2F
SOIL PESTICIDE SURROGATE RECOVERY

La Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

GC Column(1): DB5-30M ID: 0.53(mm) GC Column(2): DB608-30M ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK1	66	66	62	77			0
02	EASS1	63	84	64	144			0
03	EASS2	74	98	62	159*			1
04	EASS3	73	76	58*	75			1
05	EASS4	70	81	64	96			0
06	EASS5	60	68	65	110			0
07	EASS6	64	77	63	96			0
08	EASS7	58*	71	64	98			1
09	EASS8	69	78	62	92			0
10	EASS9	65	74	61	84			0
11	EAST0	76	91	71	116			0
12	EAST1	66	68	64	78			0
13	EAST2	60	69	68	86			0
14	EAST3	62	74	64	93			0
15	EAST4	75	78	69	85			0
16	EAST5	72	76	72	88			0
17	EAST6	63	80	69	101			0
18	EAST7	74	86	64	131			0
19	EAST7DL	92	90	58*	149			1
20	EAST8	77	90	60	106			0
21	EAST9	55*	65	48*	132			2
22	EASW0	78	83	68	88			0
23	EASS1MS	66	80	59*	124			1
24	EASS1MSD	65	86	61	120			0

QC LIMITS

TCX = Tetrachloro-m-xylene (60-150)
DCB = Decachlorobiphenyl (60-150)

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

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix Spike - EPA Sample No.: EASS1

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	21.300	0	12.8	60	46-127
Heptachlor	21.300	0	12.6	59	35-130
Aldrin	21.300	0	22.1	104	34-132
Dieldrin	42.700	0	29.4	69	31-134
Endrin	42.700	0	32.4	76	42-139
4,4'-DDT	42.700	17.2	62.6	106	42-139

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	21.300	13.8	65	8	50	46-127
Heptachlor	21.300	13.2	62	5	31	35-130
Aldrin	21.300	21.6	101	3	43	34-132
Dieldrin	42.700	29.8	70	1	38	31-134
Endrin	42.700	34.2	80	5	45	42-139
4,4'-DDT	42.700	48.0	72	38	45	42-139

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK1

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Lab Sample ID: 5335MBS12-7 Lab File ID: _____

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 12/07/95

Date Analyzed (1): 12/27/95 Date Analyzed (2): 12/27/95

Time Analyzed (1): 1653 Time Analyzed (2): 1653

Instrument ID (1): ECD3A Instrument ID (2): ECD3B

GC Column (1): DB5-30M ID: 0.53 (mm) GC Column (2): DB608-30M ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EASS1	5335A	12/23/95	12/23/95
02	EASS2	5335B	12/23/95	12/23/95
03	EASS3	5335C	12/23/95	12/23/95
04	EASS4	5335D	12/23/95	12/23/95
05	EASS5	5335E	12/23/95	12/23/95
06	EASS6	5335F	12/23/95	12/23/95
07	EASS7	5335G	12/23/95	12/23/95
08	EASS8	5335H	12/23/95	12/23/95
09	EASS9	5335I	12/23/95	12/23/95
10	EAST0	5335J	12/23/95	12/23/95
11	EAST1	5335K	12/23/95	12/23/95
12	EAST2	5335L	12/23/95	12/23/95
13	EAST3	5335M	12/23/95	12/23/95
14	EAST4	5335N	12/23/95	12/23/95
15	EAST5	5335O	12/23/95	12/23/95
16	EAST6	5335P	12/23/95	12/23/95
17	EAST7	5335Q	12/23/95	12/23/95
18	EAST7DL	5335QDL	12/26/95	12/26/95
19	EAST8	5335R	12/23/95	12/23/95
20	EAST9	5335S	12/23/95	12/23/95
21	EASW0	5335T	12/23/95	12/23/95
22	EASS1MS	5335AMS	12/23/95	12/23/95
23	EASS1MSD	5335AMSD	12/23/95	12/23/95

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK1

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335MBS12-7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/27/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS1

EASS1

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	6.8	
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.1	J
72-54-8	4,4'-DDD	19	P
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	17	P
72-43-5	Methoxychlor	21	JP
33494-70-5	Endrin ketone	4.6	P
7421-93-4	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	19	P
5103-74-2	gamma-Chlordane	15	P
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS2

EASS2

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.6	J
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	21	P
53494-70-5	Endrin ketone	5.4	Y
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	77	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS3

EASS3

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335C

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS4

EASS4

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.8	P
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	6.2	
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	6.2	
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	2.5	J
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	4.7	
5103-74-2	gamma-Chlordane	3.8	P
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS5

EASS5

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335E

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 11 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	4.2	
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	4.5	
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	2.3	J
72-54-8	4,4'-DDD	5.9	P
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	4.5	
72-43-5	Methoxychlor	11	J
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	2.9	P
5103-74-2	gamma-Chlordane	5.0	
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	75	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS6

EASS6

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335F

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	13	P
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	6.9	P
72-55-9	4,4'-DDE	22	
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	8.7	
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.6	JP
72-43-5	Methoxychlor	8.0	J
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	0.79	JP
5103-74-2	gamma-Chlordane	1.9	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS7

EASS7

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335G

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	4.1	
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	38	
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	2.6	JP
72-54-8	4,4'-DDD	4.6	
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	4.1	
72-43-5	Methoxychlor	10	J
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	2.0	
5103-74-2	gamma-Chlordane	2.5	P
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS8

EASS8

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335H

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	2.2	P
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	2.7	J
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	2.8	J
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	1.8	J
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.3	J
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS9

EASS9

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335I

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	4.1	U
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	2.1	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS10

EAST0

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335J

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.9	
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

#2557

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS 11

EAST1

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335K

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	77	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS12

EAST2

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335L

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	2.3	J
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	2.8	J
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS13

EAST3

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335M

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 14 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.0 Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.2	P
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	4.2	
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	4.4	
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	4.3	P
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	71	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS14

EAST4

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335N

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	4.1	U
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	2.1	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS15

EAST5

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 53350

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	3.9	U
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	3.9	U
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS16

EAST6

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335P

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.8	P
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	7.2	
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.5	J
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	2.2	JP
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	1.3	J
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS17

EAST7

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335Q

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	7.2	
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	13	Y
72-55-9	4,4'-DDE	60	
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.0	JP
72-54-8	4,4'-DDD	15	P
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	120	PE
72-43-5	Methoxychlor	16	JP
53494-70-5	Endrin ketone	4.9	P
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	6.6	
5103-74-2	gamma-Chlordane	3.4	P
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EAST7DL

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335QDL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/26/95

Injection Volume: 1.00 (uL) Dilution Factor: 5.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.9	U
319-85-7	beta-BHC	9.9	U
319-86-8	delta-BHC	9.9	U
58-89-9	gamma-BHC (Lindane)	9.9	U
76-44-8	Heptachlor	9.9	U
309-00-2	Aldrin	9.9	U
1024-57-3	Heptachlor epoxide	9.9	U
959-98-8	Endosulfan I	9.9	U
60-57-1	Dieldrin	19	U
72-55-9	4,4'-DDE	73	D
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U
72-54-8	4,4'-DDD	18	JPD
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	140	D
72-43-5	Methoxychlor	99	U
53494-70-5	Endrin ketone	19	U
7421-93-4	Endrin aldehyde	19	U
5103-71-9	alpha-Chlordane	14	D
5103-74-2	gamma-Chlordane	12	D
8001-35-2	Toxaphene	990	U
12674-11-2	Aroclor-1016	190	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	190	U
53469-21-9	Aroclor-1242	190	U
12672-29-6	Aroclor-1248	190	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS18

EAST8

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335R

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	4.7	P
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	22	
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	5.7	P
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	50	P
72-43-5	Methoxychlor	13	JP
53494-70-5	Endrin ketone	5.0	P
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.7	JP
5103-74-2	gamma-Chlordane	4.0	Y
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
5519

