IL1190000000-Madison Co
Kettle River Creosote
ILD984791665
SF/HRS
Volume 2 of 2

CERCLA

Screening Site Inspection Analytical Results

Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

EPA Region 5 Records Ctr.
308613

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APPENDIX F

CHEMICAL ANALYSIS DATA OF IEPA COLLECTED SAMPLES (4-21-92)

Illinois Environmental Protection Agency · P.O. Box 19276, Springfield, IL 62794-9276

MEMORANDUM

DATE: August 12, 1992

TO: Ken Corkill

FROM: Ron Turpin & Jim Shaw

SUBJECT: Review of Data Package
Kettle River

The Division of Laboratories Quality Assurance Section has reviewed the above referenced data package. The package was for 14 soil samples taken on April 24, 1992. The samples were analyzed at the IEPA laboratories in Springfield (organics) and in Champaign (inorganics).

I have attached summary forms for the Volatile Organics Analyses (VOAs), the Semi-Volatile Analyses (SVs) and the Pesticide/PCB analyses (P/Ps) in soil and water samples. The results on the summary forms have been modified as required by USEPA data validation guidelines. The results on the summary forms are valid as qualified by the associated data qualifiers. The Inorganics Analysis data has been validated and the attached sample analysis data sheets have been modified as required by the data validation process and the USEPA data validation guidelines. The data is valid as qualified on the attached modified sample analysis data sheets.

attachments

cc: John Hurley
Karl Reed

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Kettle River Treating Company
ILD984791665

