no	--	--	--	VOA - cal[3]

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

2 The non-compliance resulted in no qualification of data.

vlj2124

Appendix C-7

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

SDG ENV-1

DATA REVIEW FOR

ENVIROTEK II SITE

SDG# ENV1

VOLATILE, SEMIVOLATILE
AND INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services
Rochester, New York

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# ENV1 for sampling at the Envirotek II Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	PCB	TAL
NW-5	328797	water	9/29/99	x	x		x
ENV-1	328799	water	9/29/99	x	x		x
GW-2	328800	water	9/29/99	x	x		x
ESI-8	328801	water	9/29/99	x	x		x
GW-3	328803	water	9/29/99	x	x		x
ENV-4	328805	water	9/30/99	x	x		x
ENV-5	328806	water	9/30/99	x	x		x
ENV-6	328807	water	9/30/99	x	x		x
NW-4[1]	328808	water	9/30/99	x	x		x
GW-7	328809	water	9/30/99	x	x		x
FD093099	328811	water	9/30/99	x	x		x
GW-4	328812	water	9/30/99	x	x		x
GW-5	328813	water	9/30/99	x	x		x
GW-6	328815	water	9/30/99	x	x		x
NW-1	328816	water	9/30/99	x	x		x
TRIP BLANK 1	328817	water	--	x			
ENV-3	328818	water	10/1/99	x	x		x
ENV-2	328819	water	10/1/99	x	x		x
TRIP BLANK 2	328820	water	--	x			

1 MS/MSD analysis performed on sample

VOLATILE ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP method 95-1.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under NYSASP is 10 days from sample receipt. The technical holding time for preserved waters 14 days from sample collection.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Acetone was detected in the method and trip blanks. Based on blank content, data for acetone have been qualified as undetected in samples NW-5, ENV-1, ESI-8, GW-3, ENV-4, ENV-5, ENV-6, NW-4, GW-7, FD093099, GW-4, GW-5, GW-6, NW-1 and ENV-3.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and all response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The response for several compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All data for compounds with decreasing responses and all positive data for compounds with increasing responses have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries were within control limits. The relative percent differences between recoveries were, however, outside control limits for four of the five spiked compounds. No data have been qualified based on matrix spike performance alone.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
GW-7 / FD093099	1,1-dichloroethane	1J	1J	0.0%
	1,2-dichloroethene	14	14	0.0%
	trichloroethene	1J	1J	0.0%
	tetrachloroethene	3J	4J	28.6%

The duplicate results are acceptable.

11. General Comments

The temperature of the cooler for the samples collected on 10/1 was outside control limits (at 11.6°C) when received at the laboratory. No data have been qualified based on the deviation.

12. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 10			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
4 out of 5			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?	X		
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Are the spectra and mass calibration acceptable?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		

	YES	NO	NA
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		

	YES	NO	NA
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*			Internal Standards*		
		TOL	BFB	DCE	BCM	DFB	CBZ
NW-5							
ENV-1							
GW-2							
ESI-8							
GW-3							
ENV-4							
ENV-5							
ENV-6							
NW-4							
GW-7							
FD093099							
GW-4							
GW-5							
GW-6							
NW-1							
TRIP BLANK 1							
ENV-3							
ENV-2							
TRIP BLANK 2							

Surrogates:
TOL Toluene-d8
BFB Bromofluorobenzene
DCE 1,2-Dichloroethane-d4

Internal Standards:
BCM Bromochloromethane
DFB 1,4-Difluorobenzene
CBZ Chlorobenzene-d5

Qualifiers:
D Diluted
↑ Recovery high
↓ Recovery low
↓↓ Recovery <25%

* Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: MS6
Matrix: water

Date/Time	10/4/99		10/5/99 1531		10/6/99 1515		10/7/99 1338			
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane						-49.7		-57.0		
bromomethane										
vinyl chloride										
chloroethane						25.1				
methylene chloride										
acetone				-36.1		-39.3		-57.4		
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene(total)										
chloroform										
1,2-dichloroethane										
2-butanone				-25.8		-41.8		-61.2		
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
cis-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
trans-1,3-dichloropropene										
bromoform										
4-methyl-2-pentanone						-44.7		-60.3		
2-hexanone				-30.2				-62.2		
tetrachloroethene										
1,1,2,2-tetrachloroethane										
toluene										
chlorobenzene										

Volatile Calibration Outliers - Page 2

Date/Time	10/4/99		10/5/99 1531		10/6/99 1515		10/7/99 1338			
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
ethylbenzene										
styrene										
xylene (total)										

Affected Samples				
	NW4	ENV1	ENV2DL	
	NW4MS	GW2	TB2	
	NW4MSD	ESI8		
	NW5	GW3		
		ENV4		
		ENV5		
		ENV6		
		GW7		
		FD093099		
		GW4		
		GW5		
		GW6		
		NW1		
		ENV3		
		TB1		
		ENV2		

Corrected Sample Analysis Data Sheets

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328799

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4668

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ENV-1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328799

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4668

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4683

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	790 600	E D
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	180	
67-64-1	Acetone	22	B
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	93	
75-34-3	1,1-Dichloroethane	910 900	E D
540-59-0	1,2-Dichloroethene (total)	20000 4300	E D
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	20	
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2500 2000	E D
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	7300 2600	E D
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	1	J
71-43-2	Benzene	2	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	7700 3300	E D
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	2400 1000	E D
108-90-7	Chlorobenzene	3	J
100-41-4	Ethylbenzene	170	
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	900	E

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ENV-2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4683

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	611-14-3	BENZENE, 1-ETHYL-2-METHYL-	15.09	54	NJ
2.	108-83-8	4-HEPTANONE, 2,6-DIMETHYL-	15.54	67	NJ
3.	526-73-8	BENZENE, 1,2,3-TRIMETHYL-	15.89	60	NJ
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-2DL

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819DL

Sample wt/vol: 2.500 (g/mL) ML Lab File ID: Q4694

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/07/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: ~~1.0~~ 200 (II) 1/2

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2000	~~U~~ UJ
74-83-9	Bromomethane	2000	U
75-01-4	Vinyl Chloride	790	DJ
75-00-3	Chloroethane	2000	U
75-09-2	Methylene Chloride	230	DJ
67-64-1	Acetone	2000	~~U~~ UJ
75-15-0	Carbon Disulfide	2000	U
75-35-4	1,1-Dichloroethene	2000	U
75-34-3	1,1-Dichloroethane	910	DJ
540-59-0	1,2-Dichloroethene (total)	26000	D
67-66-3	Chloroform	2000	U
107-06-2	1,2-Dichloroethane	2000	U
78-93-3	2-Butanone	2000	~~U~~ UJ
71-55-6	1,1,1-Trichloroethane	2500	D
56-23-5	Carbon Tetrachloride	2000	U
75-27-4	Bromodichloromethane	2000	U
78-87-5	1,2-Dichloropropane	2000	U
10061-01-5	cis-1,3-Dichloropropene	2000	U
79-01-6	Trichloroethene	7300	D
124-48-1	Dibromochloromethane	2000	U
79-00-5	1,1,2-Trichloroethane	2000	U
71-43-2	Benzene	2000	U
10061-02-6	trans-1,3-Dichloropropene	2000	U
75-25-2	Bromoform	2000	U
108-10-1	4-Methyl-2-Pentonone	2000	~~U~~ UJ
591-78-6	2-Hexanone	2000	~~U~~ UJ
127-18-4	Tetrachloroethene	7700	D
79-34-5	1,1,2,2-Tetrachloroethane	2000	U
108-88-3	Toluene	2400	D
108-90-7	Chlorobenzene	2000	U
100-41-4	Ethylbenzene	2000	U
100-42-5	Styrene	2000	U
1330-20-7	Xylene (Total)	770	DJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ENV-2DL

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819DL

Sample wt/vol: 2.500 (g/mL) ML Lab File ID: Q4694

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/07/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: ~~1.0~~ 200 @ 1/2

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-3

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328818

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4681

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~ UJ
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	52	
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	~~2~~ 10	~~JB~~ UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	71	
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	~~U~~ UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	~~U~~ UJ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ENV-3