EAST9

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335S

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.3 Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	9.8	
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	2.6	JP
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	15	
72-43-5	Methoxychlor	22	Y
53494-70-5	Endrin ketone	5.0	Y
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
5520

EASW0

Lab Name: ANALYTICAL RESOURCES INC Contract: 68-D5-0029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASS1

Matrix: (soil/water) SOIL Lab Sample ID: 5335T

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) Y Date Received: 11/29/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/07/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	2.1	J
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	3.7	U
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	6.0	
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: _____ CERCLIS No: MIB000000082

Case No: 24259 Site Name Location: Jefferson/ Chene

Contractor or EPA Lab: ARI Data User: MDNR

No. of Samples: 20+9 Date Sampled or Data Received: 1-16-96

Have Chain-of-Custody records been received? Yes ✓ No ___
Have traffic reports or packing lists been received? Yes ✓ No ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ___
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ✓ No ___
No of samples claimed: 20+9 No. of samples received: 19 20

Received by: Lynette Burnett Date: 1-16-96

Received by LSSS: Allison C Harvey Date: 1-16-96

Review started: 18 Jan 1996 Reviewer Signature: Al Venuto

Total time spent on review: 26 hrs Date review completed: 1-24-96

Copied by: M. Fletcher Date: 1/29/96

Mailed to user by: M. Fletcher Date: 1/29/96

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

United States Environmental Protection Agency
Contract Laboratory Program

C[illegible]nic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 24259

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: V
Sampling Co.: MDEQ
4. Date Shipped: 11-28-95
Carrier: Airborne Express
6. Date Received -- Received by: 11/29/95 Erin Johnson
Sampler (Name): Nabil Seif
Airbill Number: 6883010680
Laboratory Contract Number: 68-D5-0029
Unit Price: 621.00
Sampler Signature: Nabil Seif
5. Ship To: Analytical Resources, Inc. 333 9th Ave. North. Seattle, WA 98109
ATTN: Kate Stegemoeller
7. Transfer to:
Date Received
Received by
Contract Number
Price

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAST7	5	L	G	5	X				5-193215-216	SS17	11/28/95-1100	MEAGM7	NS			
EAST7						X	X		5-193217	SS17	11/28/95 1100	MEAGM7	NS			
EAST8					X				5-193219-220	SS18	11/28/95-1110	MEAGM8	NS			
EAST8						X	X		5-193221	SS18	11/28/95-1110	MEAGM8	NS			
EAST9					X				5-193223-224	SS19	11-28-95-1145	MEAGM9	NS			
EAST9						X	X		5-193225	SS19	11-28-95-1145	MEAGM9	NS			
EASW0					X				5-193227-228	SS20	11-28-95-1155	MEAGN0	NS			
EASW0						X	X		5-193229	SS20	11-28-95 1155	MEAGN0	NS			
EASW1					X				5-193231-232	SS21	11-28-95 1205	MEAGN1	NS			
EASW1						X	X		5-193233	SS21	11-28-95 1205	MEAGN1	NS			

Shipment for Case Complete? (Y/N)
Page 1 of 3
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 152979, 152980

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? (Y/N/none)	
		Erin Johnson	11/29/95 11:00	SDG # EAS51	

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EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

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EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 24259

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: I
Sampling Co.: MDEQ
4. Date Shipped: 11-28-95
Carrier: Airborne Express
6. Date Received -- Received by: 11/29/95 Erin Johnson
Sampler (Name): Nabil Seif
Airbill Number: 6883010680
Laboratory Contract Number: 68-D5-0029
Unit Price: 621.00
Sampler Signature: Nabil Seif
5. Ship To: Analytical Resources, Inc 333 9th Ave. North. Seattle, WA 98109
ATTN: Kate Stegemoeller
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAST1	5	L	G	5	X				5-193191-92	SS11	11-28-95-1615	MEAGM 1	NS			
EAST1						X	X		5-193193	SS11	11-28-95-1615	MEAGM 1	NS			
EAST2					X				5-193195-96	SS12	11-28-95-1545	MEAGM 2	NS			
EAST2						X	X		5-193197	SS12	11-28-95 1545	MEAGM 2	NS			
EAST3					X				5-193199-200	SS13	11-28-95 1500	MEAGM 3	NS			
EAST3						X	X		5-193201	SS13	11-28-95-1500	MEAGM 3	NS			
EAST4					X				5-193203-204	SS14	11-28-95-1530	MEAGM 4	N			
EAST4						X	X		5-193205	SS14	11-28-95-1530	MEAGM 4	NS			
EAST5					X				5-193207-208	SS15	11-28-95-1645	MEAGM 5	NS			
EAST5						X	X		5-193209	SS15	11-28-95-1645	MEAGM 5	NS			

Shipment for Case Complete? (Y/N): (Y)
Page 1 of 2
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 152996, 152997

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? (Y)/N/none	
		Erin Johnson	11/29/95 11:00am	SDG # EAS51	

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*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

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EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 2425C

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: V
Sampling Co.: MDEQ
4. Date Shipped: 11-28-95
Carrier: Airborne Express
6. Date Received -- Received by: 11/29/95 Erin Johnson
Sampler (Name): Nabil Seif
Airbill Number: 6883010680
Laboratory Contract Number: 68-D5-0029
Unit Price: 621.00
Sampler Signature: Nabil Seif
5. Ship To: Analytical Resources Inc. 333 9th Ave. North Seattle, WA 98109 ATTN: Kate Stegemoeller
7. Transfer to:
Date Received
Received by
Contract Number
Price

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI, ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EASTG	5	L	G	5	X				5-193211-212	SS16	11-28-95 1210	MEAGM6	NS			
EASTG	5	L	G	5		X	X		5-193213	SS16	11-28-95 1210	MEAGM6	NS			
EASXI	4	L	G	1	X				5-193271-272	FBI	11-28-95 1530	MEAGP1	NS			
EASXI	4	L	G	5		X	X		5-193273-274	FBI	11-28-95 1530	MEAGP1	NS			

Shipment for Case Complete?: (Y/N)
Page 2 of 2
Sample(s) to be Used for Laboratory QC
Additional Sampler Signatures
Chain of Custody Seal Number(s): 152996, 152997

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? (Y)N/none	
		Erin Johnson	11/29/95 11:00am	SDG# EAS51	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-2

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*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

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EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 24259

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: I
Sampling Co.: MDEQ
Sampler (Name): Nabil Seif
Sampler Signature: Nabil Seif
3. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

4. Date Shipped: 11-28-95
Carrier: Airborne Express
Airbill Number: 6883010680
5. Ship To: Analytical Resources, Inc. 333 9th Ave. North. Seattle, WA 98109
ATTN: Kate Stegemoeller

6. Date Received – Received by: 11/29/95 Ann Johnson
Laboratory Contract Number: 68-D5-0029
Unit Price: 621.00
7. Transfer to:
Date Received
Received by
Contract Number
Price

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EAS56	5	L	G	5	X				5-193171-72	SS6	11-28-95-1345	MEAGL6	NS			
EAS56						X	X		5-193173	SS6	11-28-95-1345	MEAGL6	NS			
EAS57					X				5-193175-76	SS7	11-28-95-1505	MEAGL7	NS			
EAS57						X	X		5-193177	SS7	11-28-95-1505	MEAGL7	NS			
EAS58					X				5-193179-80	SS8	11-28-95-1530	MEAGL8	NS			
EAS58						X	X		5-193181	SS8	11-28-95-1530	MEAGL8	NS			
EAS59					X				5-193183-84	SS9	11-28-95-1555	MEAGL9	NS			
EAS59						X	X		5-193185	SS9	11-28-95-1555	MEAGL9	NS			
EAS70					X				5-193187-88	SS10	11-28-95-1620	MEAGM0	NS			
EAS70						X	X		5-193189	SS10	11-28-95-1620	MEAGM0	NS			

Shipment for Case Complete? (Y/N) Y
Page 2 of 2
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 152994, 152995

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		Ann Johnson	11/29/95 11:00AM	SDG # EAS51	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

