23984
Dover Gas Light
GW splits
VOA/SVOA
8/13-15
1991
12A
6B
10A
63

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401
(301) 266-9180

DATE : November 8, 1991

SUBJECT : Region III Data QA Review

FROM : Theresa A. Simpson TAS
Region III ESAT RPO (3ES23)

TO : Randy Sturgeon
Regional Project Manager (3HW25)

Attached is the organic data validation report for the Dover Gas Light Site (Case 16965) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

If you have any questions regarding this review, please call me.

Attachment

cc: Michael Herz, Dynamac
Edward Kantor, EMSL-LV
Regional CLP TPO: Stevie Wilding Region: III Lab Code: RECMD

TID File: 03911018 Task 1016

revised 03/91

AR301123

Lockheed\ESAT Region III

1419 Forest Drive, Suite 104
Annapolis, Maryland 21401

DATE: November 1, 1991

SUBJECT: Organic Data Validation for Case 16965
Site: Dover Gas Light

FROM: Kenneth Curry KWC — Organic Data Reviewer
Mahboobeh Mecanic MM — Senior oversight chemist

TO: Terry Simpson
ESAT Regional Project Officer

THRU: Julie Zalikowski JAZ
ESAT Assistant Team Manager

OVERVIEW

Case 16965 consisted of nine (9) aqueous samples submitted to RECMD for volatiles and semivolatiles analyses. The case included one (1) trip blank, which was analyzed for volatiles only, one "AQ" blank, one (1) equipment rinsate blank, and one (1) field duplicate pair. The samples were analyzed as a Contract Laboratory Program (CLP) Routine Analytical Service (RAS).

SUMMARY

All samples were successfully analyzed for all target compounds. All instrument and method sensitivities were according to the Contract Laboratory Program (CLP) Routine Analytical Service (RAS) protocol.

MINOR PROBLEMS

- Several compounds failed precision criteria in the volatiles and semivolatiles initial and/or continuing calibrations. The quantitation limits were qualified "UJ" and positive results were qualified "J", except when superseded by the "B" qualifier, for these compounds in the affected samples. (See Table I in Appendix F.)

NOTES

- The maximum concentrations of all compounds found in the analyses of the trip, equipment rinsate, AQ, or laboratory method blanks are listed below. Samples with concentrations of common laboratory contaminants less than ten times (<10X) the blank concentrations, or with concentrations of other contaminants less than five times (<5X) the blank concentrations, have been qualified "B" on the data summary forms.

Compound	Concentration (µg/L)
methylene chloride*	6 J
acetone *	26
carbon disulfide	2 J

* = Common laboratory contaminant

- Non-spiked compounds, other than blank contaminants, were determined in sample CEB78 and the MS/MSD analyses of this sample. The results and precision estimates are as follows:

Compound	Concentration (µg/L) CEB78	MS	MSD	%RSD
tetrachloroethene	2 J	2 J	1 J	60
diethylphthate	ND	1 J	2 J	67+
bis(2-ethylhexyl)phthate	ND	1 J	2 J	67+

%RSD = Percent Relative Standard Deviation
ND = Not Detected
+ = Value is RPD (Relative Percent Difference)

- One (1) field duplicate pair was analyzed. 1,2-dichloroethene (total) and tetrachloroethene were determined in one (1) of the duplicate samples at concentrations of 79 and 460 ug/L, respectively. These compounds were not detected in the other field duplicate sample and, therefore, no useful comparison can be made.

- The volatile analysis of samples CEB30 and CEB83 were performed at dilution to correct for tetrachloroethane which exceeded the linear calibration range in the initial analysis. The CRQLs are elevated because of the dilutions for these samples.

- The tentatively identified compounds (TICs) in Appendix D were reviewed and corrected during data validation. Compounds identified as blank contaminants were crossed off the TIC Form Is.

All data for Case 16965 were reviewed in accordance with the Functional Guidelines for Evaluating Organic Analyses with Modifications for use within Region III. The text of this report addresses only those problems affecting usability.

ATTACHMENTS

1) Appendix A - Glossary of Data Qualifiers
2) Appendix B - Data Summary. These include:
   (a) All positive results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R").
3) Appendix C - Results as Reported by the Laboratory for All Target Compounds
4) Appendix D - Reviewed and Corrected Tentatively Identified Compounds
5) Appendix E - Organic Regional Data Assessment Summary
6) Appendix F - Support Documentation

DCN: KC111A01.DOV

Appendix A

Glossary of Data Qualifiers

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATING TO IDENTIFICATION
(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tenative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: DOVER GAS LIGHT

WATER SAMPLES
(µg/L)

Case #: 16965 Sampling Date(s): 8/13-8/15/91

To calculate sample quantitation limit: (CRQL * Dilution Factor)

AB301130

CRQL	COMPOUND	CEB29		CEB30		CEB78		CEB79		CEB80		CEB81		CEB82		CEB83		CEB84	
	Dilution Factor	1.0		4.0		1.0		1.0		1.0		1.0		1.0		2.5		1.0	
	Location	DG-12A-GW-01		DG-12A-GW03		DG-6B-GW01		DG-10A-GW01		DG-6C-GW01		AQ BLANK		EQIP BLANK		DG12B GW01		TRIP BLANK	
		FIELD Dup of CEB 30		FIELD Duplicate of CEB29								A.Q BLANK		Equipment RINSE				TRIP BLANK	
10	Chloromethane		4J																
10	Bromomethane																		
10	*Vinyl Chloride																		
10	Chloroethane																		
10	*Methylene Chloride	5	B	33	B	1	B	9	B	2	B	1	B	2	B	10	B		4
10	Acetone	23	B		4J		4J		4J		4J	8	B		4J	93	B		4J
10	Carbon Disulfide													2	B			2	J
10	*1,1-Dichloroethene																		
10	1,1-Dichloroethane																		
10	*Total 1,2-Dichloroethene			79												28			
10	Chloroform																		
10	*1,2-Dichloroethane																		
10	*2-Butanone				4J				4J										
10	*1,1,1-Trichloroethane			4	J														
10	*Carbon Tetrachloride																		
10	Bromodichloromethane																		

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: VOLATILES 2

Site Name: DOVER GAS LIGHT

WATER SAMPLES
(µg/L)

Case #: 16965 Sampling Date(s): 8/13-8/15/91

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	CEB 29		CEB 30		CEB 78		CEB 79		CEB 80		CEB 81		CEB 82		CEB 83		CEB 84	
	Dilution Factor	1.0		4.0		1.0		1.0		1.0		1.0		1.0		2.5		1.0	
	Location	DG-12A-GW01 Field Duplicate of CEB30		DG-12A-GW03 Field Duplicate of CEB29		DG-GC-GW01		DG-10A GW01		DG-GC-GW01		A.Q BLANK A.Q BLANK		EQUIPMENT RINSE		DG12AGW01		TRIP BLANK TRIP BLANK	
10	*1,2-Dichloropropane																		
10	Cis-1,3-Dichloropropane																		
10	Trichloroethene																		
10	Dibromochloromethane															14	J		
10	1,1,2-Trichlorethane																		
10	*Benzene																		
10	Trans-1,3-Dichloropropene																		
10	Bromoform																		
10	4-Methyl-2-pentanone																		
10	2-Hexanone		UJ																
10	*Tetrachloroethene			460		2	J			6	J					420			
10	1,1,2,2-Tetrachloroethane																		
10	*Toluene																		
10	*Chlorobenzene																		
10	*Ethylbenzene																		
10	*Styrene																		
10	*Total Xylenes																		

CRQL = Con[illegible] Required Quantitation Limit * [illegible] Level Exists SEE NARRATIVE FOR [illegible] DEFINITIONS

revised 07/90

DATA SUMMARY FORM: B N A S 1

Site Name: DOVER GAS LIGHT

WATER SAMPLES
(µg/L)

Case #: 109965 Sampling Date(s): 8/13-8/15/91

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	CEB29		CEB30		CEB28		CEB27		CEB30		CEB81		CEB82		CEB83			
	Sample No.	CEB29		CEB30		CEB28		CEB27		CEB30		CEB81		CEB82		CEB83			
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0			
	Location	DG-12A-6001 Field Duplicate of CEB29		DG-12A-6003 Field Duplicate of CEB29		DG-12B-6001		DG-10A-6001		DG-10B-6001		AQ BLANK AQ BLANK		EQUIPMENT BLK Equipment Rinse		DG-12B-6001			
10	Phenol																		
10	bis(2-Chloroethyl)ether						U5				U5		U5		U5		U5		
10	2-Chlorophenol																		
10	*1,3-Dichlorobenzene																		
10	*1,4-Dichlorobenzene																		
10	1,2-Dichlorobenzene																		
10	2-Methylphenol																		
10	2,2'-Oxybis(1-chloropropane)																		
10	4-Methylphenol																		
10	N-Nitroso-di-n-propylamine																		
10	Hexachloroethane																		
10	Nitrobenzene																		
10	Isophorone																		
10	2-Nitrophenol																		
10	2,4-Dimethylphenol																		
10	bis(2-Chloroethoxy)methane																		
10	2,4-Dichlorophenol																		
10	1,2,4-Trichlorobenzene																		
10	Naphthalene															2	J		
10	4-Chloroaniline																		

CRQL = Contract Required Quantitation Limit

A01132

DATA SUMMARY FORM: B N A S 2

Site Name: Dover Gas Light

WATER SAMPLES
(µg/L)