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328818

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4681

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKANE	1.65	9	J
2.		UNKNOWN ALKANE	2.15	6	J
3.		UNKNOWN	14.93	12	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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14.					
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16.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328805

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4672

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~ UJ
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	5	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~2~~ 10	~~JB~~ UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	85	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	~~U~~ UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	46	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	~~U~~ UJ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	9	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	24	
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	67	

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ENV-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328805

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4672

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	354-23-4	ETHANE, 1,2-DICHLORO-1,1,2-T	2.69	7	NJ
2.	108-08-7	PENTANE, 2,4-DIMETHYL-	6.48	6	NJ
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328806

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4673

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~ UJ
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	3	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~2~~	~~JB~~ UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	56	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	~~U~~ UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	~~U~~ UJ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ENV-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328806

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4673

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	1.50	14	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ENV-6

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328807

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4674

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	2	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	6	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ENV-6

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328807

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4674

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	141-78-6	ETHYL ACETATE	5.75	5	NJ
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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27.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ESI-8

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328801

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4670

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESI-8

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328801

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4670

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328800

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4669

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328800

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4669

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-3

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328803

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4671

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~ UJ
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~6~~	~~JB~~ UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	~~U~~ UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	~~U~~ UJ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-3

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328803

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4671

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328812

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4677

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	5	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	1	J
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328812

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4677

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	141-78-6	ETHYL ACETATE	5.75	12	NJ
2.	527-84-4	BENZENE, 1-METHYL-2-(1-METHY	16.49	11	NJ
3.					
4.					
5.					
6.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328813

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4678

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	4	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328813

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4678

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	141-78-6	ETHYL ACETATE	5.75	6	NJ
2.					
3.					
4.					
5.					
6.					
7.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-6

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328815

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4679

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~ UJ
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~2~~	~~JB~~ UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	~~U~~ UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	~~U~~ UJ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-6

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328815

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4679

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	141-78-6	ETHYL ACETATE	5.75	12	NJ
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-7

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328809

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4675

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	14	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	3	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-7

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328809

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4675

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NW-1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328816

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4680

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	~~U~~
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~2~~	~~JB~~
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	~~U~~
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	~~U~~
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

NW-1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328816

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4680

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NW-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328808

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4643

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	9	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 2 JB	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	8	J
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

NW-4

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328808

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4643

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NW-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328797

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4648

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10 ~~2~~	~~JB~~ U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

NW-5

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328797

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4648

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD093099

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328811

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4676

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	~~2~~	~~JB~~
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	14	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD093099

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328811

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4676

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328817

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4682

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	1	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 1

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328817

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4682

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/06/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328820

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4695

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/07/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	JB
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentonone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK 2

Lab Name: CAS-ROC Contract: BBL

Lab Code: 10145 Case No.: 99-10-004 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328820

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q4695

Level: (low/med) LOW Date Received: 10/01/99

% Moisture: not dec. _____ Date Analyzed: 10/07/99

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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SEMIVOLATILE ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP method 95-2.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

E The compound was quantitated above the calibration range.

D Concentration is based on a diluted sample analysis.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, and rinse blanks) are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blank.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits to all compounds with no exceptions.

The %RSD for was less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

The response for several compounds in the continuing calibration standards were outside 25% difference (%D) of the initial calibration, as summarized on the attached calibration summary sheets. All data for compounds with

decreasing responses and all positive data for compounds with increasing responses have been qualified as estimated.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

All internal standard responses and retention times were within established limits.

7. Compound Identification

Compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

The recovery for pentachlorophenol was above control limits in the matrix spike duplicate. All other matrix spike and matrix spike duplicate recoveries and all relative percent differences between recoveries were within control limits. Since the recovery for pentachlorophenol was above control limits and since no pentachlorophenol was detected in the samples, no data have been qualified based on the deviation.

9. Matrix Spike Blank

All matrix spike blank recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
GW-7 / FD093099	ND	--	--	NA

ND Not detected.
NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

11. General Comments

The temperature of the cooler for the samples collected on 10/1 was outside control limits (at 11.6°C) when received at the laboratory. No data have been qualified based on the deviation.

12. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Semi-Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits? 1 out of 22			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method blanks have positive results?	X		

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Are there field/rinse blanks associated with every sample?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable with respect to:			
Baseline stability	X		
Resolution	X		
Peak shape	X		
Attenuation	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		

	YES	NO	NA
Tentatively Identified Compounds			
Are all the TIC summary forms present?	X		
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		X	
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
Do the TIC and "best match" spectrum agree within 20%?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are all RF equal to or greater than minimum requirements?	X		

	YES	NO	NA
Are there any transcription/calculation errors in reporting of RF or %D?	____	X	____
Internal Standards			
Are internal standard areas of every samples and blank within the upper and lower limits for each continuing calibration?	X	____	____
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X	____	____
Field Duplicates			
Were field duplicates submitted with the samples?	X	____	____

Semi-Volatile Qualifier Summary
Holding Time, Surrogates, Internal Standards

Sample ID	Holding Time*	Surrogates*								Internal Standards*					
		NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	DCB	NPT	ANT	PHN	CRY	PRY
NW-5															
ENV-1															
GW-2															
ESI-8															
GW-3															
ENV-4															
ENV-5															
ENV-6															
NW-4															
NW-4 MS															
NW-4 MSD															
GW-7															
FD093099															
GW-4															
GW-5															
GW-6															
NW-1															
ENV-3															
ENV-2															

Surrogates:
- NBZ Nitrobenzene-d5
- FBP 2-Fluorobiphenyl
- TPH Terphenyl-d14
- DCB 1,2-Dichlorobenzene-d4
- PHL Phenol-d6
- 2FP 2-Fluorophenol
- TBP 2,4,6-Tribromophenol
- 2CP 2-Chlorophenol-d4

Internal Standards:
- DCB 1,4-Dichlorobenzene-d4
- NPT Naphthalene-d8
- ANT Acenaphthene-d10
- PHN Phenanthrene-d10
- CRY Chrysene-d12
- PRY Perylene-d12

Qualifiers:
- D Diluted
- l Recovery low
- h Recovery high
- na not applicable

* Unless otherwise specified, all parameters are within acceptable limits.

Semivolatile Calibration Outliers

Instrument: HP5973-A

Date/Time	9/23/99		10/5/99 1518		10/6/99 1151		10/6/99 1148			
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'oxybis(1-Chloropropane)				25.5				31.1		
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene								29.6		
3-Nitroaniline								42.2		
Acenaphthene										
2,4-Dinitrophenol								39.2		

Semivolatile Calibration Outliers - Page 2

Date/Time	9/23/99		10/5/99 1518		10/6/99 1151		10/6/99 1148			
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
4-Nitrophenol										
Dibenzofuran										
2,4-Dinitrotoluene										
Diethylphthalate										
4-Nitroaniline								41.7		
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol								49.8		
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Anthracene										
Carbazole										
Di-n-butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate										
Di-n-octylphthalate										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene								-27.6		
Dibenz(a,h)anthracene								-27.9		
Benzo(g,h,i)perylene								-29.4		

Affected Samples:				
NW5		ENV3		
ENV1				
GW2				
ESI8				
GW3				
NW4				

Semivolatile Calibration Outliers - Page 3

Date/Time	9/23/99		10/5/99 1518		10/6/99 1151		10/6/99 1148			
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
			NW4MS							
			NW4MSD							

Corrected Sample Analysis Data Sheets

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328799

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC828.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	28	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	28	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	28	U
51-28-5	2,4-Dinitrophenol	28	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	28	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328799

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC828.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	28	U
534-52-1	4,6-Dinitro-2-methylphenol	28	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	28	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	1	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
ENV-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328799

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC828.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	23.63	4	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC846.D

Level: (low/med) LOW Date Received: 10/1/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC846.D

Level: (low/med) LOW Date Received: 10/1/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	5	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
ENV-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328819

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC846.D

Level: (low/med) LOW Date Received: 10/1/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.55	4	J
2.	unknown	5.49	2	J
3.	unknown	5.61	18	J
4.	unknown	9.53	2	J
5.	unknown	19.33	9	J
6.	unknown	31.52	21	J
7.	unknown	31.54	29	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-3

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328818

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC849.D

Level: (low/med) LOW Date Received: 10/1/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/7/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-3