EPA United States Environmental Protection Agency Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (If applicable):

Case No.: 24259

1. Matrix (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Field QC
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H2SO4
   5. Ice only
   6. Other (Specify in Column D)
   N. Not preserved

2. Region No.: I
Sampling Co.: MDEQ
4. Date Shipped: 11-28-95
Carrier: Airborne Express
6. Date Received -- Received by: 11/29/95 Erin Johnson
Sampler (Name): Nabil Seif
Airbill Number: 688 301 0680
Laboratory Contract Number: 68-D5-0029
Unit Price: 621.00
Sampler Signature: Nabil Seif
5. Ship To: Analytical Resources, Inc. 333 9th Ave. North Seattle, WA 98109
ATTN: Kate Stegemoeller
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/ PCB	High only ARO/ TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
EASS1	5	L	G	5	X				5-193151 - 52	SS1	11-28-95-1145	MEAGL1	NS			
EASS1						X	X		5-193153	SS1	11-28-95-1145	MEAGL1	NS			
EASS2					X				5-193155 - 56	SS2	11-28-95-1130	MEAGL2	NS			
EASS2						X	X		5-193-157	SS2	11-28-95-1130	MEAGL2	NS			
EASS3					X				5-193159 - 60	SS3	11-28-95-1220	MEAGL3	NS			
EASS3						X	X		5-193161	SS3	11-28-95-1220	MEAGL3	NS			
EASS4					X				5-193163 - 64	SS4	11-28-95-1245	MEAGL4	NS			
EASS4						X	X		5-193165	SS4	11-28-95-1245	MEAGL4	NS			
EASS5					X				5-193 67 - 68	SS5	11-28-95-1430	MEAGL5	NS			
EASS5						X	X		5-193 69	SS5	11-28-95-1430	MEAGL5	NS			

Shipment for Case Complete? (Y/N): Y
Page 1 of 2
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 152 994, 152 995

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? (Y/N/none)	
		Erin Johnson	11/29/95 11:00AM	SDG # EASS1	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

13680

359027

Pg 1 of

RECEIVED
FEB 20 1996
ERD-SUPERFUND

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on Jan 16, 1996

FROM: Stephen L. Ostrodka, Chief (HSRL-5J)
Superfund Technical Support Section

TO: Data User: MDNR Patricia J Scott for Steve Ostrodka 02/07/96

We have reviewed the data for the following case:

SITE NAME: Jefferson/Chene (MI)

CASE NUMBER: 24259 (2) SDG NUMBER: EASW1

Number and Type of Samples: 11 (water/soil)

Sample Numbers: EASW1-9 EASX0-1

Laboratory: ARJ Hrs. for Review: 14 hrs
1.5 admin
15.5

Following are our findings:

The data are acceptable and usable with the qualifications described in the attached narrative.

Patricia J Scott

cc: Regional TPO
Brian Freeman
HSMC-5J

NARRATIVE

LABORATORY: ARI
CASE: 24259 (2)
SDG: EASW1
SITE: Jefferson/Chene (MI)

The soil samples (EASW1-EASW9, EASX0) and a field blank (EASX1) were collected on 11/28/95. The laboratory received ten (10) soil samples and the field blank on 11/29/95 in good condition for the full list of organic analysis following the SOW OLM03.1.

Sample EASW2 was used as the low level matrix spike/spike duplicates for the VOA, SVOA and Pest/PCB fractions. No water matrix spike/spike duplicates for the VOA, SVOA and Pest/PCB fractions were analyzed since the only water sample in this data package is the field blank.

Sample EASX1 was identified as the field blank. None of the samples in this data package was identified as the field duplicates.

The VOA samples were analyzed within the holding time of fourteen (14) days for the preserved water sample and the soil samples. The SVOA and Pest/PCB samples were extracted within the holding time of seven (7) days for the preserved water and fourteen (14) days for the soil samples. The extracts were analyzed within forty (40) days following the extraction.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__January 29th, 1996__

NARRATIVE

LABORATORY: ARI
CASE: 24259 (2)
SDG: EASW1
SITE: Jefferson/Chene (MI)

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

1.HOLDING TIME

The laboratory received ten (10) soil samples (EASW1-EASW9, EASX0) and a field blank (EASX1) on 11/29/95 in good condition for the full list of organic analysis following the SOW OLM03.1. The VOA samples were analyzed within the holding time of fourteen (14) days for the preserved water and the soil samples; therefore, the results are acceptable. The SVOA and Pest/PCB samples were extracted within the holding time of seven (7) days for the water samples and fourteen (14) days for the soil samples. The extracts were analyzed within forty (40) days following the extraction; therefore, the SVOA and Pest/PCB results are acceptable.

2.GC/MS TUNING PERFORMANCE

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP. All samples were analyzed within the twelve (12) hour periods for instrument performance checks.

The GC Resolution Check Mix met the 60% resolution criteria. DDT and Endrin degradation checks using Performance Evaluation Mix of DB-608 and DB-5 columns were acceptable (<20%); therefore, the results are acceptable.

The Florisil Cartridge and GPC Calibration Checks met the QC criteria; therefore, the results are acceptable.

3.CALIBRATION

Initial and continuing calibration standards of VOA, SVOA and Pest/PCB were evaluated for the Target Compounds List (TCLs) and outliers were recorded on the outlier forms included as a part of this narrative.

4.METHOD BLANK

For the VOA fraction, VBLK31 is the method blank for the water sample and VBLK52 is the method blank for the soil samples. VBLK31 is clean and VBLK52 contains 4 TICs. The presence of the TICs in

the associated samples is flagged as non-detected (U) when the sample results are less than 5X the blank results. Please, refer to Form IVs VOA for the list of associated samples.

For the SVOA fraction, SBLK01 is the method blank for the water sample. SBLK02 and SBLK03 are the method blanks for the soil samples. SBLK01 is clean and SBLK02 contains 3 alkane TICs. SBLK03 contains 1 TIC and 1 alkane TIC. The presence of the TICs and alkane TICs in the associated samples is flagged as non-detected (U) when the sample results are less than 5X the blank results. Please, refer to Form IVs SVOA for the list of associated samples.

For the Pest/PCB fraction, PBLK1 is the method blank for the water sample and PBLK2 is the method blank for the soil samples. PBLK1 and PBLK2 contain no Pest/PCB residues.

5.SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The system monitoring compound recoveries for the VOA sample were within the QC limits; therefore, the results are acceptable.

The surrogate recoveries for the SVOA samples were within the QC limits; therefore, the results are acceptable.

~~For the Pest/PCB fraction, the recovery of TCX1 for EZS23 was below the QC limit.~~ The recovery of DCB2 for EASW1, EASW2DL, EASW6DL, EASW7, EASW8DL and EASW2MS was above the QC limit. The positive results for the above samples are flagged as estimated (J). The recovery of TCX1 for sample EASW1, EASW2MS, EASW2MSD and the recovery of DCB1 for EASW2DL, EASW4, EASW7, EASW9, EASW2MSD was flagged as the outstanding QC by the laboratory. However, these results were within the QC limits for the SOW OLM03.1. Therefore, no qualification is needed for these samples.

GB 03/07/96

6.MATRIX SPIKE/SPIKE DUPLICATES

Sample EASW2 was used as the low level matrix spike/spike duplicates for the VOA, SVOA and Pest/PCB fractions. No water matrix spike/spike duplicates for the VOA, SVOA and Pest/PCB fractions were analyzed since the only water sample in this data package is the field blank.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__January 29th, 1996__

For the VOA fraction, the RPDs for toluene and chlorobenzene were above the QC limits. The positive results for toluene and chlorobenzene in the unspiked soil sample (EASW2) are flagged as estimated (J) and non-detected (UJ).

For the SVOA fraction, the recovery of 2,4-dinitrotoluene for both EASW2MS and EASW2MSD was above the QC limit. The recovery of 4-nitrophenol for EASW2MSD was above the QC limit. The positive results of 2,4-dinitrotoluene and 4-nitrophenol in the unspiked soil sample (EASW2) are flagged as estimated (J).