Case #: 16965 Sampling Date(s): 8/13-8/15/91

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

AR311133

CRQL	COMPOUND	CEB29		CEB30		CEB78		CEB79		CEB80		CEB81		CEB82		CEB83			
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0			
	Location	DG-12A-GW01		DG-12A-GW03		DG-6B-GW01		DG-10A-GW01		DG-6C-GW01		AQ BLANK		EQUIP BLK		DG-12B-GW01			
		Field Duplicate of CEB30		Field Duplicate of CEB29								AQ BLANK		Equipment RINSE					
10	Hexachlorobutadiene						UJ				UJ		UJ		UJ		UJ		
10	4-Chloro-3-methylphenol																		
10	2-Methylnaphthalene																		
10	Hexachlorocyclopentadiene						UJ				UJ		UJ		UJ		UJ		
10	2,4,6-Trichlorophenol																		
25	2,4,5-Trichlorophenol																		
10	2-Chloronaphthalene																		
25	2-Nitroaniline																		
10	Dimethylphthalate																		
10	Acenaphthylene																		
10	2,6-Dinitrotoluene																		
25	3-Nitroaniline																		
10	Acenaphthene																		
25	2,4-Dinitrophenol		UJ		UJ				UJ										
25	4-Nitrophenol																		
10	Dibenzofuran																		
10	2,4-Dinitrotoluene																		
10	Diethylphthalate					1	J												
10	4-Chlorophenyl-phenylether																		
10	Fluorene																		
25	4-Nitroaniline																		
25	4,6-Dinitro-2-methylphenol																		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 07/90

DATA SUMMARY FORM: B N A S 3

WATER SAMPLES
(µg/L)

Site Name: Dover Gas Light

Case #: 16965 Sampling Date(s): 8/13-8/15/91

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	CEB29	CEB30	CEB78	CEB79	CEB80	CEB81	CEB82	CEB83
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Location	DG-12A-GW01	DG-12A-GW03	DG-6B-GW01	DG-10A GW01	DG-6C-GW01	AQ BLANK	EQUIP BLK	DG-12B-GW1
		Field Duplicate of CEB30	Field Duplicate of CEB29				AQ Blank	Equip. Rinse	
10	N-Nitrosodiphenylamine								
10	4-Bromophenyl-phenylether								
10	*Hexachlorobenzene			4J		4J	4J	4J	4J
25	*Pentachlorophenol								
10	Phenanthrene								
10	Anthracene								
10	Carbazole								
10	Di-n-butylphthalate								
10	Fluoranthene								
10	Pyrene								
10	Butylbenzylphthalate								
10	3,3'-Dichlorobenzidine			4J		4J	4J	4J	4J
10	Benzo(a)anthracene								
10	Chrysene								
10	bis(2-Ethylhexyl)phthalate				0.8 J			5 J	
10	Di-n-octylphthalate								
10	Benzo(b)fluoranthene								
10	Benzo(k)fluroanthene								
10	Benzo(a)pyrene								
10	Indeno(1,2,3-cd)pyrene								
10	Dibenz(a,h)anthracene								
10	Benzo(g,h,i)perylene								

CRQL = Contract Required Quantitation Limit

Appendix C

Results as Reported by the Laboratory
for all Target Compounds

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB29

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2222

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF721

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/16/91

GC Column: SP-1000 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	5	BJ
67-64-1	Acetone	23	B
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

AR301136

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB29

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2222

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE155

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB29

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2222

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE155

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB30

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2223

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF737

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 4.0

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	40	U
74-83-9	Bromomethane	40	U
75-01-4	Vinyl Chloride	40	U
75-00-3	Chloroethane	40	U
75-09-2	Methylene Chloride	33	BJ
67-64-1	Acetone	40	U
75-15-0	Carbon Disulfide	40	U
75-35-4	1,1-Dichloroethene	40	U
75-34-3	1,1-Dichloroethane	40	U
540-59-0	1,2-Dichloroethene (total)	79	
67-66-3	Chloroform	40	U
107-06-2	1,2-Dichloroethane	40	U
78-93-3	2-Butanone	40	U
71-55-6	1,1,1-Trichloroethane	4	J
56-23-5	Carbon Tetrachloride	40	U
75-27-4	Bromodichloromethane	40	U
78-87-5	1,2-Dichloropropane	40	U
10061-02-6	cis-1,3-Dichloropropene	40	U
79-01-6	Trichloroethene	40	U
124-48-1	Dibromochloromethane	40	U
79-00-5	1,1,2-Trichloroethane	40	U
71-43-2	Benzene	40	U
10061-01-5	trans-1,3-Dichloropropene	40	U
75-25-2	Bromoform	40	U
108-10-1	4-Methyl-2-Pentanone	40	U
591-78-6	2-Hexanone	40	U
127-18-4	Tetrachloroethene	460	
79-34-5	1,1,2,2-Tetrachloroethane	40	U
108-88-3	Toluene	40	U
108-90-7	Chlorobenzene	40	U
100-41-4	Ethylbenzene	40	U
100-42-5	Styrene	40	U
1330-20-7	Xylene (total)	40	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB30

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2223

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE156

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB30

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2223

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE156

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF323

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	1	BJ
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE174

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE174

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	1	J
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB79

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2224

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF735

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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	9	BJ
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB79

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE157

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

AR301146

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB79

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE157

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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	0.8	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

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB80

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2227

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF324

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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	2	BJ
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

AR301148

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB80

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2227

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE175

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB80

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2227

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE175

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

Lab Name: RECRA ENVIRON Contract: 68-D0-0138

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2228

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF325

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	1	BJ
67-64-1	Acetone	8	BJ
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB81

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2228

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE176

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB81

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2228

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE176

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB82

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2230

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF327

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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	2	BJ
67-64-1	Acetone	10	U
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB82

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2230

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE177

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB82

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2230

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE177

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB83

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2225

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF756

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/21/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 2.5

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	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	25	U
75-00-3	Chloroethane	25	U
75-09-2	Methylene Chloride	10	BJ
67-64-1	Acetone	93	B
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
540-59-0	1,2-Dichloroethene (total)	28	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-02-6	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	14	J
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	25	U
10061-01-5	trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	420	
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	25	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB83

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2225

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE173

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB83

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2225

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE173

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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	5	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

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB84

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2229

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF326

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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	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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

FORM I VOA

Appendix D

Reviewed and Corrected Tentatively Identified Compounds

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB29

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2222

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF721

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/16/91

GC Column: SP-1000 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	25.45	25	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB29

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2222

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE155

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.88~~	~~8~~	~~BJN~~
~~2.~~	~~UNKNOWN~~	~~7.23~~	~~4~~	~~BJ~~
3. 105602	Caprolactam	10.41	95	JN

AR301163

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB30

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2223

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF737

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 4.0

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

FORM I VOA-TIC

AR301164

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB30

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2223

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE156

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.90~~	~~20~~	~~BJN~~
~~2.~~	~~UNKNOWN~~	~~7.24~~	~~4~~	~~BJ~~
3. 105602	Caprolactam	10.41	100	JN

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB78

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF323

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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~~	~~1.27~~	~~16~~	BJ

FORM I VOA-TIC

AR301166

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB78

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE174

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 372504~~	~~2-Pyrrolidinone, 1-methyl~~	~~6.89~~	~~20~~	~~BJN~~
2. 105602	Caprolactam	10.98	1000	JN
3.	UNKNOWN	20.54	4	J
4.	UNKNOWN	21.85	4	J
5.	UNKNOWN	22.04	4	J
6. 4337659	HEXANEDIOIC ACID, MONO(2-ETH	22.87	3	JN
7. 85609	Phenol, 4,4'-butylidenebis[2	25.44	26	JN
8.	UNKNOWN	28.36	12	J
9.	UNKNOWN	28.48	120	J
10.	UNKNOWN	29.70	100	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB79

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2224

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF735

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB79

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE157

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.89~~	~~10~~	~~BJN~~
2. 105602	Caprolactam	10.50	180	JN
3. 1610180	Prometon (ACN)	16.60	2	JN
4. 4337659	HEXANEDIOIC ACID, MONO(2-ETH	22.89	8	JN
5. 85609	Phenol, 4,4'-butylidenebis[2	25.46	6	JN
6.	UNKNOWN	28.49	85	J
7.	UNKNOWN	29.71	65	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB80

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2227

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF324

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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~~	~~1.35~~	~~26~~	~~BJ~~
2.	UNKNOWN	28.80	5	J

FORM I VOA-TIC 3/90

AR301170

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB80

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2227

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE175

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.89~~	~~6~~	BJN
2. 105602	Caprolactam	10.69	430	JN
3. 10544500	Sulfur, mol. (S8)	20.05	3	JN
4.	UNKNOWN	28.39	4	J

Kw 10/

AR301171

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB81

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2228

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF325

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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~~	1.01	79	BJ
~~2.~~	~~UNKNOWN~~	~~2.06~~	~~8~~	J

10/3

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB81

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2228

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE176

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.86~~	~~6~~	BJN

FORM I SV-TIC

AR301173

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB82

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2230

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF327

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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~~	~~1.29~~	20	BJ
~~2.~~	UNKNOWN	2.02	8	BJ

AR301174

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB82

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2230

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE177

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.87~~	~~6~~	~~BJN~~
~~2.~~	~~UNKNOWN~~	~~7.21~~	~~4~~	~~BJ~~

FORM I SV-TIC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB83

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2225

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF756

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/21/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 2.5