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328818

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC849.D

Level: (low/med) LOW Date Received: 10/1/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/7/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	4	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
ENV-3

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328818

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC849.D

Level: (low/med) LOW Date Received: 10/1/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/7/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.55	5	J
2.	unknown	5.50	2	J
3.	unknown	5.62	19	J
4. 000585-34-2	Phenol, m-tert-butyl-	9.54	2	JN
5.	unknown	19.33	7	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328805

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC837.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328805

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC837.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
ENV-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328805

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC837.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.88	3	J
2.	unknown	5.93	3	J
3.	unknown	22.34	2	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328806

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC838.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	26	U
51-28-5	2,4-Dinitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	26	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328806

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC838.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	7	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
ENV-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328806

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC838.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 5 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown acid	10.31	4	J
2.	unknown acid	10.47	3	J
3.	unknown	19.44	2	J
4.	unknown	23.56	2	J
5.	unknown acid	23.63	4	J

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-6

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328807

Sample wt/vol: 850 (g/ml) ML Lab File ID: AC839.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	12	U
111-44-4	bis(-2-Chloroethyl)Ether	12	U
95-57-8	2-Chlorophenol	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12	U
95-48-7	2-Methylphenol	12	U
621-24-7	N-Nitroso-Di-n-propylamine	12	U
67-72-1	Hexachloroethane	12	U
106-44-5	4-Methylphenol	12	U
98-95-3	Nitrobenzene	12	U
78-59-1	Isophorone	12	U
88-75-5	2-Nitrophenol	12	U
105-67-9	2,4-Dimethylphenol	12	U
111-91-1	bis(-2-Chloroethoxy)Methane	12	U
120-83-2	2,4-Dichlorophenol	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U
91-20-3	Naphthalene	12	U
106-47-8	4-Chloroaniline	12	U
87-68-3	Hexachlorobutadiene	12	U
59-50-7	4-Chloro-3-methylphenol	12	U
91-57-6	2-Methylnaphthalene	12	U
77-47-4	Hexachlorocyclopentadiene	12	U
88-06-2	2,4,6-Trichlorophenol	12	U
95-95-4	2,4,5-Trichlorophenol	29	U
91-58-7	2-Chloronaphthalene	12	U
88-74-4	2-Nitroaniline	29	U
208-96-8	Acenaphthylene	12	U
131-11-3	Dimethyl Phthalate	12	U
606-20-2	2,6-Dinitrotoluene	12	U
83-32-9	Acenaphthene	12	U
99-09-2	3-Nitroaniline	29	U
51-28-5	2,4-Dinitrophenol	29	U
132-64-9	Dibenzofuran	12	U
121-14-2	2,4-Dinitrotoluene	12	U
100-02-7	4-Nitrophenol	29	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ENV-6

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328807

Sample wt/vol: 850 (g/ml) ML Lab File ID: AC839.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	12	U
7005-72-3	4-Chlorophenyl-phenylether	12	U
84-66-2	Diethylphthalate	12	U
100-01-6	4-Nitroaniline	29	U
534-52-1	4,6-Dinitro-2-methylphenol	29	U
86-30-6	N-Nitrosodiphenylamine	12	U
101-55-3	4-Bromophenyl-phenylether	12	U
118-74-1	Hexachlorobenzene	12	U
87-86-5	Pentachlorophenol	29	U
85-01-8	Phenanthrene	12	U
120-12-7	Anthracene	12	U
86-74-8	Carbazole	12	U
84-74-2	Di-n-Butylphthalate	3	J
206-44-0	Fluoranthene	12	U
129-00-0	Pyrene	12	U
85-68-7	Butyl benzyl phthalate	12	U
91-94-1	3,3'-Dichlorobenzidine	12	U
56-55-3	Benzo(a)Anthracene	12	U
218-01-9	Chrysene	12	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	12	U
117-84-0	Di-n-octyl phthalate	12	U
205-99-2	Benzo(b)fluoranthene	12	U
207-08-9	Benzo(k)Fluoranthene	12	U
50-32-8	Benzo(a)Pyrene	12	U
193-39-5	Indeno(1,2,3-cd)Pyrene	12	U
53-70-3	Dibenz(a,h)anthracene	12	U
191-24-2	Benzo(g,h,i)Perylene	12	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
ENV-6

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328807

Sample wt/vol: 850 (g/ml) ML Lab File ID: AC839.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 8 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	8.81	2	J
2.	unknown	9.53	3	J
3.	unknown	9.68	3	J
4.	unknown	13.19	2	J
5.	unknown	18.45	4	J
6.	unknown	18.57	4	J
7.	unknown	19.39	18	J
8.	unknown	22.34	8	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ESI-8

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328801

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC830.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ESI-8

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328801

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC830.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ESI-8

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328801

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC830.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD093099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328811

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC841.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FD093099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328811

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC841.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FD093099

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328811

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC841.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.48	4	J
2.	unknown	22.32	3	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328800

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC829.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	28	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	28	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	28	U
51-28-5	2,4-Dinitrophenol	28	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	28	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328800

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC829.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	28	U
534-52-1	4,6-Dinitro-2-methylphenol	28	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	28	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	2	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-2

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328800

Sample wt/vol: 900 (g/ml) ML Lab File ID: AC829.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	19.32	4	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-3

Lab Name: Columbia Analytical Services Contract: B8L

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328803

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC831.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	6	J
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	5	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-3

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328803

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC831.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	1	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	6	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	1	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-3

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328803

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC831.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000103-82-2	Benzeneacetic acid	8.91	2	JN
2.	unknown	19.31	2	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328812

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC842.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	7	J
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	2	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328812

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC842.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328812

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC842.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

Number TICs found: 22 (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	4.48	3	J
2.	007785-70-8	1R-.alpha.-Pinene	5.59	6	JN
3.	025155-15-1	Benzene, methyl(1-methylethyl)-	6.65	10	JN
4.		unknown	7.73	3	J
5.		unknown	8.02	8	J
6.	000464-48-2	Bicyclo[2.2.1]heptan-2-one, 1,7,7	8.14	14	JN
7.		unknown	8.35	3	J
8.		unknown	8.52	23	J
9.		unknown acid	8.93	6	J
10.	000645-56-7	Phenol, 4-propyl-	9.11	4	JN
11.		unknown	9.91	3	J
12.		unknown	14.42	2	J
13.		unknown	15.27	6	J
14.	033675-75-1	Phenol, 3-(2-phenylethyl)-	15.38	260	JN
15.	003839-46-1	Phenol, 4-(2-phenylethenyl)-	17.30	16	JN
16.		unknown	17.52	5	J
17.		unknown	17.94	3	J
18.		unknown	18.13	6	J
19.		unknown	18.17	4	J
20.		unknown	19.43	18	J
21.		unknown	20.01	24	J
22.		unknown	22.33	3	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328813

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC843.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	26	U
51-28-5	2,4-Dinitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	26	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328813

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC843.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	1	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328813

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC843.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 30 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	4.48	4	J
2.		unknown	5.32	5	J
3.		unknown	6.26	4	J
4.		unknown	7.08	3	J
5.		unknown acid	7.75	58	J
6.		unknown	7.94	3	J
7.		unknown	8.36	3	J
8.		unknown	8.53	3	J
9.		unknown	8.80	10	J
10.		unknown	9.05	2	J
11.		unknown	9.16	3	J
12.		unknown	9.36	6	J
13.		unknown	10.06	3	J
14.		unknown acid	10.12	4	J
15.		unknown	10.23	4	J
16.		unknown	10.91	3	J
17.		unknown	10.99	5	J
18.		unknown	11.13	4	J
19.		unknown	11.22	3	J
20.		unknown	11.47	3	J
21.		unknown acid	11.56	6	J
22.		unknown acid	11.71	15	J
23.		unknown	11.86	3	J
24.		unknown	11.96	3	J
25.		unknown	12.18	5	J
26.		unknown	12.39	4	J
27.		unknown	13.59	2	J
28.		unknown	15.08	2	J
29.	000081-84-5	1,8-Naphthalic anhydride	17.72	7	JN
30.		unknown	19.57	7	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-6

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328815

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC844.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-6

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328815

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC844.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-6