For the Pest/PCB fraction, the recovery of 4,4'-DDT for the EASW2MS and EASW2MSD was below the QC limit (<10%). The RPD for 4,4'-DDT was below the QC limit. The positive result for 4,4'-DDT in the unspiked soil sample is flagged as estimated (J) and non-detected as unusable (R).

7.FIELD BLANK AND FIELD DUPLICATE

Sample EASX1 was identified as the field blank. None of the samples in this data package was identified as the field duplicates. Sample EASX1 contains acetone below the CRQL.

8.INTERNAL STANDARDS

The internal standard retention times and area counts for the VOA and SVOA fractions were within the QC limits; therefore, the results are acceptable.

9.COMPOUND IDENTIFICATION

The target compounds and TICs for the VOA, SVOA and Pest/PCB fractions were properly identified.

10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The VOA, SVOA and Pest/PCB Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the data are acceptable. The CRQLs were adjusted to reflect all sample dilutions and percent moisture.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__January 29th, 1996__

For the Pest/PCB samples that have congested chromatogram, the positive results for the pesticide target compounds are flagged as non-detected (U) when the concentration from the two columns differ by more than a factor of three or the area of the compound on the primary column is less than 2000.

11.SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

The baseline for the Pest/PCB analysis indicated acceptable performance.

12.ADDITIONAL INFORMATION

The SVOA sample EASW1 reported seven (7) analytes that exceeded the calibration range. The Pest/PCB samples EASW2, EASW6 and EASW8 reported at least one (1) analyte that exceeded the calibration range. For the analyte that exceeded the calibration range in the original sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration.

Reviewed by: Steffanie N. Tobin__Lockheed/ESAT
Date:__January 29th, 1996__

CALIBRATION OUTLIER
Volatile TCL
(Page 1 of 1)

CASE/SAS #: 24259 (2)
COLUMN: CAP
PURGE (Y/N) N

LABORATORY: ART
SITE NAME: Jefferson / Creek (MI)

Instrument ID: FINN3		Initial Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
Date: 11/29/95		11/29/95			12/8/95								
Time: 18:17		18:17			9:12								
	#	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane	0.010												
Bromomethane	0.100												
Vinyl Chloride	0.100												
Chloroethane	0.010												
Methylene Chloride	0.010												
Acetone	0.010	1.06	39.0	J									
Carbon Disulfide	0.010												
1,1-Dichloroethene	0.100												
1,1-Dichloroethane	0.200												
1,2-Dichloroethene (total)	0.010												
Chloroform	0.200												
1,2-Dichloroethane	0.100												
2-Butanone	0.010												
1,1,1-Trichloroethane	0.100												
Carbon Tetrachloride	0.100												
Bromodichloromethane	0.200												
1,2-Dichloropropane	0.010												
cis-1,3-Dichloropropene	0.200												
Trichloroethene	0.300												
Dibromochloromethane	0.100												
1,1,2-Trichloroethane	0.100												
Benzene	0.500												
trans-1,3-Dichloropropene	0.100												
Bromoform	0.100												
4-Methyl-2-Pentanone	0.010												
2-Hexanone	0.010												
Tetrachloroethene	0.200												
1,1,2,2-Tetrachloroethane	0.300												
Toluene	0.400												
Chlorobenzene	0.500												
Ethylbenzene	0.100												
Styrene	0.300												
Xylene (total)	0.300												
Toluene-d_8	0.010												
Bromofluorobenzene	0.200												
1,2-Dichloroethane-d_4	0.010												

Affected Samples:

	VB1K31		
	VHB1K31		

Minimum Relative Response Factor.
* These flags should be applied to the analytes on the sample data sheets.
J/R = All positive results are estimated, "J" and non-detected results are unusable "R".

Reviewer's Init/Date: ST 1/22/96

CALIBRATION OUTLIER
Volatile TCL
(Page 1 of 1)

CASE/SAS #: 24259 (2)
COLUMN: CAP
HEATED PURGE (Y/N) Y

LABORATORY: ART
SITE NAME: Jefferson / Chene (MI)

Instrument ID: FINN5		Initial Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
Date: 12/6/95		12/6/95			12/7/95								
Time: 14:31		14:31			10:54								
	#	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane	0.010												
Bromomethane	0.100												
Vinyl Chloride	0.100												
Chloroethane	0.010												
Methylene Chloride	0.010												
Acetone	0.010	2.18			1.52	30.6	J						
Carbon Disulfide	0.010												
1,1-Dichloroethene	0.100												
1,1-Dichloroethane	0.200												
1,2-Dichloroethene (total)	0.010												
Chloroform	0.200												
1,2-Dichloroethane	0.100												
2-Butanone	0.010												
1,1,1-Trichloroethane	0.100												
Carbon Tetrachloride	0.100												
Bromodichloromethane	0.200												
1,2-Dichloropropane	0.010												
cis-1,3-Dichloropropene	0.200												
Trichloroethene	0.300												
Dibromochloromethane	0.100												
1,1,2-Trichloroethane	0.100												
Benzene	0.500												
trans-1,3-Dichloropropene	0.100												
Bromoform	0.100												
4-Methyl-2-Pentanone	0.010												
2-Hexanone	0.010												
Tetrachloroethene	0.200												
1,1,2,2-Tetrachloroethane	0.300												
Toluene	0.400												
Chlorobenzene	0.500												
Ethylbenzene	0.100	0.60			0.44	25.9	J						
Styrene	0.300												
Xylene (total)	0.300	0.83			0.60	27.5	J						
Toluene-d_8	0.010												
Bromofluorobenzene	0.200												
1,2-Dichloroethane-d_4	0.010												

Affected Samples:

	VBLK52		
	EASW1-9		
	EASX0-1		
	EASW2MS		
	EASW2MSD		

Minimum Relative Response Factor.
* These flags should be applied to the analytes on the sample data sheets.
J/R = All positive results are estimated, "J" and non-detected results are unusable "R".

Reviewer's Init/Date: ST 1/22/96

ST 1/29/96

CALIBRATION OUTLIER
Semivolatile TCL
(Page 1 of 2)

CASE/SAS #: 24259
COLUMN:

LABORATORY: ARI
SITE NAME: Jefferson Chine

Instrument ID: FINN8		Initial Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
Date: 12/16/95		12/16/95			12/16/95			12/21/95			12/29/95		
Time: 14:56		14:56			19:12			16:05			16:47		
	#	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol	0.800												
bis(2-Chloroethyl)ether	0.700												
2-Chlorophenol	0.800												
1,3-Dichlorobenzene	0.600												
1,4-Dichlorobenzene	0.500												
1,2-Dichlorobenzene	0.400												
2-Methylphenol	0.700												
2,2-oxybis(1-Chloropropane)	0.010												
4-Methylphenol	0.600												
N-Nitroso-di-n-propylamine	0.500												
Hexachloroethane	0.300												
Nitrobenzene	0.200												
Isophorone	0.400												
2-Nitrophenol	0.100												
2,4-Dimethylphenol	0.200												
bis(2-Chloroethoxy)methane	0.300												
2,4-Dichlorophenol	0.200												
1,2,4-Trichlorobenzene	0.200												
Naphthalene	0.700												
4-Chloroaniline	0.010												
Hexachlorobutadiene	0.010												
4-Chloro-3-methylphenol	0.200												
2-Methylnaphthalene	0.400												
Hexachlorocyclopentadiene	0.010												
2,4,6-Trichlorophenol	0.200												
2,4,5-Trichlorophenol	0.200												
2-Chloronaphthalene	0.800												
2-Nitroaniline	0.010												
Dimethylphthalate	0.010												
Acenaphthylene	0.900												
2,6-Dinitrotoluene	0.200												
3-Nitroaniline	0.010												
Acenaphthene	0.900												
2,4-Dinitrophenol	0.010												

Affected Samples:

	SB1KQ1	SB1KQ2	EASWIDL
	EASXI	EASWI-9	
		EASXD	
		SB1KQ3	
		EASW2MS	
		EASW2MSD	

Minimum Relative Response Factor.
* These flags should be applied to the analytes on the sample data sheets.
J/R = All positive results are estimated "J" and non-detected results are unusable "R".