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

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB83

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2225

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE173

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 19

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 872504~~	~~2-Pyrrolidinone, 1-methyl-~~	~~6.92~~	~~12~~	~~BJN~~
2. 105602	Caprolactam	11.33	1400	JN
3.	UNKNOWN	14.50	60	J
4. 544638	Tetradecanoic acid	16.71	16	JN
5. 57103	Hexadecanoic acid	18.83	29	JN
6. 2440224	Phenol, 2-(2H-benzotriazol-2	20.17	55	JN
7.	UNKNOWN	20.60	85	J
8. 5711421	Octadecanoic acid	20.79	26	JN
9.	UNKNOWN	21.18	20	J
10.	UNKNOWN HYDROCARBON	21.94	12	J
11.	UNKNOWN	22.14	19	J
12.	UNKNOWN	22.65	12	J
13.	UNKNOWN HYDROCARBON	22.81	7	J
14. 4337659	HEXANEDIOIC ACID, MONO(2-ETH	22.88	10	JN
15. 1740198	1-Phenanthrenecarboxylic aci	23.52	7	JN
16.	UNKNOWN	24.33	8	J
17. 85609	Phenol, 4,4'-butylidenebis[2	25.45	7	JN
18.	UNKNOWN	28.48	24	J
19.	UNKNOWN	29.70	24	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CEB84

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2229

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF326

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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~~	~~1.14~~	81	BJ
~~2.~~	~~UNKNOWN~~	~~2.14~~	8	BJ

FORM I VOA-TIC 3/90

Appendix E

Organic Regional Data Assessment Summary

TPO: [ ] ACTION [X] FYI Region III

ORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO: 16965
SDG NO: CEB29
SOW: 3/90
NO. OF SAMPLES: 9

LABORATORY: RECMD
DATA USER: Stevie Wilding
REVIEW COMPLETION DATE: 10/31/91
MATRIX: Aqueous

REVIEWER: ESAT

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	O	O		
2. GC-MS TUNE/GC PERFORMANCE	O	O		
3. INITIAL CALIBRATIONS	X	O		
4. CONTINUING CALIBRATION	X	X		
5. FIELD BLANKS (F=NOT APPLICABLE)	X	O		
6. LABORATORY BLANKS	X	O		
7. SURROGATES	O	O		
8. MATRIX SPIKE/DUPLICATES	O	O		
9. REGIONAL QC (F=NOT APPLICABLE)	F	F		
10. INTERNAL STANDARDS	O	O		
11. COMPOUND IDENTIFICATION	O	O		
12. COMPOUND QUANTITATION	O	O		
13. SYSTEM PERFORMANCE	O	O		
14. OVERALL ASSESSMENT	X	X		

O = No problems or minor problems that do not affect data usability
X = No more than about 5% of the data points are qualified as either estimated or unusable.
M = More than about 5% of the data points are qualified as estimated.
Z = More than about 5% of the data points are qualified as unusable.
A = TPO action requested; use in conjunction with one of the above codes.

TPO ACTION ITEMS:

AREAS OF CONCERN: (Documentation Attached, See Following Pages)

ORGANIC REGIONAL DATA ASSESSMENT SUMMARY NOTES
Case 16965 SDG CEB29 Aqueous Samples

Item 3A One (1) or two (2) compounds had %RSDs greater than 30% in the volatiles initial calibrations. (See Table I in Appendix F.)

Item 4A Several compounds had %Ds greater than 25% in the volatiles continuing calibrations. (See Table I in Appendix F.)

Item 4B Several compounds had %Ds greater than 25% in the semivolatiles continuing calibrations. (See Table in Appendix F.)

Item 5A The maximum concentrations of all compounds found in the analyses of the trip, AQ, or equipment rinsate blanks are listed below.

Compound	Concentration (µg/L)
methylene chloride*	2 J
acetone *	8 J
carbon disulfide	2 J

* = Common laboratory contaminant

Item 6A Methylene chloride and acetone (common laboratory contaminants) were determined in the analysis of the laboratory method blanks at concentrations of 6J and 26 ug/L, respectively.

Item 7B One (1) acid surrogate recovery was above the QC limits in samples CEB78, CEB78 MS/MSD, CEB80, and CEB83. No data were affected. (See Form II-SV in Appendix F.)

Item 8A The volatile MS/MSD analyses of sample CEB78 had two (2) out of five (5) RPDs outside the QC limits. (See Form III - VOA in Appendix F.)

Item 8B The semivolatiles MS/MSD analyses of sample CEB78 had one (1) out of eleven (11) RPDs and four (4) out of twenty-two (22) spike recoveries outside the QC limits. (See Form III - SV in Appendix F.)

Appendix F

Support Documentation

ENVIRONMENTAL PROTECTION AGENCY REGION III
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS No. 16965 CONTRACTOR ESAT

Instrument# 70011	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/16/91 1325			8/19/91 1120											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane					27.2	C									
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride		34.7	I+		26.1	C+									
Acetone		34.5	I+												
Carbon Disulfide															
1,1-Dichloroethene															
1,1-Dichloroethane															
Total-1,2-Dichloroethene															
Chloroform															
1,2-Dichloroethane															
2-Butanone															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
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															
Ethylbenzene															
Styrene															
Total Xylenes															

AFFECTED SAMPLES:

ALL	VBLK W1
SAMPLES	CER 79
ON THIS	CER 80
PAGE	CER 81
	CER 84
	CER 82

Reviewer Initials/Date: KMC 10/31/91

* See last page of this table for DEFINITION OF CODES.

TABLE I

ENVIRONMENTAL PROTECTION AGENCY REGION III
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS No. 16965 CONTRACTOR ESAT

Instrument# 70033	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/13/91 / 1219			9/16/91 / 1024											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane					26.4	C									
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone		60.5	I+		50.0	C+									
Carbon Disulfide															
1,1-Dichloroethene															
1,1-Dichloroethane															
Total-1,2-Dichloroethene															
Chloroform															
1,2-Dichloroethane															
2-Butanone															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
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					36.5	C									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
Total Xylenes															

AFFECTED SAMPLES:

VBLK W2	V.BLK W2
CEB 29	CEB 29

Reviewer Initials/Date: 10/31/91 [illegible]

* See last page of this table for DEFINITION OF CODES.

TABLE I

ENVIRONMENTAL PROTECTION AGENCY REGION III
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS No. 16965 CONTRACTOR ESAT

Instrument# 70233	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/16/91 / 1020			8/16/91 / 1023			8/20/91 / 1102			8/21/91 / 1005					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone		61.3	I+		37.3	C		34.5	C+		37.4	C+			
Carbon Disulfide															
1,1-Dichloroethene															
1,1-Dichloroethane															
Total-1,2-Dichloroethene															
Chloroform															
1,2-Dichloroethane															
2-Butanone					35.2	C									
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
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															
Ethylbenzene															
Styrene															
Total Xylenes															

AFFECTED SAMPLES:

All Samples	VBLKW3	VBLKW4	VBLKW5
THROUGH	CER79	CER79MSD	CER83
	CER80		
	CER79MS		

Reviewer Initials/Date: JNC 10/31/91

* See last page of this table for DEFINITION OF CODES.

TABLE I

ENVIRONMENTAL PROTECTION AGENCY REGION III
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS (Part 2 of 2)

CASE/SAS No. 16965 CONTRACTOR CSAT

Instrument# 7D0404	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/28/91 831			8/30/91 1008			9/03/91 1058								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(2-Chloroethyl)ether								26.2	C						
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-Chloroisopropyl)ether															
4-Methylphenol															
N-Nitroso-di-n-propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic acid															
bis(2-Chloroethoxy)methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene								30.7	C						
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene								29.7	C						
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethylphthalate															
Acenaphthylene															
2,6-Dinitrotoluene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol					29.5	C									
4-Nitrophenol															

AFFECTED SAMPLES:

SBLKW1, CEB29, CEB30, CEB79, CEB83, CEB78, CEB80, CEB81, CEB82, CEB78MS, CEB78MSD

Reviewer Initials/Date: HJC 10/31/91

* See last page of this table for DEFINITION OF CODES.

TABLE I

ENVIRONMENTAL PROTECTION AGENCY REGION III
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS (Part 2 of 2)

CASE/SAS No. 16965 CONTRACTOR ESAT

Instrument# 700404	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	9/28/91 1131			9/30/91 1009			9/03/91 1056								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Dibenzofuran															
2,4-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene								39.5	C						
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
3,3-Dichlorobenzidine								34.0	C						
Benzo(a)anthracene															
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:

SBLKW1
CEB29
CEB30
CEB79
CEB83
CEB78
CEB80
CEB81
CEB82
CEB78 MS
CEB78 MSD

Reviewer Initials/Date: RWC 10/31/91

* See last page of this table for DEFINITION OF CODES.

DEFINITION OF CODES USED IN TABLE I

I = %RSD exceeded 30% in the initial calibration, positive results are qualified "J", and quantitation limits are qualified "UJ".

C = %D exceeded 25% in the continuing calibration. Positive results are qualified "J", and quantitation limits are qualified "UJ".

F = RF less than 0.05 in the calibration. All quantitation limits are qualified "R".

+ = The "B" qualifier, denoting blank contamination, supersedes the qualifier issued in this table.