Table 3-2

ANALYTICAL SUMMARY

1992 Screening Site Inspection Results

SAMPLING POINT	X101 04-21-92	X102 04-21-92	X103 04-21-92	X104 04-21-92	X105 04-21-92	X106 04-21-92	X107 04-21-92	X108 04-21-92	X109 04-21-92	X110 04-21-92	X111 04-21-92	X112 04-21-92	X113 04-21-92	X114 04-21-92
VOLATILES														
Methylene Chloride	210.000	--	2600.000 J	--	--	--	130.000	220.000	--	640.000 D	--	--	--	--
Acetone	--	--	--	--	--	140.000	160.000	--	--	90.000	--	--	--	--
1,1-dichloroethene	--	--	1500.000 J	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	58.000	--	--	3.000 J	47.000	100.000	230.000	150.000	14.000	150.000	--	--	--	--
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	7.000 J	--	--	--	--
Toluene	8.000 J	--	--	--	--	--	9.000 J	6.000 J	--	58.000 J	--	--	--	--
Xylene(total)	--	--	--	--	--	--	4.000 J	--	--	12.000 J	--	1.000 J	--	--
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
PESTICIDES														
Beta-BHC	--	--	--	--	15.000 JPD	--	--	--	--	--	--	--	--	--
Delta-BHC	--	--	5.900 JPD	--	12.000 JPD	--	--	--	--	4.800 JD	--	--	--	--
Lindane (Gamma-BHC)	5.000 JD	--	6.300 JPD	--	--	11.000 JPD	12.000 JPD	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	31.000 PD	41.000 PD	--	--	57.000 PD	--	--	--	--
Aldrin	--	--	8.500 JPD	--	23.000 PD	26.000 PD	34.000 D	--	--	4.700 JPD	--	--	--	--
Heptachlor Epoxide	--	11.000 JD	37.000 PD	--	110.000 PD	74.000 PD	43.000 PD	--	--	55.000 D	28.000 D	--	--	--
Endosulfan I	--	--	14.000 JD	--	--	--	--	--	--	8.400 JPD	--	--	--	--
Dieldrin	--	--	--	--	660.000 PD	270.000 PD	340.000 PD	--	--	110.000	--	--	41.000 JD	--
Endrin	--	--	5.600 JPD	--	62.000 PD	22.000 JPD	44.000 PD	--	--	--	--	--	--	--
4,4'-DDD	--	--	11.000 JPD	--	93.000 PD	73.000 PD	84.000 PD	--	--	53.000	--	--	--	--
Endosulfan II	44.000 D	--	42.000 JPD	--	--	--	20.000 jpd	--	--	--	--	--	--	--
4,4'-DDT	--	--	130.000 PD	--	--	--	--	--	--	140.000 PD	--	--	--	--
Endrin ketone	--	--	--	--	25.000 JPD	31.000 JPD	53.000 PD	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	20.000 JD	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	25.000 JP	--	13.000 JPD	10.000 JPD	--	--	--	--	--	11.000 JPD	--	--	--	--
Chlordane-alpha	--	--	--	16.000 JPD	--	17.000 JD	--	--	--	--	4.700 JPD	--	--	--
Chlordane-gamma	--	--	--	4.200 JPD	--	--	--	--	--	--	--	--	--	--
Arochlor-1242	--	--	--	--	--	--	--	--	--	480.000 PD	--	--	--	--
Arochlor-1248	--	--	300.000 JPD	--	--	--	--	--	--	--	--	--	--	--
Arochlor-1260	--	--	--	--	--	--	2600.000 PD	--	--	--	--	--	--	--
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
SEMIVOLATILES														
Naphthalene	210.000 J	--	1600.000 J	--	8600.000	3300.000 J	3500.000 J	--	--	180.000 J	--	--	--	--
2-Methylnaphthalene	150.000 J	--	3600.000 J	--	6700.000	2400.000 J	2200.000 J	--	--	420.000	--	--	--	--
Acenaphthylene	180.000 J	--	--	--	4200.000	1600.000 J	2200.000 J	--	--	--	--	--	--	--
Acenaphthene	91.000 J	--	--	--	2500.000 J	780.000 J	900.000 J	--	--	--	--	--	--	--
Dibenzofuran	190.000 J	--	1600.000 J	--	7800.000	3400.000 J	3900.000	--	--	--	--	--	--	--
Fluorene	--	--	--	--	27000.000 D	4900.000	--	--	--	--	--	--	--	--
Phenanthrene	1000.000	--	--	130.000 J	60000.000 D	18000.000	11000.000 D	110.000 J	--	1700.000 E	320.000 J	--	--	--
Anthracene	2100.000 E	--	--	170.000 J	290000.000 DE	50000.000 DE	13000.000	180.000 J	--	79.000 J	--	--	--	--
Fluoranthene	1500.000	340.000 J	3100.000 J	370.000 J	111000.000 D	27000.000 D	40000.000 DE	320.000 J	110.000 J	450.000	480.000	87.000 J	--	270.000 J
Pyrene	1400.000	330.000 J	2900.000 J	340.000 J	100000.000 D	26000.000 D	40000.000 DE	310.000 J	110.000 J	780.000	720.000	85.000 J	--	310.000 J
Benzo(a)anthracene	1100.000	170.000 J	1200.000 J	200.000 J	54000.000 D	14000.000	19000.000 D	130.000 J	--	--	350.000 J	--	--	200.000 J
Chrysene	--	--	1900.000 J	--	98000.000 D	29000.000 D	26000.000 D	--	--	470.000	--	--	--	--
Benzo(b)fluoranthene	1400.000	250.000 J	1600.000 J	340.000 J	66000.000 D	26000.000 D	27000.000 D	140.000 J	--	240.000 J	790.000	--	--	340.000 J
Benzo(k)fluoranthene	1100.000	180.000 J	--	240.000 J	46000.000 D	17000.000 D	16000.000 D	130.000 J	--	--	620.000	--	--	230.000 J
Benzo(a)pyrene	1100.000	--	--	--	58000.000 D	20000.000 D	15000.000 D	63.000 J	--	--	410.000 J	--	--	46.000 J
Indeno(1,2,3-cd)pyrene	440.000	--	--	130.000 J	10000.000	--	6900.000	--	--	--	230.000 J	--	--	140.000 J
Benzo (g,h,i) perylene	380.000 J	--	--	110.000 J	--	--	--	330.000 J	--	--	--	--	--	--
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
INORGANICS														
Aluminum	16800.000	15700.000	13500.000	12500.000	16900.000	12300.000	10700.000	13600.000	10300.000	8420.000	13300.000	13400.000	11900.000	15400.000
Antimony	--	--	--	--	--	--	--	--	--	--	--	6.800 B	--	8.100 B
Arsenic	12.700	16.200	17.400	6.000	9.400	8.300	7.200	4.600	5.800	12.200	7.400	9.800	6.500	7.400
Barium	184.000	227.000	81.600	174.000	213.000	158.000	112.000	232.000	198.000	119.000	175.000	186.000	163.000	134.000
Beryllium	0.740	0.860	0.940	0.650 B	0.810	0.680	0.860	0.810	0.600 B	1.200	0.700 B	0.670 B	0.540 B	0.580 B
Cadmium	--	0.910	3.100	--	--	1.400	--	--	--	3.400	0.770	--	--	--
Calcium	9230.000	7810.000	6350.000	4860.000	10500.000	55100.000	73800.000	1620.000	3790.000	6100.000	6030.000	6220.000	1540.000	31600.000
Chromium	24.100	26.800	27.500	19.400	23.800	41.200	25.900	17.300	15.800	17.100	19.700	18.300	17.100	22.600
Cobalt	10.500	10.200	11.900	6.800 B	9.600	7.000	5.600 B	8.400	7.110	12.100	8.700	12.300	6.200 B	7.500
Copper	19.400	29.700	198.000	17.600	23.500	29.300	45.000	13.600	14.800	31.600	16.900	15.300	12.100	30.500
Iron	21100.000	22500.000	120000.000	17700.000	23800.000	25100.000	19100.000	18400.000	13400.000	33400.000	19800.000	20500.000	13700.000	21800.000
Lead	37.900	121.000	133.000	14.400	42.300	65.000	85.000	14.900	22.000	58.800	97.200	22.000	14.400	23.400
Magnesium	5440.000	2920.000	544.000 B	3400.000	3670.000	7290.000	6900.000	1510.000	1670.000	1300.000	2700.000	2580.000	1530.000	20800.000
Manganese	836.000	109.000	479.000	634.000	905.000	833.000	473.000	871.000	862.000	652.000	1170.000	1550.000	991.000	382.000
Mercury	0.230	0.080 B	0.070 B	--	0.060 B	0.060 B	0.060 B	0.020 B	0.060 B	0.050 B	--	--	--	0.050 B
Nickel	20.600	19.700	45.700	17.200	26.200	20.300	16.200	11.900	17.300	29.600	22.400	18.500	15.200	18.500
Potassium	2170.000	2270.000	1060.000	1090.000	1920.000	1960.000	1540.000	1570.000	1540.000	1580.000	1580.000	1340.000	2050.000	2050.000
Selenium	--	0.260 B	1.220	0.150 B	--	--	0.690	0.360 B	0.180 B	2.700	0.320 B	0.310 B	0.190 B	--
Silver	--	--	--	--	--	--	--	--	--	--	--	6.700 B		
Sodium	--	--	496.000 B	--	--	246.000 B	305.000 B	--	--	804.000	--	--	--	--
Thallium	0.700 B	0.460 B	--	--	0.470 B	0.430 B	--	0.490 B	--	0.520 B	--	--	--	
Vanadium	39.000	47.800	24.900	19.200	35.100	70.300	26.700	29.300	24.500	25.400	32.100	34.500	28.300	35.100
Zinc	150.000	178.000	638.000	77.400	119.000	402.000	148.000	93.600	80.500	577.000	108.000	78.300	58.900	70.500
Cyanide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216275