Reviewer's Init/Date: ST 1/23/96

ST 1/23/96

CALIBRATION OUTLIER
Semivolatile TCL
(Page 2 of 2)

CASE/SAS #: 24259
COLUMN:

LABORATORY: ARI
SITE NAME: Jefferson Chem

Instrument ID: FINN8		Initial Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
Date: 12/16/95		12/16/95			12/16/95			12/21/95			12/22/95		
Time: 14:56		14:56			19:12			16:05			16:47		
	#	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*
4-Nitrophenol	0.010												
Dibenzofuran	0.800												
2,4-Dinitrotoluene	0.200												
Diethylphthalate	0.010												
4-Chlorophenyl-phenylether	0.400												
Fluorene	0.900												
4-Nitroaniline	0.010												
4,6-Dinitro-2-methylphenol	0.010												
N-nitrosodiphenylamine	0.010												
4-Bromophenyl-phenylether	0.100												
Hexachlorobenzene	0.100												
Pentachlorophenol	0.050												
Phenanthrene	0.700												
Anthracene	0.700												
Carbazole	0.010												
Di-n-butylphthalate	0.010												
Fluoranthene	0.600												
Pyrene	0.600												
Butylbenzylphthalate	0.010												
3-3'-Dichlorobenzidine	0.010												
Benzo(a)anthracene	0.800												
Chrysene	0.700												
bis(2-Ethylhexyl)phthalate	0.010												
Di-n-octylphthalate	0.010	1.83						2.58	41.4	J			
Benzo(b)fluoranthene	0.700												
Benzo(k)fluoranthene	0.700												
Benzo(a)pyrene	0.700												
Indeno(1,2,3-cd)pyrene	0.500												
Dibenz(a,h)anthracene	0.400												
Benzo(g,h,i)perylene	0.500												
Nitrobenzene-d_5	0.200												
2-Flurobiphenyl	0.700												
Terphenyl-d_{14}	0.500												
Phenol-d_5	0.800												
2-Fluorophenol	0.600												
2,4,6-Tribromophenol	0.010												
2-Chlorophenol-d_4	0.800												
1,2-Dichlorobenzene-d_4	0.400												

Minimum Relative Response Factor.
* These flags should be applied to the analytes on the sample data sheets.
J/R = All positive results are estimated "J" and non-detected results are unusable "R".

Reviewer's Init/Date: ST 1/23/96

ST 1/24/96

CALIBRATION OUTLIER
Pesticide/PCB TCL
(Page 1 of 1)

CASE/SAS #: 24259
COLUMN: DB-608

LABORATORY: ART
SITE NAME: Jefferson/Chene

Instrument Number	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
Date 12/21/95	12/21/95		12/22/95		12/23/95		12/26/95			
Time 15:44	15:44		11:32		9:30		19:25			
	%RSD	*	%D	*	%D	*	%D	*	%D	*
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC										
Hepachlor										
Aldrin										
Heptachlor Epoxide										
Endosulfan I										
Dieldrin										
4,4'-DDE										
Endrin										
Endosulfan II										
4,4'-DDD										
Endosulfan Sulfate										
4,4'-DDT										
Methoxychlor										
Endrin Ketone										
Endrin Aldehyde										
alpha-Chlordane										
gamma-Chlordane										
Aroicor 1016										
Aroclor 1221										
Aroclor 1232										
Aroicor 1242										
Aroclor 1248										
Aroclor 1254										
Aroclor 1260										

Affected Samples:

	PBIKQ			
	EASXO-1	EASW2DL		
	PBIK-1	EASW6DL		
	EASWL-9	EASW8DL		
	EASW2MS			
	EASW2MSD			

* These flags should be applied to the analytes on the sample data sheets.
J/R = All positive results are estimated "J" and non-detected results are unusable "R".

Reviewer's Init/Date: ST 1/24/96

ST 1/24/96

CALIBRATION OUTLIER
Pesticide/PCB TCL
(Page 1 of 1)

CASE/SAS #: 24259
COLUMN: DB-5

LABORATORY: ART
SITE NAME: Jefferson Chem

Instrument Number Date 12/21/95	Initial Cal. 12/21/95		Cont. Cal. 12/22/95		Cont. Cal. 12/23/95		Cont. Cal. 12/26/95		Cont. Cal.	
Time 15:44	15:44		11:32		9:50		19:25			
	%RSD	*	%D	*	%D	*	%D	*	%D	*
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC										
Hepachlor										
Aldrin										
Heptachlor Epoxide										
Endosulfan I										
Dieldrin										
4,4'-DDE										
Endrin										
Endosulfan II										
4,4'-DDD										
Endosulfan Sulfate										
4,4'-DDT										
Methoxychlor										
Endrin Ketone										
Endrin Aldehyde										
alpha-Chlordane										
gamma-Chlordane										
Arolcor 1016										
Aroclor 1221										
Aroclor 1232										
Arolcor 1242										
Aroclor 1248										
Aroclor 1254										
Aroclor 1260										

Affected Samples:

	PB1112			
	EASX0-1	EASW2X		
	PB1111	EASW6X		
	EASW1-9	EASW8DL		
	EASW2MS			
	EASW2MSD			

* These flags should be applied to the analytes on the sample data sheets.
J/R = All positive results are estimated "J" and non-detected results are unusable "R".

Reviewer's Init/Date: ST 1/24/96

ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document, the following code letters and associated definitions are provide:

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL).

U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.

J Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound but the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.

R Indicates the data are unusable. (Note: The analyte may or may not be present.)

N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.

P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.

C Indicates pesticide results that have been confirmed by GC/MS.

B Indicates the analyte is detected in the associated blank as well as the sample.

E Indicates compounds whose concentrations exceed the calibration range of the instrument.

D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.

A Indicates tentatively identified compounds that are suspected to be aldol condensation products.

G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.

L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.

T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.

X, Y, Z are reserved for laboratory defined flags.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

10 January 1996

Charles T. Elly
USEPA Region V
536 S. Clark Street
Tenth Floor, SL-10C
Chicago, IL 60605

RE: Case# 24259, SDG# EASW1 - Contract 68-D50029;
ARI Job. #5336

Dear Mr. Elly,

Please find enclosed the data and deliverables for the above referenced Case and SDG which includes the following listed soil samples and water QC sample for full organics analyses. This SDG was received in one shipment, on 11/29/95, with samples from SDG# EASS1. No confidential information was received.

EASW1	**EASW2**	**EASW3**	**EASW4**	**EASW5**	**EASW6**
EASW7	**EASW8**	**EASW9**	**EASX0**	**EASX1**	

All samples were in good condition when received, and there were no discrepancies between the OTR/COC and sample container labels, with one exception; sample "EASW25" was designated as the QC sample for the whole Case, and no such sample was received. Also, both samples EASW2 and EASW5 fall into the same SDG when all samples for the Case are ordered alphanumerically. At the authorization of the CLASS representative, **EASW2** was used for QC for this SDG, and a different sample was chosen for SDG# EASS1.

VOLATILE ORGANICS

Samples were analyzed for volatile organics by GC/MS on Finn 5, and the storage blank was analyzed on Finn 3. Both instruments are equipped with Restek Rtx 502.2, 0.25 mm X 105 m, 3.0 µm phase capillary columns. The traps are Vocarb 3000, containing Carbopack B/Carboxen 1000 and 1001 material. This trap conforms to all requirements specified in the OLM03.0 SOW. Performance equivalent to the systems specified in the SOW is demonstrated by the initial and continuing calibrations, for which all requirements were met prior to analysis. Tuning criteria were also met for these instruments on all analysis dates.