R = The "R" qualifier, denoting unusable results, supersedes the qualifier issued in this table.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29[illegible]

Instrument ID: 70011 Calibration Date(s): 08/16/91 08/16/91

Heated Purge: (Y/N): N Calibration Times: 1325 1719

GC Column: SP-1000 ID: 2.00 (mm)

LAB FILE ID: RRF10 = XF312 RRF20 = XF311
RRF50= XF310 RRF100= XF315 RRF200= XF313

COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane		0.967	0.993	1.023	0.852	0.937	0.954	6.9
Bromomethane	*	1.791	1.661	1.648	1.531	1.155	1.557	15.6*
Vinyl Chloride	*	1.168	1.132	1.179	1.051	1.140	1.134	4.4*
Chloroethane		0.765	0.784	0.760	0.682	0.732	0.745	5.3
Methylene Chloride		2.747	1.737	1.293	1.425	1.399	1.720	34.7
Acetone		0.466	0.375	0.253	0.263	0.200	0.311	34.5
Carbon Disulfide		2.383	2.809	3.009	2.778	3.016	2.799	9.2
1,1-Dichloroethene	*	0.910	1.215	0.945	1.221	1.288	1.116	15.6*
1,1-Dichloroethane	*	2.667	2.931	2.581	2.909	2.966	2.811	6.2*
1,2-Dichloroethene (total)		1.277	1.387	1.160	1.338	1.411	1.315	7.6
Chloroform	*	3.886	4.204	3.788	4.271	4.313	4.092	[illegible]*
1,2-Dichloroethane	*	3.322	3.140	2.713	3.181	3.276	3.126	[illegible]*
2-Butanone		0.300	0.344	0.261	0.279	0.248	0.286	13.2
1,1,1-Trichloroethane	*	1.081	1.153	1.068	1.094	1.207	1.121	5.2*
Carbon Tetrachloride	*	0.922	1.077	0.985	1.091	1.106	1.036	7.7*
Bromodichloromethane	*	1.278	1.288	1.137	1.241	1.340	1.257	6.0*
1,2-Dichloropropane		0.377	0.385	0.386	0.390	0.385	0.385	1.2
cis-1,3-Dichloropropene	*	1.034	1.071	1.175	1.053	1.064	1.079	5.1*
Trichloroethene	*	0.469	0.524	0.515	0.508	0.498	0.503	4.2*
Dibromochloromethane	*	0.895	0.863	0.914	0.898	0.890	0.892	2.1*
1,1,2-Trichloroethane	*	0.341	0.343	0.329	0.334	0.318	0.333	3.0*
Benzene	*	0.825	0.832	0.774	0.811	0.811	0.811	2.8*
trans-1,3-Dichloropropene	*	0.365	0.366	0.272	0.350	0.344	0.339	11.5*
Bromoform	*	0.682	0.646	0.660	0.684	0.677	0.670	2.4*
4-Methyl-2-Pentanone		0.326	0.267	0.238	0.235	0.211	0.255	17.3
2-Hexanone		0.223	0.191	0.175	0.173	0.149	0.182	15.0
Tetrachloroethene	*	0.548	0.616	0.558	0.555	0.584	0.572	4.9*
1,1,2,2-Tetrachloroethane	*	0.521	0.471	0.459	0.509	0.483	0.489	5.3*
Toluene	*	1.150	1.252	1.083	1.196	1.195	1.175	5.4*
Chlorobenzene	*	0.950	1.046	0.979	1.036	1.003	1.003	4.[illegible]*
Ethylbenzene	*	0.406	0.463	0.409	0.432	0.427	0.427	5.3*
Styrene	*	0.976	1.033	0.981	0.959	0.950	0.980	3.3*
Xylene (total)	*	0.555	0.582	0.572	0.536	0.540	0.557	3.6*
Toluene-d8		1.142	1.109	1.120	0.564	1.091	1.005	24.6
Bromofluorobenzene	*	1.258	1.166	1.154	0.605	1.185	1.074	[illegible]*
1,2-Dichloroethane-d4		2.878	2.691	2.522	1.413	2.685	2.438	[illegible]

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

FORM VI VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 70011 Calibration date: 08/19/91 Time: 1120

Lab File ID: XF321 Init. Calib. Date(s): 08/16/91 08/16/91

Heated Purge: (Y/N) N Init. Calib. Times: 1325 1719

GC Column: SP-1000 ID: 2.00 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D	Samples
Chloromethane	0.954	0.695		27.2		VBLKW1
Bromomethane	1.557	1.394	0.100	10.5	25.0	CEB78
Vinyl Chloride	1.134	0.904	0.100	20.3	25.0	CEB80
Chloroethane	0.745	0.591		20.7		CEB81
Methylene Chloride	1.720	1.271		26.1		
Acetone	0.311	0.279		10.3		CEB84
Carbon Disulfide	2.799	2.547		9.0		
1,1-Dichloroethene	1.116	1.149	0.100	-3.0	25.0	CEB82
1,1-Dichloroethane	2.811	2.583	0.200	8.1	25.0	
1,2-Dichloroethene (total)	1.315	1.243		5.5		
Chloroform	4.092	3.890	0.200	4.9	25.0	
1,2-Dichloroethane	3.126	2.791	0.100	10.7	25.0	
2-Butanone	0.286	0.270		5.6		
1,1,1-Trichloroethane	1.121	1.067	0.100	4.8	25.0	
Carbon Tetrachloride	1.036	1.095	0.100	-5.7	25.0	
Bromodichloromethane	1.257	1.183	0.200	5.9	25.0	
1,2-Dichloropropane	0.385	0.342		11.2		
cis-1,3-Dichloropropene	1.079	0.951	0.200	11.9	25.0	
Trichloroethene	0.503	0.494	0.300	1.8	25.0	
Dibromochloromethane	0.892	0.898	0.100	-0.7	25.0	
1,1,2-Trichloroethane	0.333	0.298	0.100	10.5	25.0	
Benzene	0.811	0.741	0.500	8.6	25.0	
trans-1,3-Dichloropropene	0.339	0.320	0.100	5.6	25.0	
Bromoform	0.670	0.727	0.100	-8.5	25.0	
4-Methyl-2-Pentanone	0.255	0.204		20.0		
2-Hexanone	0.182	0.164		9.9		
Tetrachloroethene	0.572	0.613	0.200	-7.2	25.0	
1,1,2,2-Tetrachloroethane	0.489	0.438	0.500	10.4	25.0	
Toluene	1.175	1.111	0.400	5.4	25.0	
Chlorobenzene	1.003	0.986	0.500	1.7	25.0	
Ethylbenzene	0.427	0.399	0.100	6.6	25.0	
Styrene	0.980	0.885	0.300	9.7	25.0	
Xylene (total)	0.557	0.514	0.300	7.7	25.0	
Toluene-d8	1.005	1.085		-8.0		
Bromofluorobenzene	1.074	1.168	0.200	-8.8	25.0	
1,2-Dichloroethane-d4	2.438	2.446		-0.3		

All other compounds must meet a minimum RRF of 0.010.

FORM VII VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

:RA ENVIRON Contract: 68-D0-0158

: CEB29 :MD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

08/13/91): 70033 Calibration date: 08/16/91 Time: 1024

1611 ZF710 Init. Calib. Date(s): 08/13/91 08/13/91

: (Y/N) N Init. Calib. Times: 1219 1611

?-1000 ID: 2.00(mm)

Samples VBLKW2 CEB 29

RRF	% RSD	?OUND	RRF	RRF50	MIN RRF	%D	MAX %D
0.438	3.7	nethane	0.438	0.571		-30.4	
1.567	8.1*	ethane	1.567	1.857	0.100	-18.5	25.0
1.036	9.8*	Chloride	1.036	1.218	0.100	-17.6	25.0
0.673	7.0	ethane	0.673	0.823		-22.3	
1.749	16.7	ene Chloride	1.749	1.699		2.9	
0.276	60.5	e	0.276	0.138		50.0	
3.316	9.7	Disulfide	3.316	3.782		-14.0	
1.063	8.4*	chloroethene	1.063	1.142	0.100	-7.4	25.0
2.093	7.0*	chloroethane	2.093	2.463	0.200	-17.7	25.0
1.100	8.4	chloroethene (total)	1.100	1.253		-13.9	
3.018	6.2*	form	3.018	3.410	0.200	-13.0	25.0
1.613	4.1*	chloroethane	1.613	1.868	0.100	-15.8	25.0
0.143	11.4	none	0.143	0.134		6.3	
0.822	3.7*	Trichloroethane	0.822	0.906	0.100	-10.2	25.0
0.783	5.8*	Tetrachloride	0.783	0.836	0.100	-6.8	25.0
0.822	6.0*	ichloromethane	0.822	0.891	0.200	-8.4	25.0
0.282	6.4	chloropropane	0.282	0.322		-14.2	
0.763	10.7*	3-Dichloropropene	0.763	0.855	0.200	-12.1	25.0
0.445	7.3*	oroethene	0.445	0.470	0.300	-5.6	25.0
0.664	5.1*	ochloromethane	0.664	0.649	0.100	2.3	25.0
0.247	6.3*	Trichloroethane	0.247	0.245	0.100	0.8	25.0
0.645	9.1*	e	0.645	0.725	0.500	-12.4	25.0
0.147	13.2*	1,3-Dichloropropene	0.147	0.170	0.100	-15.6	25.0
0.448	4.7*	orm	0.448	0.400	0.100	10.7	25.0
0.131	8.4	yl-2-Pentanone	0.131	0.117		10.7	
0.104	13.9	none	0.104	0.066		36.5	
0.544	3.7*	hloroethene	0.544	0.543	0.200	0.2	25.0
0.398	8.9*	2-Tetrachloroethane	0.398	0.375	0.500	5.8	25.0
0.950	6.0*	e	0.950	1.036	0.400	-9.1	25.0
0.869	3.4*	benzene	0.869	0.903	0.500	-3.9	25.0
0.350	5.8*	enzene	0.350	0.382	0.100	-9.1	25.0
0.766	4.9*	e	0.766	0.824	0.300	-7.6	25.0
0.480	3.8*	(total)	0.480	0.530	0.300	-10.4	25.0
1.024	1.4	e-d8	1.024	1.044		-2.0	
0.867	4.8*	luorobenzene	0.867	0.883	0.200	-1.8	25.0
1.560	3.1	chloroethane-d4	1.560	1.751		-12.2	

her compounds must meet a minimum RRF of 0.010.