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 21 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	210	~~B~~	am
67-64-1	Acetone	42	~~B~~ U	am
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	58		
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	8	J	
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.

X101

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216275

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 21 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60-29-3	ETHYL ETHER	5.12	8	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216276

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 26 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216276

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 26 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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.

X103

1. Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216277

Sample wt/vol: 4.0 (g/mL) G Lab File ID: B0429LC05

Level: (low/med) MED Date Received: 04/23/92

% Moisture: not dec. 23 Date Analyzed: 04/29/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1500	U
74-83-9	Bromomethane	1500	U
75-01-4	Vinyl Chloride	1500	U
75-00-3	Chloroethane	1500	U
75-09-2	Methylene Chloride	2600	J
67-64-1	Acetone	1500	U
75-15-0	Carbon Disulfide	1500	U
75-35-4	1,1-Dichloroethene	1500	UJ
75-34-3	1,1-Dichloroethane	1500	U
540-59-0	1,2-Dichloroethene (total)	1500	U
67-66-3	Chloroform	1500	U
107-06-2	1,2-Dichloroethane	1500	U
78-93-3	2-Butanone	1500	U
71-55-6	1,1,1-Trichloroethane	1500	U
56-23-5	Carbon Tetrachloride	1500	U
75-27-4	Bromodichloromethane	1500	U
78-87-5	1,2-Dichloropropane	1500	U
10061-01-5	cis-1,3-Dichloropropene	1500	U
79-01-6	Trichloroethene	1500	U
124-48-1	Dibromochloromethane	1500	U
79-00-5	1,1,2-Trichloroethane	1500	U
71-43-2	Benzene	1500	U
10061-02-6	trans-1,3-Dichloropropene	1500	U
75-25-2	Bromoform	1500	U
108-10-1	4-Methyl-2-Pentanone	1500	U
591-78-6	2-Hexanone	1500	U
127-18-4	Tetrachloroethene	1500	U
79-34-5	1,1,2,2-Tetrachloroethane	1500	U
108-88-3	Toluene	1500	U
108-90-7	Chlorobenzene	1500	U
100-41-4	Ethylbenzene	1500	U
100-42-5	Styrene	1500	U
1330-20-7	Xylene (total)	1500	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216277

Sample wt/vol: 4.0 (g/mL) G Lab File ID: B0429LC05

Level: (low/med) MED Date Received: 04/23/92

% Moisture: not dec. 23 Date Analyzed: 04/29/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALIP. HYDROCARBON	13.42	870	J
2.	UNKNOWN ALIP. HYDROCARBON	17.10	1400	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216278

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 21 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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~~8~~	~~B~~U am
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	3	J
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.