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328815

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC844.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.49	3	J
2.	unknown	10.70	19	J
3.	unknown	11.03	3	J
4.	unknown	11.10	6	J
5.	unknown	22.34	3	J
6.	unknown	31.57	14	J
7.	unknown	31.62	10	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-7

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328809

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC840.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

GW-7

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328809

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC840.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-7

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328809

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC840.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.48	3	J
2.	unknown	23.62	14	J
3.	unknown	32.38	4	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NW-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328816

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC845.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
95-48-7	2-Methylphenol	10	U
621-24-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
106-44-5	4-Methylphenol	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(-2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
208-96-8	Acenaphthylene	10	U
131-11-3	Dimethyl Phthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
83-32-9	Acenaphthene	10	U
99-09-2	3-Nitroaniline	25	U
51-28-5	2,4-Dinitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
100-02-7	4-Nitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NW-1

Lab Name: Columbia Analytical Services Contract: B8L

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328816

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC845.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
84-66-2	Diethylphthalate	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	5	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	1	J
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
NW-1

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328816

Sample wt/vol: 1000 (g/ml) ML Lab File ID: AC845.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	8.35	3	J
2.	unknown	10.09	2	J
3.	unknown	11.30	3	J
4.	unknown	11.70	2	J
5. 000112-40-3	Dodecane	12.60	7	JN
6.	unknown	13.31	2	J
7.	unknown	23.61	3	J

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NW-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328808

Sample wt/vol: 930 (g/ml) ML Lab File ID: AC832.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	27	U
51-28-5	2,4-Dinitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	27	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NW-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328808

Sample wt/vol: 930 (g/ml) ML Lab File ID: AC832.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	4,6-Dinitro-2-methylphenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	2	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

NW-4

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328808

Sample wt/vol: 930 (g/ml) ML Lab File ID: AC832.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/6/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NW-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328797

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC827.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(-2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11	U
95-48-7	2-Methylphenol	11	U
621-24-7	N-Nitroso-Di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
106-44-5	4-Methylphenol	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(-2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
208-96-8	Acenaphthylene	11	U
131-11-3	Dimethyl Phthalate	11	U
606-20-2	2,6-Dinitrotoluene	11	U
83-32-9	Acenaphthene	11	U
99-09-2	3-Nitroaniline	26	U
51-28-5	2,4-Dinitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
100-02-7	4-Nitrophenol	26	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NW-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328797

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC827.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: decanted:(Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
86-73-7	Fluorene	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
84-66-2	Diethylphthalate	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butyl benzyl phthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
NW-5

Lab Name: Columbia Analytical Services Contract: BBL

Lab Code: 10145 Case No.: 99-10-04 SAS No.: _____ SDG No.: ENV1

Matrix: (soil/water) WATER Lab Sample ID: 328797

Sample wt/vol: 950 (g/ml) ML Lab File ID: AC827.D

Level: (low/med) LOW Date Received: 9/30/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 10/4/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.48	2	J

INORGANIC ANALYSES

Introduction

Analyses were performed according to NYSDEC-ASP CLP-M methods.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

E The reported value is estimated due to the presence of interference.

M Duplicate injection precision not met.

N Spiked sample recovery not within control limits.

S Reported value was determined by the method of standard additions (MSA).

W Post-digestion spike for Furnace-AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.

* Duplicate analysis not within control limits.

\+ Correlation coefficient for MSA is less than 0.995.

Validation qualifiers:

J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for inorganic analyses under NYSASP protocols is as follows. All holding times are measured from validated time of sample receipt (VTSR).

Metals (other than mercury)	180 days
Mercury	26 days
Cyanide	12 days

The technical holding times for inorganic analyses is as follows. All holding times are measured from date of collection.

Metals (other than mercury)	180 days
Mercury	28 days
Cyanide	14 days

All samples were analyzed within specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

All calibration and preparation blanks were found to be acceptable, with no analytes detected above the CRDL. Several compounds were, however, detected below the CRDL. Based on the similarity between blank and sample concentrations, data for the following samples and analytes should be considered highly suspect.

Zinc	FD093099, GW-6, GW-7, NW-5

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and the recoveries for all initial calibration verification standards were acceptable.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All CRDL standard recoveries were within control limits.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix spike

With the exception of antimony, all matrix spike recoveries were within control limits. Based on the matrix spike recovery, all data for antimony have been qualified as estimated.

4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits.

5. Field Duplicate

Results for the duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
GW-7 / FD093099	aluminum	744	1240	50.0%
	arsenic	4.0B	3.4U	<CRDL
	barium	38.3B	44.4B	<CRDL
	beryllium	0.32B	0.12U	<CRDL
	calcium	254000	274000	7.6%
	chromium	2.0B	2.2B	<CRDL
	cobalt	2.7B	1.7U	<CRDL
	copper	2.8U	3.1B	<CRDL
	iron	918	1040	12.5%
	lead	2.9U	3.0	<CRDL
	magnesium	1110B	1330B	<CRDL
	manganese	27.6	34.0	20.8%
	nickel	1.6B	1.9B	<CRDL
	potassium	29300	28600	2.4%
	selenium	4.2U	5.9	<CRDL
	sodium	13800	13600	1.4%
	thallium	8.9B	5.1U	<CRDL
	vanadium	2.1B	2.9B	<CRDL
	zinc	8.7B	8.4B	<CRDL

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

The serial dilution results for calcium were outside control limits. All calcium data have been qualified as estimated based on the results.

8. Furnace QC

No furnace analyses were performed on the samples.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

11. General Comments

The temperature of the cooler for the samples collected on 10/1 was outside control limits (at 11.6°C) when received at the laboratory. No data have been qualified based on the deviation.

12. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checksheets

Inorganic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Form I to IX			
Are all the Form I through Form IX labeled with:			
Laboratory name?	X		
Sample No.?	X		
SDG No.?	X		
Correct units?	X		
Matrix?	X		
Raw Data			
Is the digestion log for flame AA/ICP present?	X		
Is the digestion log for furnace AA present?			X
Is the distillation log for mercury present?	X		
Is the distillation log for cyanides present?	X		
Are pH values listed?	X		
pH for metals analyses <2 (waters)?	X		
pH for cyanide analyses >12 (waters)?	X		
Percent solids calculation present for soils/sediments?			X
Are preparation dates present on sample preparation logs/bench sheets?	X		
Are the measurement read out records present for:			
ICP	X		
Flame AA			X
Furnace AA			X
Mercury	X		
Cyanides	X		
Is the data legible?	X		

	YES	NO	NA
Is the data properly labeled?	X		
Holding Times			
Were mercury analyses performed within 28 days?	X		
Were cyanide distillations performed within 14 days?	X		
Were other metal analysis performed within 6 months?	X		
Form I (Final Data)			
Are all forms complete?	X		
Are correct units indicated on Form I's?	X		
Are soil sample results for each parameter corrected for percent solids?			X
Are all "less than IDL" values properly coded with "U"?	X		
Are the correct concentration qualifiers used with final data?	X		
Is a brief physical description of samples given on Form I's?	X		
Calibration			
Is a record of at least 2 point calibration present for ICP analysis?	X		
Is a record of 5 point calibration present for Hg analysis?	X		
Is a record of 4 point calibration present for:			
Flame AA?			X
Furnace AA?			X
Cyanides?	X		
Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
Is correlation coefficient greater than .995 for:			
Mercury Analysis?	X		
Cyanide Analysis?	X		
Atomic Absorption Analysis?			X
Form II A (Initial and Continuing Calibration Verification)			
Present and complete for all analytes?	X		

	YES	NO	NA
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	X		
Hg (80-120%)?	X		
Cyanides (85-115%)?	X		
Was continuing calibration performed every 10 samples or every 2 hours?	X		
Was the ICV for cyanides distilled?	X		
Form II B (CRDL Standards for AA and ICP)			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?			X
Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis?	X		
Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run?	X		
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run?	X		
Are CRA and CRI standards within control limits for metals (60-120%)?	X		
Is mid-range standard within control limits for cyanide (80-120%)	X		
Form III (Initial and Continuing Calibration Blanks)			
Present and complete?	X		
Was an initial calibration blank analyzed?	X		
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
Form III (Preparation Blank)			
Was one prep. blank analyzed for:			
each Sample Delivery Group SDG)?	X		
each batch of digested samples?	X		
each matrix type?	X		