AR301191

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 70033 Calibration Date(s): 08/19/91 08/19/91

Heated Purge: (Y/N): N Calibration Times: 1020 1507

GC Column: SP-1000 ID: 2.00 (mm)

LAB FILE ID: RRF10 = ZF730 RRF20 = ZF729
RRF50= ZF728 RRF100= ZF733 RRF200= ZF731

COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane		0.517	0.523	0.518	0.457	0.452	0.493	7.2
Bromomethane	*	2.193	2.173	1.940	1.910	2.225	2.088	7.2*
Vinyl Chloride	*	1.199	1.193	1.110	1.272	1.398	1.234	8.7*
Chloroethane		0.813	0.858	0.763	0.832	0.895	0.832	5.9
Methylene Chloride		2.943	2.236	1.844	1.894	2.034	2.190	20.4
Acetone		0.533	0.202	0.166	0.187	0.246	0.267	56.8
Carbon Disulfide		3.096	3.284	3.047	3.178	3.548	3.231	6.2
1,1-Dichloroethene	*	1.230	1.081	1.312	1.206	1.426	1.251	10.2*
1,1-Dichloroethane	*	2.730	2.562	2.607	2.556	2.852	2.661	4.8*
1,2-Dichloroethene (total)		1.298	1.291	1.358	1.330	1.488	1.353	5.9
Chloroform	*	4.299	3.845	3.784	3.802	4.317	4.009	6.8*
1,2-Dichloroethane	*	2.572	2.543	2.098	2.346	2.492	2.410	8.1*
2-Butanone		0.167	0.162	0.119	0.170	0.177	0.159	14.5
1,1,1-Trichloroethane	*	1.329	1.386	1.181	1.150	1.292	1.268	7.9*
Carbon Tetrachloride	*	1.243	1.132	1.128	1.062	1.268	1.167	7.4*
Bromodichloromethane	*	1.258	1.391	1.093	1.218	1.233	1.239	8.6*
1,2-Dichloropropane		0.310	0.349	0.332	0.334	0.333	0.332	4.2
cis-1,3-Dichloropropene	*	0.750	0.938	0.812	0.893	0.880	0.855	8.6*
Trichloroethene	*	0.506	0.526	0.533	0.527	0.557	0.530	3.5*
Dibromochloromethane	*	0.805	0.910	0.770	0.831	0.831	0.829	6.2*
1,1,2-Trichloroethane	*	0.273	0.308	0.264	0.291	0.270	0.281	6.4*
Benzene	*	0.764	0.846	0.765	0.808	0.817	0.800	4.4*
trans-1,3-Dichloropropene	*	0.217	0.276	0.232	0.269	0.260	0.251	10.0*
Bromoform	*	0.525	0.610	0.467	0.543	0.521	0.533	9.7*
4-Methyl-2-Pentanone		0.108	0.157	0.126	0.152	0.130	0.135	14.8
2-Hexanone		0.079	0.089	0.072	0.093	0.092	0.085	10.8
Tetrachloroethene	*	0.626	0.619	0.649	0.588	0.641	0.625	3.8*
1,1,2,2-Tetrachloroethane	*	0.456	0.514	0.383	0.458	0.399	0.442	11.8*
Toluene	*	1.115	1.155	1.073	1.137	1.162	1.128	3.2*
Chlorobenzene	*	1.040	1.036	0.992	1.007	1.028	1.021	2.0*
Ethylbenzene	*	0.375	0.415	0.386	0.418	0.432	0.405	5.9*
Styrene	*	0.752	0.782	0.749	0.867	0.866	0.803	7.4*
Xylene (total)	*	0.501	0.519	0.482	0.541	0.559	0.520	5.9*
Toluene-d8		1.015	1.055	1.098	1.057	1.077	1.060	2.9
Bromofluorobenzene	*	0.961	0.966	0.923	0.945	0.961	0.951	1.9*
1,2-Dichloroethane-d4		2.280	2.098	1.910	2.006	2.169	2.093	6.8

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 70033 Calibration date: 08/19/91 Time: 1020

Lab File ID: ZF728 Init. Calib. Date(s): 08/19/91 08/19/91

Heated Purge: (Y/N) N Init. Calib. Times: 1020 1507

GC Column: SP-1000 ID: 2.00 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.493	0.518		-5.1	
Bromomethane	2.088	1.940	0.100	7.1	25.0
Vinyl Chloride	1.234	1.110	0.100	10.0	25.0
Chloroethane	0.832	0.763		8.3	
Methylene Chloride	2.190	1.844		15.8	
Acetone	0.267	0.166		37.8	
Carbon Disulfide	3.231	3.047		5.7	
1,1-Dichloroethene	1.251	1.312	0.100	-4.9	25.0
1,1-Dichloroethane	2.661	2.607	0.200	2.0	25.0
1,2-Dichloroethene (total)	1.353	1.358		-0.4	
Chloroform	4.009	3.784	0.200	5.6	25.0
1,2-Dichloroethane	2.410	2.098	0.100	13.0	25.0
2-Butanone	0.159	0.119		25.2	
1,1,1-Trichloroethane	1.268	1.181	0.100	6.9	25.0
Carbon Tetrachloride	1.167	1.128	0.100	3.3	25.0
Bromodichloromethane	1.239	1.093	0.200	11.8	25.0
1,2-Dichloropropane	0.332	0.332		0.0	
cis-1,3-Dichloropropene	0.855	0.812	0.200	5.0	25.0
Trichloroethene	0.530	0.533	0.300	-0.6	25.0
Dibromochloromethane	0.829	0.770	0.100	7.1	25.0
1,1,2-Trichloroethane	0.281	0.264	0.100	6.0	25.0
Benzene	0.800	0.765	0.500	4.4	25.0
trans-1,3-Dichloropropene	0.251	0.232	0.100	7.6	25.0
Bromoform	0.533	0.467	0.100	12.4	25.0
4-Methyl-2-Pentanone	0.135	0.126		6.7	
2-Hexanone	0.085	0.072		15.3	
Tetrachloroethene	0.625	0.649	0.200	-3.8	25.0
1,1,2,2-Tetrachloroethane	0.442	0.383	0.500	13.4	25.0
Toluene	1.128	1.073	0.400	4.9	25.0
Chlorobenzene	1.021	0.992	0.500	2.8	25.0
Ethylbenzene	0.405	0.386	0.100	4.7	25.0
Styrene	0.803	0.749	0.300	6.7	25.0
Xylene (total)	0.520	0.482	0.300	7.3	25.0
Toluene-d8	1.060	1.098		-3.6	
Bromofluorobenzene	0.951	0.923	0.200	2.9	25.0
1,2-Dichloroethane-d4	2.093	1.910		8.7	

Samples
VBLKW3
CEB79
CEB30
CEB78 MS

All other compounds must meet a minimum RRF of 0.010.

FORM VII VOA 3/90

AR301193

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 70033 Calibration date: 08/20/91 Time: 1102

Lab File ID: ZF746 Init. Calib. Date(s): 08/19/91 08/19/91

Heated Purge: (Y/N) N Init. Calib. Times: 1020 1507

GC Column: SP-1000 ID: 2.00 (mm)

Samples
VBLK W4
CEB78 MSI

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.493	0.539		-9.3	
Bromomethane	2.088	2.103	0.100	-0.7	25.0
Vinyl Chloride	1.234	1.290	0.100	-4.5	25.0
Chloroethane	0.832	0.883		-6.1	
Methylene Chloride	2.190	2.115		3.4	
Acetone	0.267	0.175		34.5	
Carbon Disulfide	3.231	3.586		-11.0	
1,1-Dichloroethene	1.251	1.329	0.100	-6.2	25.0
1,1-Dichloroethane	2.661	2.807	0.200	-5.5	25.0
1,2-Dichloroethene (total)	1.353	1.491		-10.2	
Chloroform	4.009	4.100	0.200	-2.3	25.0
1,2-Dichloroethane	2.410	2.381	0.100	1.2	25.0
2-Butanone	0.159	0.144		9.4	
1,1,1-Trichloroethane	1.268	1.211	0.100	4.5	25.0
Carbon Tetrachloride	1.167	1.066	0.100	8.7	25.0
Bromodichloromethane	1.239	1.195	0.200	3.6	25.0
1,2-Dichloropropane	0.332	0.354		-6.6	
cis-1,3-Dichloropropene	0.855	0.886	0.200	-3.6	25.0
Trichloroethene	0.530	0.534	0.300	-0.8	25.0
Dibromochloromethane	0.829	0.831	0.100	-0.2	25.0
1,1,2-Trichloroethane	0.281	0.303	0.100	-7.8	25.0
Benzene	0.800	0.849	0.500	-6.1	25.0
trans-1,3-Dichloropropene	0.251	0.259	0.100	-3.2	25.0
Bromoform	0.533	0.524	0.100	1.7	25.0
4-Methyl-2-Pentanone	0.135	0.135		0.0	
2-Hexanone	0.085	0.075		11.8	
Tetrachloroethene	0.625	0.640	0.200	-2.4	25.0
1,1,2,2-Tetrachloroethane	0.442	0.431	0.500	2.5	25.0
Toluene	1.128	1.217	0.400	-7.9	25.0
Chlorobenzene	1.021	1.092	0.500	-7.0	25.0
Ethylbenzene	0.405	0.451	0.100	-11.4	25.0
Styrene	0.803	0.931	0.300	-15.9	25.0
Xylene (total)	0.520	0.597	0.300	-14.8	25.0
Toluene-d8	1.060	1.093		-3.1	
Bromofluorobenzene	0.951	0.946	0.200	0.5	25.0
1,2-Dichloroethane-d4	2.093	1.945		7.1	

All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 70033 Calibration date: 08/21/91 Time: 1005