A matrix spike triplicate was analyzed due to low responses in the matrix spike; only the matrix spike duplicate and triplicate results are reported. Sample **EASW9** required reanalysis because an internal standard area was outside QC limits initially. The reanalysis results are compliant

System Monitoring Compound (SMC) and internal standard areas are all within contract-required QC limits. Spike compound recoveries are also within limits in the MS and MSD, however the RPDs for toluene and chlorobenzene are high. No corrective action is required.

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EXTRACTIONS

Sample **EASW2** was found to be difficult to homogenize, as the matrix consisted of clay and pebbles. This sample and the associated QC required reextraction for semivolatiles due to contamination in the initial matrix spike. The reextraction was performed within holding time, therefore the original extracts were not analyzed.

SEMIVOLATILE ORGANICS

Samples were analyzed for semivolatile organics by GC/MS on Finn 8. This instrument uses a 31 m segment of a Restek Rtx-5 column, 0.32 mm X 105 m, 0.25 µm phase. Performance equivalent to the systems specified in the SOW is demonstrated by the initial and continuing calibrations, for which all requirements were met prior to analysis. Tuning criteria were also met for this instrument on the analysis dates.

Sample **EASW1** required reanalysis at dilution due to analyte concentrations above the linear range of instrument calibration. Both sets of results for this sample are reported.

Surrogate recoveries for the method blank and samples are within contract-required QC limits without exception. Internal standard areas are also all within limits.

Spike compound recoveries are outside advisory limits in the matrix spike for 2,4-dinitrotoluene, and in the matrix spike duplicate for 4-nitrophenol and 2,4-dinitrotoluene. RPDs are all within limits. No corrective action is required.

Manual integrations were required for the following standard and samples:

SSTD05085	indeno(1,2,3-cd)pyrene
EASW1	benzo(b)fluoranthene, benzo(k)fluoranthene
EASW1DL	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASW2	benzo(b)fluoranthene, benzo(k)fluoranthene
EASW2MS	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASW2MSD	benzo(b)fluoranthene, benzo(k)fluoranthene
EASW3	benzo(b)fluoranthene, benzo(k)fluoranthene
EASW4	benzo(b)fluoranthene, benzo(k)fluoranthene
EASW5	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASW6	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASW7	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASW8	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASW9	benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene
EASX0	d10-phenanthrene

Alkanes were detected in samples as presented in Attachment A. Spectra for any additional TICs that are not reported on the Form Is and are not alkanes are included in the Sample Prep/ Miscellaneous Data section.

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PESTICIDE/PCB ORGANICS

Pesticide/PCB samples were analyzed by GC instrument ECD3A. This instrument uses both J&W DB-5, 0.53 mm X 30 m, 1.5 µm phase, and J&W DB-608, 0.53 mm X 30 m, 0.83 µm phase, columns, and analyses were performed using 1 µl injections. Calibration criteria were met on this instrument for all reported analysis dates.

Samples **EASW2**, **EASW6**, and **EASW8** required reanalyses at dilution due to analyte concentrations that are above the linear range of instrument calibration. Both sets of results are reported. Compounds in some of these samples are quantified and "P" flagged because they fall within the retention time windows. It is the opinion of the analyst and QA reviewer, however, that they may not be "real" hits, as significant matrix interference precludes definitive quantitation.

The TCX and DCB surrogate recoveries are within advisory limits with the exceptions of low TCX on the primary column in samples **EASW1**, **EASW2MS**, and **EASW2MSD**, low DCB on the primary column in samples **EASW2DL**, **EASW4**, **EASW7**, **EASW9**, and **EASW2MSD**, and high DCB on the secondary column in samples **EASW1**, **EASW2DL**, **EASW2MS**, **EASW6DL**, **EASW7**, and **EASW8DL**. No corrective action is required, however note that several of these samples are reanalyses, either at dilution or as matrix spikes, which indicates some matrix effect.

All spike compound recoveries and RPDs are within limits in the QC samples with the exceptions of 4,4'-DDT in both the MS and MSD, due to the high concentration of this compound in the unspiked sample. No corrective action is required.

Any unreported data associated with these samples (sample preparation information, analyst worksheets, unreported data, etc.) has been submitted here in the Sample Prep/Miscellaneous Data section. Copies of any communication records, instrument logbook pages, and any other documentation regarding this SDG that is not included elsewhere is in the Additional Records section. A copy of the entire package will be kept on file at Analytical Resources, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer readable data submitted on the floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Kate Stegemoeller 1/10/96
Signature Date

Respectfully submitted,
ANALYTICAL RESOURCES, INC.

Kate Stegemoeller

Kathryn A. Stegemoeller
EPA Project Manager

Original to Region
cc: USEPA-CLP-SMO
file 5336

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Attachment A

Alkanes, Case# 24259, SDG# EASW1 Contract# 68D50029, A.R.I.
 1/10/96

	Sample No.	Scan No.	Identification	Concentration (ug/Kg)	
1	SBLK02	982	Unknown Alkane (bp m/e 55)	9 J	
2	SBLK02	1178	Unknown Alkane (bp m/e 55)	4 J	
3	SBLK02	1560	Unknown Alkane (bp m/e 57)	5 J	
1	SBLK03	1559	Unknown Alkane (bp m/e 57)	3 J	
1	EASW1	804	Unknown Alkane (bp m/e 57)	3 J	
2	EASW1	968	Unknown Alkane (bp m/e 57)	3 J	
3	EASW1	1004	Unknown Alkane (bp m/e 57)	7 J	
4	EASW1	1095	Unknown Alkane (bp m/e 57)	5 J	
5	EASW1	1138	Unknown Alkane (bp m/e 57)	5 J	
6	EASW1	1187	Unknown Alkane (bp m/e 57)	12 J	
7	EASW1	1265	Unknown Alkane (bp m/e 57)	3 J	
8	EASW1	1490	Unknown Alkane (bp m/e 57)	3 J	
9	EASW1	1560	Unknown Alkane (bp m/e 57)	14 JBU	
10	EASW1	1625	Unknown Alkane (bp m/e 57)	7 J	PS 02/07/96
11	EASW1	1750	Unknown Alkane (bp m/e 57)	11 J	
12	EASW1	1867	Unknown Alkane (bp m/e 57)	16 J	
13	EASW1	2081	Unknown Alkane (bp m/e 57)	18 J	
14	EASW1	2085	Unknown Alkane (bp m/e 83)	6 J	
15	EASW1	2181	Unknown Alkane (bp m/e 57)	12 J	
1	EASW1DL	1185	Unknown Alkane (bp m/e 57)	11 J	
2	EASW1DL	2077	Unknown Alkane (bp m/e 57)	23 J	
1	EASW2	1178	Unknown Alkane (bp m/e 55)	4 JB	
2	EASW2	1559	Unknown Alkane (bp m/e 57)	10 JBU	PS 02/07/96
3	EASW2	1625	Unknown Alkane (bp m/e 57)	3 J	
4	EASW2	1750	Unknown Alkane (bp m/e 57)	5 J	
5	EASW2	1810	Unknown Alkane (bp m/e 57)	3 J	
6	EASW2	1866	Unknown Alkane (bp m/e 57)	9 J	
7	EASW2	2080	Unknown Alkane (bp m/e 57)	8 J	
8	EASW2	2084	Unknown Alkane (bp m/e 55)	4 J	
9	EASW2	2180	Unknown Alkane (bp m/e 57)	3 J	
1	EASW3	981	Unknown Alkane (bp m/e 55)	6 JB U	PS 02/07/96
2	EASW3	1177	Unknown Alkane (bp m/e 55)	4 JB U	
3	EASW3	1385	Unknown Alkane (bp m/e 55)	3 J	