	YES	NO	NA
Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)?	X		
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?			X
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?			X
Is concentration of prep. blank below the negative CRDL?		X	
Form IV (ICP Interference Check Sample)			
Present and complete?	X		
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X		
Are all ICS results inside the control limits (±20%)?	X		
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for spiked sample?		X	
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?		X	
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	X		
Aqueous			
Are any spike recoveries:			
less than 30%?		X	
between 30-74%?	X		
between 126-150%?		X	
greater then 150%?		X	
Soil/Sediment			
Are any spike recoveries:			
less than 10%?			X

	YES	NO	NA
between 10-74%?			X
between 126-200%?			X
greater than 200%?			X
Form VI (Lab Duplicates)			
Present and complete for:			
each SDG?	X		
each matrix type?	X		
Was field blank used for duplicate analysis?		X	
Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?	X		
If no, are all results outside the control limits flagged with an * on Form I's and VI?			X
Aqueous			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?		X	
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?		X	
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?			X
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?			X
Field Duplicates			
Were field duplicates analyzed?	X		
Aqueous			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?		X	
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?		X	
Soil/Sediment			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?			X

	YES	NO	NA
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?			X
Form VII (Laboratory Control Sample)			
Was one LCS prepared and analyzed for:			
each SDG?	X		
each batch samples digested/distilled?	X		
Aqueous LCS			
Is any LCS recovery:			
less than 50%?		X	
between 50% and 79%?		X	
between 121% and 150%?		X	
greater than 150%?		X	
Solid LCS			
Is LCS "Found" value higher than the control limits on Form VII?			X
Is LCS "Found" lower than the control limits on Form VII?			X
Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each SDG?	X		
each matrix type?	X		
Was field blank(s) used for Serial Dilution Analysis?		X	
Are results outside control limit flagged with an "E"" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.	X		
Are any required % difference values:			
> 10%?	X		
≥100%?		X	
Furnace Atomic Absorption (AA) QC Analysis			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?			X

	YES	NO	NA
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?			X
Were dilutions analyzed for samples with analytical spike recovery less than 40%?			X
Is analytical spike recovery outside the control limits (85-115%) for any sample?			X
Form VIII (Method of Standard Addition Results)			
Present?		X	
If no, is any Form I result coded with "S" or "+"?		X	
Was MSA required for any sample but not performed?		X	
Is the coefficient of correlation for MSA less than 0.995 for any sample?			X
Is the coefficient of correlation for MSA less than 0.990 for any sample?			X
Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
Was proper quantitation procedure followed?			X
Dissolved/Total for Inorganic/Total Analytes			
Were any analyses performed for dissolved as well as total analytes on the same sample.		X	
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if greater than CRDL)			X
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?			X
Field Blank			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?			X
If no, was field blank value already rejected due to other QC criteria?			X
Form X, XI, XII (Verification of Instrumental Parameters)			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	X		
ICP Interelement Correlation Factors (annually)?	X		

	YES	NO	NA
ICP Linear Ranges (quarterly)?	X		
Are IDLs present for:			
all the analytes?	X		
all the instruments used?	X		
Is IDL greater than CRDL for any analyte?		X	
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.			X
Was any sample result higher than the linear range of ICP.		X	
Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
Percent Solids			
Are the percent solids in soil/sediment(s):			
< 50%?			X
< 10%?			X

Corrected Sample Analysis Data Sheets

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ENV-1

tract: 9910000004

Code: Case No.: SAS No.: SDG NO.: ENV1

rix (soil/water): WATER Lab Sample ID: 328799

el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22300			P
7440-36-0	Antimony	7.4	B	N	P
7440-38-2	Arsenic	42.1			P
7440-39-3	Barium	225			P
7440-41-7	Beryllium	0.16	B		P
7440-43-9	Cadmium	0.92	B		P
7440-70-2	Calcium	209000		E	P
7440-47-3	Chromium	38.2			P
7440-48-4	Cobalt	13.7	B		P
7440-50-8	Copper	53.1			P
7439-89-6	Iron	57500			P
7439-92-1	Lead	38.2			P
7439-95-4	Magnesium	38000			P
7439-96-5	Manganese	4690			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	46.1			P
7440-09-7	Potassium	9450			P
7782-49-2	Selenium	12.7			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	23700			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	48.3	B		P
7440-66-6	Zinc	143			P

olor Before: BROWN Clarity Before: CLOUDY Texture:

o After: YELLOW Clarity After: CLEAR Artifacts:

omments:

0108

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ENV-2

:ıtract: 9910000004

) Code: Case No.: SAS No.: SDG NO.: ENV1

:rix (soil/water): WATER Lab Sample ID: 328819

/el (low/med): LOW Date Received: 10/01/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7370			P
7440-36-0	Antimony	2.9	B	N UJ	P
7440-38-2	Arsenic	8.4	B		P
7440-39-3	Barium	135	B		P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	4.1	B		P
7440-70-2	Calcium	127000		E J	P
7440-47-3	Chromium	10.8			P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	48.3			P
7439-89-6	Iron	8240			P
7439-92-1	Lead	64.5			P
7439-95-4	Magnesium	5960			P
7439-96-5	Manganese	573			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	10.8	B		P
7440-09-7	Potassium	7260			P
7782-49-2	Selenium	15.7			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	7890			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	8.2	B		P
7440-66-6	Zinc	3000			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0123

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ENV-3

ıtract: 9910000004

ɔ Code: Case No.: SAS No.: SDG NO.: ENV1

:rix (soil/water): WATER Lab Sample ID: 328818

/el (low/med): LOW Date Received: 10/01/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7720			P
7440-36-0	Antimony	4.7	B	N J	P
7440-38-2	Arsenic	9.7	B		P
7440-39-3	Barium	128	B		P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	35100		E J	P
7440-47-3	Chromium	19.5			P
7440-48-4	Cobalt	7.8	B		P
7440-50-8	Copper	34.9			P
7439-89-6	Iron	39900			P
7439-92-1	Lead	82.0			P
7439-95-4	Magnesium	24600			P
7439-96-5	Manganese	1290			P
7439-97-6	Mercury	0.05	B		CV
7440-02-0	Nickel	20.6	B		P
7440-09-7	Potassium	11700			P
7782-49-2	Selenium	6.5			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	27.3	B		P
7440-66-6	Zinc	83.5			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0122

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ENV-4

ntract: 9910000004

) Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328805

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15000			P
7440-36-0	Antimony	61.9		N J	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	166	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	235000		E J	P
7440-47-3	Chromium	21.2			P
7440-48-4	Cobalt	8.4	B		P
7440-50-8	Copper	31.3			P
7439-89-6	Iron	14800			P
7439-92-1	Lead	18.5			P
7439-95-4	Magnesium	21300			P
7439-96-5	Manganese	538			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	25.7	B		P
7440-09-7	Potassium	19500			P
7782-49-2	Selenium	25.2			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	20000			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	33.0	B		P
7440-66-6	Zinc	80.1			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0112

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ENV-5

:tract: 9910000004

Code: Case No.: SAS No.: SDG NO.: ENV1

:rix (soil/water): WATER Lab Sample ID: 328806

:el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14000			P
7440-36-0	Antimony	2.9	B	N	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	139	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	124000		E	P
7440-47-3	Chromium	16.2			P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	31.4			P
7439-89-6	Iron	15900			P
7439-92-1	Lead	43.2			P
7439-95-4	Magnesium	28300			P
7439-96-5	Manganese	626			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	22.5	B		P
7440-09-7	Potassium	21900			P
7782-49-2	Selenium	8.3			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	27200			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	23.2	B		P
7440-66-6	Zinc	93.6			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0113

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ENV-6

tract: 9910000004

Code: Case No.: SAS No.: SDG NO.: ENV1

rix (soil/water): WATER Lab Sample ID: 328807

el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	29600			P
7440-36-0	Antimony	7.3	B	NJ	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	238			P
7440-41-7	Beryllium	2.0	B		P
7440-43-9	Cadmium	4.6	B		P
7440-70-2	Calcium	408000		EJ	P
7440-47-3	Chromium	53.3			P
7440-48-4	Cobalt	15.4	B		P
7440-50-8	Copper	58.2			P
7439-89-6	Iron	33400			P
7439-92-1	Lead	37.1			P
7439-95-4	Magnesium	48800			P
7439-96-5	Manganese	1610			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	48.2			P
7440-09-7	Potassium	39400			P
7782-49-2	Selenium	33.1			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	25300			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	27.1	B		P
7440-66-6	Zinc	159			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0114