Lab File ID: ZF754 Init. Calib. Date(s): 08/19/91 08/19/91

Heated Purge: (Y/N) N Init. Calib. Times: 1020 1507

GC Column: SP-1000 ID: 2.00(mm)

Samples VBLKW5 CEB83

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.493	0.466		5.5	
Bromomethane	2.088	1.827	0.100	12.5	25.0
Vinyl Chloride	1.234	1.111	0.100	10.0	25.0
Chloroethane	0.832	0.847		-1.8	
Methylene Chloride	2.190	2.049		6.4	
Acetone	0.267	0.167		37.4	
Carbon Disulfide	3.231	3.595		-11.3	
1,1-Dichloroethene	1.251	1.379	0.100	-10.2	25.0
1,1-Dichloroethane	2.661	3.023	0.200	-13.6	25.0
1,2-Dichloroethene (total)	1.353	1.488		-10.0	
Chloroform	4.009	4.061	0.200	-1.3	25.0
1,2-Dichloroethane	2.410	2.322	0.100	3.7	25.0
2-Butanone	0.159	0.155		2.5	
1,1,1-Trichloroethane	1.268	1.032	0.100	18.6	25.0
Carbon Tetrachloride	1.167	0.922	0.100	21.0	25.0
Bromodichloromethane	1.239	1.103	0.200	11.0	25.0
1,2-Dichloropropane	0.332	0.378		-13.9	
cis-1,3-Dichloropropene	0.855	0.865	0.200	-1.2	25.0
Trichloroethene	0.530	0.512	0.300	3.4	25.0
Dibromochloromethane	0.829	0.755	0.100	8.9	25.0
1,1,2-Trichloroethane	0.281	0.296	0.100	-5.3	25.0
Benzene	0.800	0.862	0.500	-7.8	25.0
trans-1,3-Dichloropropene	0.251	0.247	0.100	1.6	25.0
Bromoform	0.533	0.458	0.100	14.1	25.0
4-Methyl-2-Pentanone	0.135	0.132		2.2	
2-Hexanone	0.085	0.072		15.3	
Tetrachloroethene	0.625	0.600	0.200	4.0	25.0
1,1,2,2-Tetrachloroethane	0.442	0.437	0.500	1.1	25.0
Toluene	1.128	1.186	0.400	-5.1	25.0
Chlorobenzene	1.021	1.060	0.500	-3.8	25.0
Ethylbenzene	0.405	0.424	0.100	-4.7	25.0
Styrene	0.803	0.873	0.300	-8.7	25.0
Xylene (total)	0.520	0.563	0.300	-8.3	25.0
Toluene-d8	1.060	1.108		-4.5	
Bromofluorobenzene	0.951	0.929	0.200	2.3	25.0
1,2-Dichloroethane-d4	2.093	1.999		4.5	

All other compounds must meet a minimum RRF of 0.010.

FORM VII VOA

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 700404 Calibration Date(s): 08/28/91 08/28/91

Calibration Times: 1131 1429

LAB FILE ID: RRF20 = QE104 RRF50 = QE103
RRF80 = QE102 RRF120= QE101 RRF160= QE100

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	1.580	1.515	1.393	1.331	1.242	1.412	9.7*
bis(2-Chloroethyl)Ether *	1.216	1.096	0.981	0.961	0.868	1.024	13.1*
2-Chlorophenol *	1.310	1.268	1.131	1.067	0.988	1.153	11.7*
1,3-Dichlorobenzene *	1.603	1.604	1.480	1.458	1.375	1.504	6.6*
1,4-Dichlorobenzene *	1.578	1.592	1.460	1.411	1.313	1.471	8.0*
1,2-Dichlorobenzene *	1.582	1.436	1.250	1.104	1.007	1.276	18.5*
2-Methylphenol *	1.174	1.170	1.038	0.984	0.931	1.059	10.3*
2,2'-oxybis(1-Chloropropane	2.966	3.014	2.843	2.701	2.527	2.810	7.1
4-Methylphenol *	1.122	1.041	0.960	0.933	0.934	0.998	8.2*
N-Nitroso-Di-n-Propylamine *	1.032	0.989	0.954	0.958	0.956	0.978	3.4*
Hexachloroethane *	0.661	0.610	0.566	0.563	0.566	0.593	7.2*
Nitrobenzene *	0.372	0.367	0.343	0.329	0.319	0.346	6.7*
Isophorone *	0.772	0.746	0.725	0.725	0.740	0.742	2.6*
2-Nitrophenol *	0.226	0.241	0.235	0.233	0.233	0.234	2.3*
2,4-Dimethylphenol *	0.375	0.379	0.356	0.343	0.343	0.359	4.8*
bis(2-Chloroethoxy)Methane *	0.496	0.484	0.461	0.444	0.437	0.464	5.5*
2,4-Dichlorophenol *	0.340	0.356	0.334	0.327	0.317	0.335	4.4*
1,2,4-Trichlorobenzene *	0.408	0.409	0.384	0.366	0.337	0.381	8.0*
Naphthalene *	1.107	1.054	0.960	0.899	0.853	0.975	10.8*
4-Chloroaniline	0.451	0.470	0.444	0.430	0.421	0.443	4.3
Hexachlorobutadiene	0.220	0.229	0.221	0.216	0.203	0.218	4.4
4-Chloro-3-Methylphenol *	0.319	0.347	0.339	0.323	0.313	0.328	4.3*
2-Methylnaphthalene *	0.759	0.733	0.685	0.632	0.602	0.682	9.7*
Hexachlorocyclopentadiene	0.316	0.382	0.357	0.351	0.331	0.347	7.3
2,4,6-Trichlorophenol *	0.370	0.401	0.380	0.379	0.377	0.381	3.1*
2,4,5-Trichlorophenol *		0.405	0.393	0.386	0.356	0.385	5.4*
2-Chloronaphthalene *	1.226	1.215	1.092	1.017	0.967	1.103	10.5*
2-Nitroaniline		0.404	0.395	0.388	0.383	0.392	2.3
Dimethyl Phthalate	1.451	1.341	1.199	1.093	1.029	1.223	14.2
Acenaphthylene *	1.884	1.730	1.458	1.285	1.180	1.507	19.6*
2,6-Dinitrotoluene *	0.331	0.369	0.362	0.358	0.345	0.353	4.3*
3-Nitroaniline		0.309	0.266	0.245	0.221	0.265	15.0
Acenaphthene *	1.375	1.267	1.105	0.976	0.888	1.122	17.9*
2,4-Dinitrophenol		0.178	0.204	0.210	0.210	0.200	7.6
4-Nitrophenol		0.109	0.133	0.125	0.124	0.123	8.1
Dibenzofuran *	1.661	1.696	1.576	1.486	1.397	1.563	7.9*
2,4-Dinitrotoluene *	0.408	0.468	0.480	0.463	0.453	0.454	6.1*

Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 700404 Calibration Date(s): 08/28/91 08/28/91

Calibration Times: 1131 1429

LAB FILE ID: RRF20 = QE104 RRF50 = QE103
RRF80 = QE102 RRF120= QE101 RRF160= QE100

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Diethylphthalate		1.629	1.539	1.390	1.192	0.987	1.347	19.4
4-Chlorophenyl-phenylether	*	0.638	0.666	0.612	0.547	0.487	0.590	12.3*
Fluorene	*	1.320	1.323	1.212	1.096	1.042	1.199	10.7*
4-Nitroaniline			0.298	0.328	0.312	0.308	0.312	4.0
4,6-Dinitro-2-Methylphenol			0.169	0.181	0.188	0.194	0.183	5.9
N-Nitrosodiphenylamine (1)		0.660	0.640	0.562	0.517	0.467	0.569	14.3
4-Bromophenyl-phenylether	*	0.233	0.244	0.226	0.240	0.235	0.236	2.9*
Hexachlorobenzene	*	0.233	0.279	0.265	0.280	0.274	0.276	2.6*
Pentachlorophenol	*		0.151	0.157	0.163	0.164	0.159	3.8*
Phenanthrene	*	1.252	1.261	1.146	1.092	1.080	1.166	7.4*
Anthracene	*	1.242	1.243	1.161	1.104	1.060	1.162	7.0*
Carbazole		1.757	1.807	1.719	1.582	1.480	1.669	8.[illegible]
Di-n-Butylphthalate		2.169	2.080	1.930	1.755	1.568	1.900	1[illegible]
Fluoranthene	*	1.115	1.178	1.185	1.106	1.054	1.128	4.[illegible]*
Pyrene	*	1.798	1.666	1.571	1.543	1.552	1.626	6.6*
Butylbenzylphthalate		1.127	1.075	1.003	0.972	0.959	1.027	7.0
3,3'-Dichlorobenzidine		0.313	0.338	0.357	0.375	0.368	0.350	7.2
Benzo(a)Anthracene	*	1.196	1.265	1.220	1.212	1.220	1.223	2.1*
Chrysene	*	1.139	1.165	1.127	1.114	1.091	1.127	2.5*
bis(2-Ethylhexyl)Phthalate		1.772	1.666	1.488	1.402	1.363	1.538	11.4
Di-n-Octyl Phthalate		2.647	2.806	2.591	2.590	2.502	2.627	4.3
Benzo(b)Fluoranthene	*	1.364	1.277	1.384	1.385	1.375	1.357	3.4*
Benzo(k)Fluoranthene	*	1.069	1.236	1.121	1.180	1.186	1.158	5.6*
Benzo(a)Pyrene	*	1.070	1.137	1.117	1.145	1.119	1.118	2.6*
Indeno(1,2,3-cd)Pyrene	*	1.066	1.146	1.105	1.105	1.046	1.094	3.6*
Dibenz(a,h)Anthracene	*	0.814	0.895	0.846	0.879	0.825	0.852	4.1*
Benzo(g,h,i)Perylene	*	0.909	0.960	0.913	0.920	0.854	0.911	4.2*
Nitrobenzene-d5	*	0.355	0.361	0.342	0.335	0.326	0.344	4.2*
2-Fluorobiphenyl	*	1.442	1.393	1.282	1.180	1.112	1.282	10.8*
Terphenyl-d14	*	0.985	0.941	0.932	0.937	0.955	0.950	2.2*
Phenol-d5	*	1.380	1.318	1.198	1.160	1.092	1.230	9.6*
2-Fluorophenol	*	1.026	1.040	1.000	0.998	0.949	1.003	3.5*
2,4,6-Tribromophenol		0.142	0.166	0.172	0.179	0.174	0.167	8.7
2-Chlorophenol-d4	*	1.117	1.051	0.961	0.913	0.846	0.978	11.0*
1,2-Dichlorobenzene-d4	*	0.976	0.928	0.834	0.785	0.734	0.851	11.7*