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4	EASW3	1559	Unknown Alkane (bp m/e 57)	4	JB U
5	EASW3	1689	Unknown Alkane (bp m/e 57)	3	J
6	EASW3	1749	Unknown Alkane (bp m/e 57)	3	J
7	EASW3	1922	Unknown Alkane (bp m/e 57)	6	J
8	EASW3	2029	Unknown Alkane (bp m/e 57)	3	J
9	EASW3	2080	Unknown Alkane (bp m/e 57)	35	J
10	EASW3	2084	Unknown Alkane (bp m/e 97)	13	J
11	EASW3	2181	Unknown Alkane (bp m/e 57)	12	J
1	EASW4	981	Unknown Alkane (bp m/e 55)	6	JB U
2	EASW4	1177	Unknown Alkane (bp m/e 55)	3	JB U
3	EASW4	1186	Unknown Alkane (bp m/e 57)	4	J
4	EASW4	1343	Unknown Alkane (bp m/e 57)	6	J
5	EASW4	1418	Unknown Alkane (bp m/e 57)	5	J
6	EASW4	1490	Unknown Alkane (bp m/e 57)	4	J
7	EASW4	1559	Unknown Alkane (bp m/e 57)	9	JB U
8	EASW4	1625	Unknown Alkane (bp m/e 57)	4	J
9	EASW4	1689	Unknown Alkane (bp m/e 57)	6	J
10	EASW4	1750	Unknown Alkane (bp m/e 57)	4	J
11	EASW4	1809	Unknown Alkane (bp m/e 57)	4	J
12	EASW4	1997	Unknown Alkane (bp m/e 43)	4	J
13	EASW4	2080	Unknown Alkane (bp m/e 57)	18	J
14	EASW4	2180	Unknown Alkane (bp m/e 57)	6	J
1	EASW5	981	Unknown Alkane (bp m/e 55)	8	JB U
2	EASW5	1177	Unknown Alkane (bp m/e 55)	5	JB U
3	EASW5	1186	Unknown Alkane (bp m/e 57)	3	J
4	EASW5	1418	Unknown Alkane (bp m/e 57)	3	J
5	EASW5	1490	Unknown Alkane (bp m/e 57)	3	J
6	EASW5	1559	Unknown Alkane (bp m/e 57)	8	JB U
7	EASW5	1625	Unknown Alkane (bp m/e 57)	3	J
8	EASW5	1750	Unknown Alkane (bp m/e 57)	5	J
9	EASW5	1809	Unknown Alkane (bp m/e 57)	3	J
10	EASW5	1922	Unknown Alkane (bp m/e 57)	8	J
11	EASW5	2028	Unknown Alkane (bp m/e 57)	4	J
12	EASW5	2080	Unknown Alkane (bp m/e 57)	70	J
13	EASW5	2180	Unknown Alkane (bp m/e 57)	18	J

BJS 02/07/96

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1	EASW6	1004	Unknown Alkane (bp m/e 57)	4	J
2	EASW6	1096	Unknown Alkane (bp m/e 57)	3	J
3	EASW6	1183	Unknown Alkane (bp m/e 57)	4	J
4	EASW6	1187	Unknown Alkane (bp m/e 57)	6	J
5	EASW6	1265	Unknown Alkane (bp m/e 57)	3	J
6	EASW6	1344	Unknown Alkane (bp m/e 57)	4	J
7	EASW6	1419	Unknown Alkane (bp m/e 57)	5	J
8	EASW6	1425	Unknown Alkane (bp m/e 69)	6	J
9	EASW6	1491	Unknown Alkane (bp m/e 57)	5	J
10	EASW6	1560	Unknown Alkane (bp m/e 57)	11	JB
11	EASW6	1626	Unknown Alkane (bp m/e 57)	5	J
12	EASW6	1751	Unknown Alkane (bp m/e 57)	9	J
13	EASW6	1811	Unknown Alkane (bp m/e 57)	7	J
14	EASW6	1867	Unknown Alkane (bp m/e 57)	29	J
15	EASW6	2029	Unknown Alkane (bp m/e 57)	8	J
16	EASW6	2082	Unknown Alkane (bp m/e 57)	73	J
17	EASW6	2085	Unknown Alkane (bp m/e 83)	30	J
18	EASW6	2182	Unknown Alkane (bp m/e 57)	21	J
19	EASW6	2189	Unknown Alkane (bp m/e 57)	28	J
1	EASW7	1004	Unknown Alkane (bp m/e 57)	3	J
2	EASW7	1095	Unknown Alkane (bp m/e 57)	3	J
3	EASW7	1182	Unknown Alkane (bp m/e 57)	3	J
4	EASW7	1187	Unknown Alkane (bp m/e 57)	5	J
5	EASW7	1265	Unknown Alkane (bp m/e 57)	3	J
6	EASW7	1419	Unknown Alkane (bp m/e 57)	3	J
7	EASW7	1490	Unknown Alkane (bp m/e 57)	3	J
8	EASW7	1559	Unknown Alkane (bp m/e 57)	7	JB
9	EASW7	1750	Unknown Alkane (bp m/e 57)	7	J
10	EASW7	1810	Unknown Alkane (bp m/e 57)	3	J
11	EASW7	1867	Unknown Alkane (bp m/e 57)	7	J
12	EASW7	2028	Unknown Alkane (bp m/e 57)	4	J
13	EASW7	2080	Unknown Alkane (bp m/e 57)	21	J
14	EASW7	2084	Unknown Alkane (bp m/e 97)	4	J
15	EASW7	2181	Unknown Alkane (bp m/e 57)	8	J
1	EASW8	567	Unknown Alkane (bp m/e 57)	7	J
2	EASW8	1095	Unknown Alkane (bp m/e 57)	3	J

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3	EASW8	1177	Unknown Alkane (bp m/e 55)	5	JB
4	EASW8	1182	Unknown Alkane (bp m/e 57)	5	J
5	EASW8	1186	Unknown Alkane (bp m/e 57)	5	J
6	EASW8	1264	Unknown Alkane (bp m/e 57)	3	J
7	EASW8	1342	Unknown Alkane (bp m/e 57)	4	J
8	EASW8	1418	Unknown Alkane (bp m/e 57)	5	J
9	EASW8	1423	Unknown Alkane (bp m/e 55)	3	J
10	EASW8	1490	Unknown Alkane (bp m/e 57)	5	J
11	EASW8	1521	Unknown Alkane (bp m/e 55)	11	J
12	EASW8	1559	Unknown Alkane (bp m/e 57)	11	JB
13	EASW8	1624	Unknown Alkane (bp m/e 57)	6	J
14	EASW8	1688	Unknown Alkane (bp m/e 57)	8	J
15	EASW8	1749	Unknown Alkane (bp m/e 57)	12	J
16	EASW8	1809	Unknown Alkane (bp m/e 57)	5	J
17	EASW8	1866	Unknown Alkane (bp m/e 57)	17	J
18	EASW8	1922	Unknown Alkane (bp m/e 252)	11	J
19	EASW8	2028	Unknown Alkane (bp m/e 57)	5	J
20	EASW8	2080	Unknown Alkane (bp m/e 57)	61	J
21	EASW8	2084	Unknown Alkane (bp m/e 55)	20	J
22	EASW8	2181	Unknown Alkane (bp m/e 57)	12	J
1	EASW9	803	Unknown Alkane (bp m/e 57)	3	J
2	EASW9	882	Unknown Alkane (bp m/e 57)	3	J
3	EASW9	906	Unknown Alkane (bp m/e 57)	6	J
4	EASW9	967	Unknown Alkane (bp m/e 57)	5	J
5	EASW9	1003	Unknown Alkane (bp m/e 57)	7	J
6	EASW9	1095	Unknown Alkane (bp m/e 57)	8	J
7	EASW9	1137	Unknown Alkane (bp m/e 57)	5	J
8	EASW9	1182	Unknown Alkane (bp m/e 57)	8	J
9	EASW9	1186	Unknown Alkane (bp m/e 57)	9	J
10	EASW9	1264	Unknown Alkane (bp m/e 57)	6	J
11	EASW9	1271	Unknown Alkane (bp m/e 57)	4	J
12	EASW9	1343	Unknown Alkane (bp m/e 57)	8	J
13	EASW9	1418	Unknown Alkane (bp m/e 57)	10	J
14	EASW9	1490	Unknown Alkane (bp m/e 57)	7	J
15	EASW9	1559	Unknown Alkane (bp m/e 57)	12	JB
16	EASW9	1625	Unknown Alkane (bp m/e 57)	7	J
17	EASW9	1689	Unknown Alkane (bp m/e 57)	10	J