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ESI-8

ntract: 9910000004

o Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328801

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5560			P
7440-36-0	Antimony	2.9	Ø	N W	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	113	B		P
7440-41-7	Beryllium	0.12	U		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	172000		E J	P
7440-47-3	Chromium	9.1	B		P
7440-48-4	Cobalt	3.7	B		P
7440-50-8	Copper	18.9	B		P
7439-89-6	Iron	6870			P
7439-92-1	Lead	9.9			P
7439-95-4	Magnesium	4920	B		P
7439-96-5	Manganese	268			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	12.5	B		P
7440-09-7	Potassium	21100			P
7782-49-2	Selenium	10.9			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	20200			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	10.6	B		P
7440-66-6	Zinc	53.4			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0110

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

FD093099

ıtract: 9910000004

› Code: Case No.: SAS No.: SDG NO.: ENV1

:rix (soil/water): WATER Lab Sample ID: 328811

/el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1240			P
7440-36-0	Antimony	2.9	B	N J	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	44.4	B		P
7440-41-7	Beryllium	0.12	U		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	274000		E J	P
7440-47-3	Chromium	2.2	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	3.1	B		P
7439-89-6	Iron	1040			P
7439-92-1	Lead	3.0			P
7439-95-4	Magnesium	1330	B		P
7439-96-5	Manganese	34.0			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	1.9	B		P
7440-09-7	Potassium	28600			P
7782-49-2	Selenium	5.9			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	13600			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	2.9	B		P
7440-66-6	Zinc	8.4	B		P

:olor Before: COLORLESS Clarity Before: CLEAR Texture:

:o r After: YELLOW Clarity After: CLEAR Artifacts:

:omments:

0117

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

GW-2

ıtract: 9910000004

› Code: Case No.: SAS No.: SDG NO.: ENV1

:rix (soil/water): WATER Lab Sample ID: 328800

/el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6590			P
7440-36-0	Antimony	2.9	B	N	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	190	B		P
7440-41-7	Beryllium	0.12	U		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	196000		E	P
7440-47-3	Chromium	9.6	B		P
7440-48-4	Cobalt	4.3	B		P
7440-50-8	Copper	24.3	B		P
7439-89-6	Iron	18200			P
7439-92-1	Lead	17.3			P
7439-95-4	Magnesium	36200			P
7439-96-5	Manganese	1260			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	14.1	B		P
7440-09-7	Potassium	10500			P
7782-49-2	Selenium	4.8	B		P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	43600			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	15.0	B		P
7440-66-6	Zinc	61.4			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

0109

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

GW-3

ntract: 9910000004

b Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328803

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	52900			P
7440-36-0	Antimony	2.9	U	N J	P
7440-38-2	Arsenic	15.1			P
7440-39-3	Barium	368			P
7440-41-7	Beryllium	4.2	B		P
7440-43-9	Cadmium	2.5	B		P
7440-70-2	Calcium	277000		E J	P
7440-47-3	Chromium	62.2			P
7440-48-4	Cobalt	35.0	B		P
7440-50-8	Copper	102			P
7439-89-6	Iron	67400			P
7439-92-1	Lead	76.4			P
7439-95-4	Magnesium	27000			P
7439-96-5	Manganese	1730			P
7439-97-6	Mercury	0.17	B		CV
7440-02-0	Nickel	91.0			P
7440-09-7	Potassium	24800			P
7782-49-2	Selenium	13.6			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	25500			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	75.7			P
7440-66-6	Zinc	298			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0111

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

GW-4

ıtract: 9910000004

Code: Case No.: SAS No.: SDG NO.: ENV1

rix (soil/water): WATER Lab Sample ID: 328812

el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	37300			P
7440-36-0	Antimony	13.9	B	N J	P
7440-38-2	Arsenic	30.8			P
7440-39-3	Barium	510			P
7440-41-7	Beryllium	2.2	B		P
7440-43-9	Cadmium	2.8	B		P
7440-70-2	Calcium	230000		E J	P
7440-47-3	Chromium	67.7			P
7440-48-4	Cobalt	27.9	B		P
7440-50-8	Copper	159			P
7439-89-6	Iron	94500			P
7439-92-1	Lead	276			P
7439-95-4	Magnesium	24200			P
7439-96-5	Manganese	3130			P
7439-97-6	Mercury	0.26			CV
7440-02-0	Nickel	79.5			P
7440-09-7	Potassium	24300			P
7782-49-2	Selenium	13.3			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	20800			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	91.9			P
7440-66-6	Zinc	548			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0118

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: GW-5

ntract: 9910000004

o Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328813

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8470			P
7440-36-0	Antimony	2.9	B	N J	P
7440-38-2	Arsenic	40.8			P
7440-39-3	Barium	184	B		P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	70400		E J	P
7440-47-3	Chromium	18.2			P
7440-48-4	Cobalt	9.2	B		P
7440-50-8	Copper	27.6			P
7439-89-6	Iron	34200			P
7439-92-1	Lead	14.2			P
7439-95-4	Magnesium	12500			P
7439-96-5	Manganese	552			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	23.8	B		P
7440-09-7	Potassium	17500			P
7782-49-2	Selenium	7.5			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	52400			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	21.6	B		P
7440-66-6	Zinc	87.6			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0119

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

GW-6

ntract: 9910000004

) Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328815

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2640			P
7440-36-0	Antimony	2.9	B	N	P
7440-38-2	Arsenic	3.7	B		P
7440-39-3	Barium	42.8	B		P
7440-41-7	Beryllium	0.12	U		P
7440-43-9	Cadmium	0.88	B		P
7440-70-2	Calcium	63000		E J	P
7440-47-3	Chromium	7.5	B		P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	16.7	B		P
7439-89-6	Iron	6080			P
7439-92-1	Lead	5.8			P
7439-95-4	Magnesium	10600			P
7439-96-5	Manganese	213			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	6.5	B		P
7440-09-7	Potassium	7330			P
7782-49-2	Selenium	4.2	U		P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	5480			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	7.8	B		P
7440-66-6	Zinc	29.7			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0120

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

GW-7

ıtract: 9910000004

› Code: Case No.: SAS No.: SDG NO.: ENV1

:rix (soil/water): WATER Lab Sample ID: 328809

/el (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	744			P
7440-36-0	Antimony	2.9	B	N	P
7440-38-2	Arsenic	4.0	B		P
7440-39-3	Barium	38.3	B		P
7440-41-7	Beryllium	0.32	B		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	254000		E	P
7440-47-3	Chromium	2.0	B		P
7440-48-4	Cobalt	2.7	B		P
7440-50-8	Copper	2.8	U		P
7439-89-6	Iron	918			P
7439-92-1	Lead	2.9	U		P
7439-95-4	Magnesium	1110	B		P
7439-96-5	Manganese	27.6			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	1.6	B		P
7440-09-7	Potassium	29300			P
7782-49-2	Selenium	4.2	U		P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	13800			P
7440-28-0	Thallium	8.9	B		P
7440-62-2	Vanadium	2.1	B		P
7440-66-6	Zinc	8.7	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0116

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

NW-1

ntract: 9910000004

b Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328816

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4540			P
7440-36-0	Antimony	3.9	B	N J	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	147	B		P
7440-41-7	Beryllium	0.12	U		P
7440-43-9	Cadmium	1.4	B		P
7440-70-2	Calcium	56900		E J	P
7440-47-3	Chromium	165			P
7440-48-4	Cobalt	4.5	B		P
7440-50-8	Copper	73.7			P
7439-89-6	Iron	29400			P
7439-92-1	Lead	79.5			P
7439-95-4	Magnesium	6470			P
7439-96-5	Manganese	2910			P
7439-97-6	Mercury	0.04	B		CV
7440-02-0	Nickel	19.8	B		P
7440-09-7	Potassium	4250	B		P
7782-49-2	Selenium	5.5			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	20800			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	72.4			P
7440-66-6	Zinc	114			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0121