(1) Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values. All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 700404 Calibration date: 08/30/91 Time: 1008

Lab File ID: QE142 Init. Calib. Date(s): 08/28/91 08/28/91

Init. Calib. Times: 1131 1429

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Phenol	1.412	1.477	0.800	-4.6	25.0
bis(2-Chloroethyl)Ether	1.024	1.129	0.700	-10.2	25.0
2-Chlorophenol	1.153	1.265	0.800	-9.7	25.0
1,3-Dichlorobenzene	1.504	1.588	0.600	-5.6	25.0
1,4-Dichlorobenzene	1.471	1.587	0.500	-7.9	25.0
1,2-Dichlorobenzene	1.276	1.443	0.400	-13.1	25.0
2-Methylphenol	1.059	1.127	0.700	-6.4	25.0
2,2'-oxybis(1-Chloropropane)	2.810	2.857		-1.7	
4-Methylphenol	0.998	0.989	0.600	0.9	25.0
N-Nitroso-Di-n-Propylamine	0.978	0.946	0.500	3.3	25.0
Hexachloroethane	0.593	0.618	0.300	-4.2	25.0
Nitrobenzene	0.346	0.359	0.200	-3.8	25.0
Isophorone	0.742	0.736	0.400	0.8	25.0
2-Nitrophenol	0.234	0.233	0.100	0.4	25.0
2,4-Dimethylphenol	0.359	0.368	0.200	-2.5	25.0
bis(2-Chloroethoxy)Methane	0.464	0.479	0.300	-3.2	25.0
2,4-Dichlorophenol	0.335	0.336	0.200	-0.3	25.0
1,2,4-Trichlorobenzene	0.381	0.404	0.200	-6.0	25.0
Naphthalene	0.975	1.055	0.700	-8.2	25.0
4-Chloroaniline	0.443	0.455		-2.7	
Hexachlorobutadiene	0.218	0.230		-5.5	
4-Chloro-3-Methylphenol	0.328	0.335	0.200	-2.1	25.0
2-Methylnaphthalene	0.682	0.726	0.400	-6.5	25.0
Hexachlorocyclopentadiene	0.347	0.336		3.2	
2,4,6-Trichlorophenol	0.381	0.391	0.200	-2.6	25.0
2,4,5-Trichlorophenol	0.385	0.399	0.200	-3.6	25.0
2-Chloronaphthalene	1.103	1.193	0.800	-8.2	25.0
2-Nitroaniline	0.392	0.389		0.8	
Dimethyl Phthalate	1.223	1.362		-11.4	
Acenaphthylene	1.507	1.713	1.300	-13.7	25.0
2,6-Dinitrotoluene	0.353	0.369	0.200	-4.5	25.0
3-Nitroaniline	0.265	0.293		-10.6	
Acenaphthene	1.122	1.281	0.800	-14.2	25.0
2,4-Dinitrophenol	0.200	0.141		29.5	
4-Nitrophenol	0.123	0.107		13.0	
Dibenzofuran	1.563	1.687	0.800	-7.9	25.0
2,4-Dinitrotoluene	0.454	0.467	0.200	-2.9	25.0

SBLKW1
CEB29
CEB30
CEB79

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 700404 Calibration date: 08/30/91 Time: 1008

Lab File ID: QE142 Init. Calib. Date(s): 08/28/91 08/28/91

Init. Calib. Times: 1131 1429

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.347	1.561		-15.9	
4-Chlorophenyl-phenylether	0.590	0.690	0.400	-17.0	25.0
Fluorene	1.199	1.332	0.900	-11.1	25.0
4-Nitroaniline	0.312	0.269		13.8	
4,6-Dinitro-2-Methylphenol	0.188	0.147		21.8	
N-Nitrosodiphenylamine (1)	0.569	0.613		-7.7	
4-Bromophenyl-phenylether	0.236	0.249	0.100	-5.5	25.0
Hexachlorobenzene	0.276	0.304	0.100	-10.1	25.0
Pentachlorophenol	0.159	0.143	0.050	10.1	25.0
Phenanthrene	1.166	1.234	0.700	-5.8	25.0
Anthracene	1.162	1.238	0.700	-6.5	25.0
Carbazole	1.669	1.761		-5.5	
Di-n-Butylphthalate	1.900	1.988		-4.6	
Fluoranthene	1.128	1.214	0.600	-7.6	25.0
Pyrene	1.626	1.752	0.600	-7.7	25.0
Butylbenzylphthalate	1.027	1.019		0.8	
3,3'-Dichlorobenzidine	0.350	0.292		16.6	
Benzo(a)Anthracene	1.223	1.241	0.800	-1.5	25.0
Chrysene	1.127	1.163	0.700	-3.2	25.0
bis(2-Ethylhexyl)Phthalate	1.538	1.510		1.8	
Di-n-Octyl Phthalate	2.627	2.840		-8.1	
Benzo(b)Fluoranthene	1.357	1.416	0.700	-4.3	25.0
Benzo(k)Fluoranthene	1.158	1.178	0.700	-1.7	25.0
Benzo(a)Pyrene	1.118	1.125	0.700	-0.6	25.0
Indeno(1,2,3-cd)Pyrene	1.094	1.100	0.500	-0.5	25.0
Dibenz(a,h)Anthracene	0.852	0.858	0.400	-0.7	25.0
Benzo(g,h,i)Perylene	0.911	0.912	0.500	-0.1	25.0
Nitrobenzene-d5	0.344	0.354	0.200	-2.9	25.0
2-Fluorobiphenyl	1.282	1.395	0.700	-8.8	25.0
Terphenyl-d14	0.950	1.036	0.500	-9.1	25.0
Phenol-d5	1.230	1.277	0.800	-3.8	25.0
2-Fluorophenol	1.003	1.038	0.600	-3.5	25.0
2,4,6-Tribromophenol	0.167	0.181		-8.4	
2-Chlorophenol-d4	0.978	1.061	0.800	-8.5	25.0
1,2-Dichlorobenzene-d4	0.851	0.933	0.400	-9.6	25.0

SB1KW1
CEB29
CEB30
CEB31

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 700404 Calibration date: 09/03/91 Time: 1056

Lab File ID: QE165 Init. Calib. Date(s): 08/28/91 08/28/91

Init. Calib. Times: 1131 1429

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D	
Phenol	1.412	1.605	0.800	-13.7	25.0	CEB83
bis(2-Chloroethyl)Ether	1.024	1.292	0.700	-26.2	25.0	CEB78
2-Chlorophenol	1.153	1.286	0.800	-11.5	25.0	CEB80
1,3-Dichlorobenzene	1.504	1.611	0.600	-7.1	25.0	
1,4-Dichlorobenzene	1.471	1.587	0.500	-7.9	25.0	CEB81
1,2-Dichlorobenzene	1.276	1.489	0.400	-16.7	25.0	
2-Methylphenol	1.059	1.169	0.700	-10.4	25.0	CEB82
2,2'-oxybis(1-Chloropropane)	2.810	3.191		-13.6		
4-Methylphenol	0.998	1.072	0.600	-7.4	25.0	CEB78MS
N-Nitroso-Di-n-Propylamine	0.978	1.070	0.500	-9.4	25.0	
Hexachloroethane	0.593	0.719	0.300	-21.2	25.0	CEB78MS
Nitrobenzene	0.346	0.421	0.200	-21.7	25.0	
Isophorone	0.742	0.823	0.400	-10.9	25.0	
2-Nitrophenol	0.234	0.233	0.100	0.4	25.0	
2,4-Dimethylphenol	0.359	0.389	0.200	-8.4	25.0	
bis(2-Chloroethoxy)Methane	0.464	0.503	0.300	-8.4	25.0	
2,4-Dichlorophenol	0.335	0.340	0.200	-1.5	25.0	
1,2,4-Trichlorobenzene	0.381	0.413	0.200	-8.4	25.0	
Naphthalene	0.975	1.086	0.700	-11.4	25.0	
4-Chloroaniline	0.443	0.455		-2.7		
Hexachlorobutadiene	0.218	0.285		-30.7		
4-Chloro-3-Methylphenol	0.328	0.349	0.200	-6.4	25.0	
2-Methylnaphthalene	0.682	0.720	0.400	-5.6	25.0	
Hexachlorocyclopentadiene	0.347	0.450		-29.7		
2,4,6-Trichlorophenol	0.381	0.410	0.200	-7.6	25.0	
2,4,5-Trichlorophenol	0.385	0.429	0.200	-11.4	25.0	
2-Chloronaphthalene	1.103	1.154	0.800	-4.6	25.0	
2-Nitroaniline	0.392	0.409		-4.3		
Dimethyl Phthalate	1.223	1.301		-6.4		
Acenaphthylene	1.507	1.678	1.300	-11.4	25.0	
2,6-Dinitrotoluene	0.353	0.371	0.200	-5.1	25.0	
3-Nitroaniline	0.265	0.268		-1.1		
Acenaphthene	1.122	1.222	0.800	-8.9	25.0	
2,4-Dinitrophenol	0.200	0.169		15.5		
4-Nitrophenol	0.123	0.118		4.1		
Dibenzofuran	1.563	1.676	0.800	-7.2	25.0	
2,4-Dinitrotoluene	0.454	0.471	0.200	-3.7	25.0	