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18	EASW9	1749	Unknown Alkane (bp m/e 57)	9	J
19	EASW9	1809	Unknown Alkane (bp m/e 57)	5	J
20	EASW9	1866	Unknown Alkane (bp m/e 57)	11	J
21	EASW9	2027	Unknown Alkane (bp m/e 57)	2	J
22	EASW9	2079	Unknown Alkane (bp m/e 57)	12	J
23	EASW9	2083	Unknown Alkane (bp m/e 55)	3	J
24	EASW9	2179	Unknown Alkane (bp m/e 57)	6	J
1	EASX0	709	Unknown Alkane (bp m/e 57)	3	J
2	EASX0	774	Unknown Alkane (bp m/e 57)	2	J
3	EASX0	804	Unknown Alkane (bp m/e 57)	4	J
4	EASX0	884	Unknown Alkane (bp m/e 57)	3	J
5	EASX0	908	Unknown Alkane (bp m/e 57)	8	J
6	EASX0	968	Unknown Alkane (bp m/e 57)	4	J
7	EASX0	982	Unknown Alkane (bp m/e 55)	3	JB U
8	EASX0	1005	Unknown Alkane (bp m/e 57)	6	J
9	EASX0	1096	Unknown Alkane (bp m/e 57)	6	J
10	EASX0	1139	Unknown Alkane (bp m/e 57)	5	J
11	EASX0	1183	Unknown Alkane (bp m/e 57)	7	J
12	EASX0	1188	Unknown Alkane (bp m/e 57)	8	J
13	EASX0	1265	Unknown Alkane (bp m/e 57)	5	J
14	EASX0	1272	Unknown Alkane (bp m/e 57)	4	J
15	EASX0	1344	Unknown Alkane (bp m/e 57)	5	J
16	EASX0	1419	Unknown Alkane (bp m/e 57)	4	J
17	EASX0	1491	Unknown Alkane (bp m/e 57)	4	J
18	EASX0	1560	Unknown Alkane (bp m/e 57)	5	JB U
19	EASX0	1626	Unknown Alkane (bp m/e 57)	11	J
20	EASX0	1690	Unknown Alkane (bp m/e 57)	8	J
21	EASX0	1751	Unknown Alkane (bp m/e 57)	11	J
22	EASX0	1810	Unknown Alkane (bp m/e 57)	5	J
23	EASX0	1867	Unknown Alkane (bp m/e 57)	10	J
24	EASX0	1923	Unknown Alkane (bp m/e 57)	5	J
25	EASX0	2029	Unknown Alkane (bp m/e 57)	4	J
26	EASX0	2080	Unknown Alkane (bp m/e 57)	8	J

PB 02/07/96

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2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	EASX1	104	99	98	0	0
02	VHBLK31	103	104	106	0	0
03	VBLK31	100	95	102	0	0

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

01 0005

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	EASW1	106	92	106	0	0
02	EASW2	101	102	103	0	0
03	EASW3	109	90	101	0	0
04	EASW4	110	88	100	0	0
05	EASW5	104	86	104	0	0
06	EASW6	116	82	101	0	0
07	EASW7	114	89	99	0	0
08	EASW8	111	90	98	0	0
09	EASW9	110	88	99	0	0
10	EASX0	120	83	99	0	0
11	EASW2MS	105	94	98	0	0
12	EASW2MSD	108	100	104	0	0
13	VBLK52	98	100	104	0	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(84-138)
SMC2 (BFB) = Bromofluorobenzene	(59-113)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix Spike - EPA Sample No.: EASW2 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	57.20	0	68.18	119	59-172
Trichloroethene	57.20	0	55.26	97	62-137
Benzene	57.20	0	55.89	98	66-142
Toluene	57.20	0	50.73	89	59-139
Chlorobenzene	57.20	0	39.20	69	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	58.40	70.75	121	2	22	59-172
Trichloroethene	58.40	59.59	102	5	24	62-137
Benzene	58.40	61.24	105	7	21	66-142
Toluene	58.40	65.75	113	24 *	21	59-139
Chlorobenzene	58.40	57.39	98	35 *	21	60-133

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:

0 0007

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK31

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Lab File ID: F3MB1208 Lab Sample ID: F3MB1208

Date Analyzed: 12/08/95 Time Analyzed: 1051

GC Column: CAP ID: 0.250(mm) Heated Purge: (Y/N) N

Instrument ID: FINN3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK31	F3HB1208	F3HB1208	1832

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK52

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Lab File ID: F5MB1207 Lab Sample ID: F5MB1207

Date Analyzed: 12/07/95 Time Analyzed: 1133

GC Column: CAP ID: 0.250(mm) Heated Purge: (Y/N) Y

Instrument ID: FINN5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EASW1	F55336A	F55336A	1316
02	EASW2	F55336B	F55336B	1346
03	EASW3	F55336C	F55336C	1414
04	EASW4	F55336D	F55336D	1442
05	EASW5	F55336E	F55336E	1510
06	EASW6	F55336F	F55336F	1538
07	EASW7	F55336G	F55336G	1605
08	EASW8	F55336H	F55336H	1633
09	EASW9	F55336IRE	F55336IRE	1956
10	EASX0	F55336J	F55336J	1729
11	EASX1	F55336K	F55336K	1801
12	EASW2MS	F55336BMSD	F55336BMSD	1928
13	EASW2MSD	F55336BMST	F55336BMST	2203

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK31

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) WATER Lab Sample ID: F3MB1208

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: F3MB1208

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

% Moisture: not dec. ____ Date Analyzed: 12/08/95

GC Column: CAP ID: 0.250 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-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.

VBLK31

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) WATER Lab Sample ID: F3MB1208

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: F3MB1208

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

% Moisture: not dec. ____ Date Analyzed: 12/08/95

GC Column: CAP ID: 0.250 (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.

VBLK52

L Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F5MB1207

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F5MB1207

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

% Moisture: not dec. _____ Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-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.

VBLK52

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F5MB1207

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F5MB1207

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

% Moisture: not dec. ____ Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	HEXANE	6.62	14	JN
2.	UNKNOWN SILANE (BP M/E 207)	10.60	15	J
3.	UNKNOWN SILANE (BP M/E 281)	13.43	72	J
4.	UNKNOWN SILANE (BP M/E 73)	15.83	11	J

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS 21

EASW1

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336A

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336A

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 14 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EASW1

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336A

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336A

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 14 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS 22

EASW2

L' Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336B

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336B

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 16 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EASW2

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336B

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336B

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 16 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

01.0029

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS23

EASW3

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336C

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F55336C

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 21 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EASW3

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336C

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F55336C

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 21 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS24

EASW4

La Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336D

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F55336D

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 16 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EASW4

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336D

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F55336D

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 16 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

0 0049

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS25

EASW5

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336E

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F55336E

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 22 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EASW5

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336E

Sample wt/vol: 5.0 (g/mL) G Lab File ID: F55336E

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 22 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS26

EASW6

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336F

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336F

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 26 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EASW6

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336F

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336F

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 26 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS27

EASW7

Lab Name: ANALYTICAL RESOURCES INC Contract: 68D50029

Lab Code: ARI Case No.: 24259 SAS No.: _____ SDG No.: EASW1

Matrix: (soil/water) SOIL Lab Sample ID: F55336G

Sample wt/vol: 5.2 (g/mL) G Lab File ID: F55336G

Level: (low/med) LOW Date Received: 11/29/95

% Moisture: not dec. 17 Date Analyzed: 12/07/95

GC Column: CAP ID: 0.250 (mm) Dilution Factor: 1.0

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

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