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

NW-4

ntract: 9910000004

o Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328808

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36500			P
7440-36-0	Antimony	12.7	B	N J	P
7440-38-2	Arsenic	33.7			P
7440-39-3	Barium	447			P
7440-41-7	Beryllium	2.6	B		P
7440-43-9	Cadmium	3.4	B		P
7440-70-2	Calcium	190000		E J	P
7440-47-3	Chromium	65.2			P
7440-48-4	Cobalt	29.1	B		P
7440-50-8	Copper	132			P
7439-89-6	Iron	94300			P
7439-92-1	Lead	238			P
7439-95-4	Magnesium	40500			P
7439-96-5	Manganese	2460			P
7439-97-6	Mercury	0.21			CV
7440-02-0	Nickel	109			P
7440-09-7	Potassium	11300			P
7782-49-2	Selenium	60.5			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	12400			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	91.5			P
7440-66-6	Zinc	682			P

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0115

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

NW-5

ntract: 9910000004

b Code: Case No.: SAS No.: SDG NO.: ENV1

trix (soil/water): WATER Lab Sample ID: 328797

vel (low/med): LOW Date Received: 09/30/99

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2690			P
7440-36-0	Antimony	2.9	U	N J	P
7440-38-2	Arsenic	3.4	U		P
7440-39-3	Barium	74.7	B		P
7440-41-7	Beryllium	0.12	U		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	105000		E J	P
7440-47-3	Chromium	7.3	B		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	3400			P
7439-92-1	Lead	5.9			P
7439-95-4	Magnesium	20200			P
7439-96-5	Manganese	115			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	3.9	B		P
7440-09-7	Potassium	9670			P
7782-49-2	Selenium	15.1			P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	13100			P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	23.4			P

Color Before: YELLOW Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

0107

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ENV-1

Date Sampled :09/29/99 Order #:328799 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ENV-2

Date Sampled :10/01/99 Order #:328819 Sample Matrix:WATER
Date Received:10/01/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

0140

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ENV-3

Date Sampled :10/01/99 Order #:328818 Sample Matrix:WATER
Date Received:10/01/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ENV-4

Date Sampled :09/30/99
Date Received:09/30/99
Order #:328805
Submission #:9910000004
Sample Matrix:WATER

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ENV-5

Date Sampled :09/30/99 Order #:328806 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ENV-6

Date Sampled :09/30/99 **Order #:**328807 **Sample Matrix:**WATER
Date Received:09/30/99 **Submission #:**9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :ESI-8

Date Sampled :09/29/99 **Order #:**328801 **Sample Matrix:**WATER
Date Received:09/30/99 **Submission #:**9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0144	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :FD093099

Date Sampled :09/30/99 Order #:328811 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :GW-2

Date Sampled :09/29/99
Date Received:09/30/99
Order #:328800
Submission #:9910000004
Sample Matrix:WATER

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0196	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :GW-3

Date Sampled :09/29/99 Order #:328803 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :GW-4

Date Sampled :09/30/99 Order #:328812 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :GW-5

Date Sampled :09/30/99 Order #:328813 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :GW-6

Date Sampled :09/30/99 Order #:328815 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :GW-7

Date Sampled :09/30/99 Order #:328809 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :NW-1

Date Sampled :09/30/99 Order #:328816 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :NW-4

Date Sampled :09/30/99 Order #:328808 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

COLUMBIA ANALYTICAL SERVICES

Reported: 11/03/99

Blasland Bouck & Lee, Inc.
Project Reference:ENVIROTEK
Client Sample ID :NW-5

Date Sampled :09/29/99 Order #:328797 Sample Matrix:WATER
Date Received:09/30/99 Submission #:9910000004

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	0.0100	0.0100 U	MG/L	10/08/99	1.00

Laboratory Narrative

vlj2125

CASE NARRATIVE

COMPANY: Blasland Bouck & Lee
Envirotek
SUBMISSION #: 9910000004
SDG #ENV1

BBL water samples were collected on 09/29/99-10/01/99 and received at CAS on 09/30/99-10/01/99 in good condition. See attached CAS ASP batching log for a cross reference list between client ID and CAS order number.

INORGANIC ANALYSIS

Seventeen water samples were analyzed for TAL inorganics by 95ASP methodology.

Matrix Spike/Duplicate was performed on NW-4 as requested. All Blank Spikes were within limits. All MS recoveries of 75 -125 % were within limits except Antimony (63.9 %) and the data has been flagged with an "N". All RPD's were within limits. All Calcium data has been flagged with an "E" indicating the serial dilution for Calcium (13.7 %) was outside of QC limits of 10 %.

No other analytical or QC problems were encountered with these analyses.

VOLATILE ORGANICS

Seventeen water samples and two trip blanks were analyzed for the TCL volatiles by Method 95-1 by ASP methodology.

All Tuning criteria for BFB were met.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within acceptance limits.

Matrix Spike/Matrix Spike Duplicate was performed on NW-4 as requested. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits except 1,1-Dichlorethene, Benzene, Toluene and Chlorobenzene and have been flagged with an "*".

Several compounds for ENV-2 have been flagged with an "E" as an estimated value due to being outside the calibration range of the instrument. The sample repeated at a higher dilution and both results have been reported out.

The Laboratory Blanks associated with these samples were free of contamination except VBLK01, VBLK01 and VBLK03 contained a small hit for Acetone which was below the CRDL and has been flagged with a "J" . All affected data has been flagged with an "B".

All samples were analyzed within required holding times.

No other analytical or QC problems were encoutered.

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SEMIVOLATILE ORGANICS

Seventeen water samples were analyzed for TCL Semi-Volatiles by 95-2 by ASP methodology.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Matrix Spike/Matrix Spike Duplicate was performed on NW-4 as requested. All MS and Blank Spike recoveries were within limits. All MSD recoveries were within limits except Pentachlorophenol (111 %) which was above the accptanceimit of 103 % and has been flagged with an "*". All RPD's were within limits.

All samples were analyzed and extracted within required holding times.

The Laboratory blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

11/10/99
Date

NYSDEC Sample Preparation and Analysis Summary Sheets

SDG #: ENV1 CASE No.:
SUBMISSIO 9910000004
CLIENT: Blasland Bouck & Lee, Inc.
CLIENT REP: Janice Jaeger
PROJECT: ENVIROTEK

BATCH COMPLETE: __yes_____
DISKETTE REQUESTED: Y___ N__x__
DATE: 10/4/99
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 10/29/99
PROTOCOL: ASP-B
SHIPPING No.:

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLE	DATE RECEIVE	pH (SOLIDS)	% SOLIDS	REMARKS AMPLE CONDITIO
328797	NW-5	WATER	95-1,95-2,TAL MET,CN	9/29/99	9/30/99			
328799	ENV-1	WATER	95-1,95-2,TAL MET,CN	9/29/99	9/30/99			
328800	GW-2	WATER	95-1,95-2,TAL MET,CN	9/29/99	9/30/99			
328801	ESI-8	WATER	95-1,95-2,TAL MET,CN	9/29/99	9/30/99			
328803	GW-3	WATER	95-1,95-2,TAL MET,CN	9/29/99	9/30/99			
328805	ENV-4	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328806	ENV-5	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328807	ENV-6	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328808QC	NW-4	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328809	GW-7	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328811	FD093099	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328812	GW-4	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328813	GW-5	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328815	GW-6	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328816	NW-1	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328817	TRIP BLANK 1	WATER	95-1,95-2,TAL MET,CN	9/30/99	9/30/99			
328818	ENV-3	WATER	95-1,95-2,TAL MET,CN	10/1/99	10/1/99			
328819	ENV-2	WATER	95-1,95-2,TAL MET,CN	10/1/99	10/1/99			
328820	TRIP BLANK 2	WATER	95-1,95-2,TAL MET,CN	10/1/99	10/1/99			
328995	COOLER BLANK	WATER	95-1,95-2,TAL MET,CN	9/30/99	10/1/99			