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Instrument ID: 700404 Calibration date: 09/03/91 Time: 1056

Lab File ID: QE165 Init. Calib. Date(s): 08/28/91 08/28/91

Init. Calib. Times: 1131 1429

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.347	1.492		-10.8	
4-Chlorophenyl-phenylether	0.590	0.726	0.400	-23.0	25.0
Fluorene	1.199	1.317	0.900	-9.8	25.0
4-Nitroaniline	0.312	0.248		0.5	
4,6-Dinitro-2-Methylphenol	0.188	0.165		2.2	
N-Nitrosodiphenylamine (1)	0.569	0.550		3.3	
4-Bromophenyl-phenylether	0.236	0.280	0.100	-18.6	25.0
Hexachlorobenzene	0.276	0.385	0.100	-39.5	25.0
Pentachlorophenol	0.159	0.176	0.050	-10.7	25.0
Phenanthrene	1.166	1.186	0.700	-1.7	25.0
Anthracene	1.162	1.197	0.700	-3.0	25.0
Carbazole	1.669	1.674		-0.3	
Di-n-Butylphthalate	1.900	1.800		5.3	
Fluoranthene	1.128	1.279	0.600	-13.4	25.0
Pyrene	1.626	1.646	0.600	-1.2	25.0
Butylbenzylphthalate	1.027	0.867		15.6	
3,3'-Dichlorobenzidine	0.350	0.231		34.0	
Benzo(a)Anthracene	1.223	1.183	0.800	3.3	25.0
Chrysene	1.127	1.108	0.700	1.7	25.0
bis(2-Ethylhexyl)Phthalate	1.538	1.268		17.6	
Di-n-Octyl Phthalate	2.627	2.478		5.7	
Benzo(b)Fluoranthene	1.357	1.364	0.700	-0.5	25.0
Benzo(k)Fluoranthene	1.158	1.276	0.700	-10.2	25.0
Benzo(a)Pyrene	1.118	1.123	0.700	-0.4	25.0
Indeno(1,2,3-cd)Pyrene	1.094	1.172	0.500	-7.1	25.0
Dibenz(a,h)Anthracene	0.852	0.902	0.400	-5.9	25.0
Benzo(g,h,i)Perylene	0.911	0.951	0.500	-4.4	25.0
Nitrobenzene-d5	0.344	0.412	0.200	-19.8	25.0
2-Fluorobiphenyl	1.282	1.360	0.700	-6.1	25.0
Terphenyl-d14	0.950	1.062	0.500	-11.8	25.0
Phenol-d5	1.230	1.408	0.800	-14.5	25.0
2-Fluorophenol	1.003	1.020	0.600	-1.7	25.0
2,4,6-Tribromophenol	0.167	0.275		-64.7	
2-Chlorophenol-d4	0.978	1.060	0.800	-8.4	25.0
1,2-Dichlorobenzene-d4	0.851	0.958	0.400	-12.6	25.0

CEB83
CEB78
CEB80
CEB81
CEB82
CEB78MS
CEB78MS

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

AR301201

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	CEB29	80	77	100	81	68	99	77	77	0
02	CEB30	83	78	101	82	69	106	77	80	0
03	CEB78	83	77	100	14	94	157 *	103	71	1
04	CEB79	78	78	103	81	65	101	75	75	0
05	CEB80	86	75	98	89	88	125 *	93	69	1
06	CEB81	77	68	106	76	67	111	73	60	0
07	CEB82	80	68	96	80	75	118	78	66	0
08	CEB83	83	84	97	18	69	161 *	35	66	1
09	CEB78MS	80	72	97	29	90	139 *	89	73	1
10	CEB78MSD	87	76	106	20	92	143 *	95	80	1
11	SBLKW1	76	71	111	75	65	84	73	70	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-110)	
S5 (2FP)	= 2-Fluorophenol	(21-110)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix Spike - EPA Sample No.: CEB78

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0	45.0	90	61-145
Trichloroethene	50.0	0	50.4	101	71-120
Benzene	50.0	0	60.9	122	76-127
Toluene	50.0	0	55.1	110	76-125
Chlorobenzene	50.0	0	54.2	108	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS R
1,1-Dichloroethene	50.0	55.9	112	22 *	14	61-145
Trichloroethene	50.0	51.7	103	2	14	71-120
Benzene	50.0	50.4	101	19 *	11	76-127
Toluene	50.0	49.8	100	10	13	76-125
Chlorobenzene	50.0	48.2	96	12	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: CW2226
#70011 MD91254:

AR301203

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix Spike - EPA Sample No.: CEB78

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	75.0	0	20.0	27	12-110
2-Chlorophenol	75.0	0	64.0	85	27-123
1,4-Dichlorobenzene	50.0	0	32.1	64	36- 97
N-Nitroso-di-n-prop.(1)	50.0	0	48.0	96	41-116
1,2,4-Trichlorobenzene	50.0	0	32.2	64	39- 98
4-Chloro-3-methylphenol	75.0	0	61.0	81	23- 97
Acenaphthene	50.0	0	38.8	78	46-118
4-Nitrophenol	75.0	0	90.5	121 *	10- 80
2,4-Dinitrotoluene	50.0	0	46.7	93	24- 96
Pentachlorophenol	75.0	0	106	141 *	9-103
Pyrene	50.0	0	38.0	76	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75.0	12.6	17	45 *	42	12-110
2-Chlorophenol	75.0	63.0	84	1	40	27-123
1,4-Dichlorobenzene	50.0	29.0	58	10	28	36- 97
N-Nitroso-di-n-prop.(1)	50.0	49.0	98	2	38	41-116
1,2,4-Trichlorobenzene	50.0	30.0	60	6	28	39- 98
4-Chloro-3-methylphenol	75.0	61.0	81	0	42	23- 97
Acenaphthene	50.0	37.8	76	3	31	46-118
4-Nitrophenol	75.0	94.0	125 *	3	50	10- 80
2,4-Dinitrotoluene	50.0	47.0	94	1	38	24- 96
Pentachlorophenol	75.0	104	139 *	1	50	9-103
Pyrene	50.0	44.9	90	17	31	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 1 out of 11 outside limits
Spike Recovery: 4 out of 22 outside limits

COMMENTS: CW2226 CEB78
GC/MS 700404 M91254

AR301204

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78MS

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226MS

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF739

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	6	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	45	
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
10061-02-6	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	61	
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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	55	
108-90-7	Chlorobenzene	54	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

AR301205

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78MSD

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226MSD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF748

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: not dec. ____ Date Analyzed: 08/20/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	3	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	56	
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
10061-02-6	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	52	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	50	
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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	50	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

AR301206

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78MS

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226MS

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE178

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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	20	
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	64	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	32	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	48	
67-72-1	Hexachloroethane	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	32	
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	61	
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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	39	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78MS

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226MS

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE178

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	90	E
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	47	
84-66-2	Diethylphthalate	1	J
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	110	E
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	38	
85-68-7	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

AR301208

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78MSD

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226MSD

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE179

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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	13	
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	63	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	29	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	49	
67-72-1	Hexachloroethane	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	30	
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	61	
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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	38	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CEB78MSD

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: CW2226MSD

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE179

Level: (low/med) LOW Date Received: 08/16/91

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/03/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	94	E
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	47	
84-66-2	Diethylphthalate	2	J
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	100	E
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	45	
85-68-7	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

AR301210

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKW1

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF322

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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	6	J
67-64-1	Acetone	15	
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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

AR301211

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKW1

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: AF322

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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	1.28	8	J
2.	UNKNOWN	2.06	6	J

AR301212

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKW2

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF711

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/16/91

GC Column: SP-1000 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	3	J
67-64-1	Acetone	26	
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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.

VBLKW2

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF711

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/16/91

GC Column: SP-1000 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

AR301214

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKW3

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF734

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	4	J
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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.

VBLKW3

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF734

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/19/91

GC Column: SP-1000 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

AR301216

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKW4

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW4

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF747

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/20/91

GC Column: SP-1000 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	3	J
67-64-1	Acetone	20	
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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.

VBLKW4

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW4

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF747

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/20/91

GC Column: SP-1000 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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKW5

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW5

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF755

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/21/91

GC Column: SP-1000 ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	3	J
67-64-1	Acetone	24	
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
10061-02-6	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
10061-01-5	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	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.

VBLKW5

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: VBLKW5

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CF755

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 08/21/91

GC Column: SP-1000 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

AR301220

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKW1

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: SBLKW1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE145

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	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
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

AR301221

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKW1

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: SBLKW1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE145

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	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	Butylbenzylphthalate	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

(1) - Cannot be separated from Diphenylamine

AR301222

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKW1

Lab Name: RECRA ENVIRON Contract: 68-D0-0158

Lab Code: RECMD Case No.: 16965 SAS No.: _____ SDG No.: CEB29

Matrix: (soil/water) WATER Lab Sample ID: SBLKW1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: DE145

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 08/19/91

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/30/91

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. 872504	2-Pyrrolidinone, 1-methyl-	6.87	3	JN
2.	UNKNOWN	7.21	4	J

AR301223