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

tomer nple le	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
NW-5	328797	X	X			X	X
ENV-1	328799	X	X			X	X
GW-2	328800	X	X			X	X
ESI-8	328801	X	X			X	X
GW-3	328803	X	X			X	X
ENV-4	328805	X	X			X	X
ENV-5	328806	X	X			X	X
ENV-6	328807	X	X			X	X
NW-4	328808	X	X			X	X
GW-7	328809	X	X			X	X
FD093099	328811	X	X			X	X
GW-4	328812	X	X			X	X
GW-5	328813	X	X			X	X
GW-6	328815	X	X			X	X
W-1	328816	X	X			X	X
RIP BLANK 1	328817	X					
ENV-3	328818	X	X			X	X
ENV-2	328819	X	X			X	X
RIP BLANK 2	328820	X					

heck Appropriate Boxes
LP, Non-CLP
SL, Priority Pollutant
F1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
328797	WATER	09/29/99	09/30/99	LOW	10/05/99
328799	WATER	09/29/99	09/30/99	LOW	10/06/99
328800	WATER	09/29/99	09/30/99	LOW	10/06/99
328801	WATER	09/29/99	09/30/99	LOW	10/06/99
328803	WATER	09/29/99	09/30/99	LOW	10/06/99
328805	WATER	09/30/99	09/30/99	LOW	10/06/99
328806	WATER	09/30/99	09/30/99	LOW	10/06/99
328807	WATER	09/30/99	09/30/99	LOW	10/06/99
328808	WATER	09/30/99	09/30/99	LOW	10/05/99
328809	WATER	09/30/99	09/30/99	LOW	10/06/99
328811	WATER	09/30/99	09/30/99	LOW	10/06/99
328812	WATER	09/30/99	09/30/99	LOW	10/06/99
328813	WATER	09/30/99	09/30/99	LOW	10/06/99
328815	WATER	09/30/99	09/30/99	LOW	10/06/99
328816	WATER	09/30/99	09/30/99	LOW	10/06/99
328817	WATER	09/30/99	09/30/99	LOW	10/06/99
328818	WATER	10/01/99	10/01/99	LOW	10/06/99
328819	WATER	10/01/99	10/01/99	LOW	10/06,07/99
328820	WATER	10/01/99	10/01/99	LOW	10/07/99

NCF5 5/91

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
328797	WATER	95-1			1.0
328799	WATER	95-1			1.0
328800	WATER	95-1			1.0
328801	WATER	95-1			1.0
328803	WATER	95-1			1.0
328805	WATER	95-1			1.0
328806	WATER	95-1			1.0
328807	WATER	95-1			1.0
328808	WATER	95-1			1.0
328809	WATER	95-1			1.0
328811	WATER	95-1			1.0
328812	WATER	95-1			1.0
328813	WATER	95-1			1.0
328815	WATER	95-1			1.0
328816	WATER	95-1			1.0
328817	WATER	95-1			1.0
328818	WATER	95-1			1.0
328819	WATER	95-1			1.0
328820	WATER	95-1			1.0

NCF2 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
B/N-A
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	DATE EXTRACTED	DATE ANALYZED
328797	WATER	09/29/99	09/30/99	10/04/99	10/05/99
328799	WATER	09/29/99	09/30/99	10/04/99	10/05/99
328800	WATER	09/29/99	09/30/99	10/04/99	10/05/99
328801	WATER	09/29/99	09/30/99	10/04/99	10/05/99
328803	WATER	09/29/99	09/30/99	10/04/99	10/06/99
328805	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328806	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328807	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328808	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328809	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328811	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328812	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328813	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328815	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328816	WATER	09/30/99	09/30/99	10/04/99	10/06/99
328818	WATER	10/01/99	10/01/99	10/04/99	10/07/99
328819	WATER	10/01/99	10/01/99	10/04/99	10/06/99

NCF4 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
328797	WATER	95-2			1.0
328799	WATER	95-2			1.0
328800	WATER	95-2			1.0
328801	WATER	95-2			1.0
328803	WATER	95-2			1.0
328805	WATER	95-2			1.0
328806	WATER	95-2			1.0
328807	WATER	95-2			1.0
328808	WATER	95-2			1.0
328809	WATER	95-2			1.0
328811	WATER	95-2			1.0
328812	WATER	95-2			1.0
328813	WATER	95-2			1.0
328815	WATER	95-2			1.0
328816	WATER	95-2			1.0
328818	WATER	95-2			1.0
328819	WATER	95-2			1.0

NCF2 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
328797	WATER	METALS	9/30/99	10/27,29/99
328799	WATER	METALS	9/30/99	10/27,29/99
328800	WATER	METALS	9/30/99	10/27,29/99
328801	WATER	METALS	9/30/99	10/27,29/99
328803	WATER	METALS	9/30/99	10/27,29/99
328805	WATER	METALS	9/30/99	10/27,29/99
328806	WATER	METALS	9/30/99	10/27,29/99
328807	WATER	METALS	9/30/99	10/27,29/99
328808	WATER	METALS	9/30/99	10/27,29/99
328809	WATER	METALS	9/30/99	10/27,29/99
328811	WATER	METALS	9/30/99	10/27,29/99
328812	WATER	METALS	9/30/99	10/27,29/99
328813	WATER	METALS	9/30/99	10/27,29/99
328815	WATER	METALS	9/30/99	10/27,29/99
328816	WATER	METALS	9/30/99	10/27,29/99
328818	WATER	METALS	10/1/99	10/27,29/99
328819	WATER	METALS	10/1/99	10/27,29/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
328797	WATER	HG	9/30/99	10/19/99
328799	WATER	HG	9/30/99	10/19/99
328800	WATER	HG	9/30/99	10/19/99
328801	WATER	HG	9/30/99	10/19/99
328803	WATER	HG	9/30/99	10/19/99
328805	WATER	HG	9/30/99	10/19/99
328806	WATER	HG	9/30/99	10/19/99
328807	WATER	HG	9/30/99	10/19/99
328808	WATER	HG	9/30/99	10/19/99
328809	WATER	HG	9/30/99	10/19/99
328811	WATER	HG	9/30/99	10/19/99
328812	WATER	HG	9/30/99	10/19/99
328813	WATER	HG	9/30/99	10/19/99
328815	WATER	HG	9/30/99	10/19/99
328816	WATER	HG	9/30/99	10/19/99
328818	WATER	HG	10/1/99	10/19/99
328819	WATER	HG	10/1/99	10/19/99

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE ANALYZED
328797	WATER	CN	9/30/99	10/8/99
328799	WATER	CN	9/30/99	10/8/99
328800	WATER	CN	9/30/99	10/8/99
328801	WATER	CN	9/30/99	10/8/99
328803	WATER	CN	9/30/99	10/8/99
328805	WATER	CN	9/30/99	10/8/99
328806	WATER	CN	9/30/99	10/8/99
328807	WATER	CN	9/30/99	10/8/99
328808	WATER	CN	9/30/99	10/8/99
328809	WATER	CN	9/30/99	10/8/99
328811	WATER	CN	9/30/99	10/8/99
328812	WATER	CN	9/30/99	10/8/99
328813	WATER	CN	9/30/99	10/8/99
328815	WATER	CN	9/30/99	10/8/99
328816	WATER	CN	9/30/99	10/8/99
328818	WATER	CN	10/1/99	10/8/99
328819	WATER	CN	10/1/99	10/8/99

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
ENV1	9/29/99	1995	NW-5	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/29/99	1995	ENV-1	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/29/99	1995	GW-2	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/29/99	1995	ESI-8	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/29/99	1995	GW-3	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	ENV-4	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	ENV-5	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	ENV-6	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	NW-4	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	GW-7	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	FD093099	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d

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Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOA	BNA	PCB	TAL	
ENV1	9/30/99	1995	GW-4	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	GW-5	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	GW-6	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	9/30/99	1995	NW-1	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	--	1995	TRIP BLANK 1	water	no	--	--	--	VOA - cal[3]
ENV1	10/1/99	1995	ENV-3	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2], cal[3] TAL - ms, ser.d
ENV1	10/1/99	1995	ENV-2	water	no	no	--	no	VOA - ms[2], cal[3] BNA - ms[2] TAL - ms, ser.d
ENV1	--	1995	TRIP BLANK 2	water	no	--	--	--	VOA - cal[3]

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.
2 The non-compliance resulted in no qualification of data.
3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.