X104

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216278

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 21 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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.

X105

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 19 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	42	~~B~~ U	am
67-64-1	Acetone	78	~~B~~ U	am
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	47		
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.

X105

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 19 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALIP. HYDROCARBON	13.30	6	J
2.	UNKNOWN ALIP. HYDROCARBON	15.89	9	J
3.	UNKNOWN ALIP. HYDROCARBON	17.09	26	J
4.	UNKNOWN ALIP. HYDROCARBON	17.52	9	J
5.	UNKNOWN	18.49	19	J
6.	UNKNOWN	19.07	7	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	46	~~B~~ U	am
67-64-1	Acetone	140	~~B~~	am
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	100		
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.

X106

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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.

X107

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC10

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 16 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	130	~~B~~
67-64-1	Acetone	160	~~B~~
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	230	
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	9	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	4	J

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an

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC10

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 16 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60-29-3	ETHYL ETHER	4.98	8	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216282

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC11

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	220	~~B~~ am
67-64-1	Acetone	78	~~B~~ U am
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	150	
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	6	J
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.

X108

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216282

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427LC11

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60-29-3	ETHYL ETHER	5.35	10	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216283

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427GK02

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	~~B~~U am
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	14	
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.

X109

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216283

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427GK02

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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.

X110

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427GK03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (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	1200	~~B~~E	am
67-64-1	Acetone	90	~~B~~	am
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	150		
71-55-6	1,1,1-Trichloroethane	7	J	
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	5	J	
10061-02-6	trans-1,3-Dichloropropene	13	U	
75-25-2	Bromoform	13	U	
108-10-1	4-Methyl-2-Pentanone	13	UJ	
591-78-6	2-Hexanone	13	UJ	
127-18-4	Tetrachloroethene	13	UJ	
79-34-5	1,1,2,2-Tetrachloroethane	13	UJ	
108-88-3	Toluene	58	J	
108-90-7	Chlorobenzene	13	UJ	
100-41-4	Ethylbenzene	13	UJ	
100-42-5	Styrene	13	UJ	
1330-20-7	Xylene (total)	12	J	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X110

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0427GK03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/27/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60-29-3	ETHYL ETHER	5.03	26	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: B0428GK03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	64	U
74-83-9	Bromomethane	64	U
75-01-4	Vinyl Chloride	64	U
75-00-3	Chloroethane	64	U
75-09-2	Methylene Chloride	640	~~B~~D
67-64-1	Acetone	64	U
75-15-0	Carbon Disulfide	64	U
75-35-4	1,1-Dichloroethene	64	U
75-34-3	1,1-Dichloroethane	64	U
540-59-0	1,2-Dichloroethene (total)	64	U
67-66-3	Chloroform	64	U
107-06-2	1,2-Dichloroethane	64	U
78-93-3	2-Butanone	64	U
71-55-6	1,1,1-Trichloroethane	64	U
56-23-5	Carbon Tetrachloride	64	U
75-27-4	Bromodichloromethane	64	U
78-87-5	1,2-Dichloropropane	64	U
10061-01-5	cis-1,3-Dichloropropene	64	U
79-01-6	Trichloroethene	64	U
124-48-1	Dibromochloromethane	64	U
79-00-5	1,1,2-Trichloroethane	64	U
71-43-2	Benzene	64	U
10061-02-6	trans-1,3-Dichloropropene	64	U
75-25-2	Bromoform	64	U
108-10-1	4-Methyl-2-Pentanone	64	U
591-78-6	2-Hexanone	64	U
127-18-4	Tetrachloroethene	64	U
79-34-5	1,1,2,2-Tetrachloroethane	64	U
108-88-3	Toluene	24	DJ
108-90-7	Chlorobenzene	64	U
100-41-4	Ethylbenzene	64	U
100-42-5	Styrene	64	U
1330-20-7	Xylene (total)	64	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X110DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284DL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: B0428GK03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 22 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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.

X111

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216285

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 33 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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	15	U	
74-83-9	Bromomethane	15	U	
75-01-4	Vinyl Chloride	15	U	
75-00-3	Chloroethane	15	U	
75-09-2	Methylene Chloride	15 ~~12~~	~~BJ~~ U	am
67-64-1	Acetone	15 ~~8~~	~~BJ~~ U	am
75-15-0	Carbon Disulfide	15	U	
75-35-4	1,1-Dichloroethene	15	U	
75-34-3	1,1-Dichloroethane	15	U	
540-59-0	1,2-Dichloroethene (total)	15	U	
67-66-3	Chloroform	15	U	
107-06-2	1,2-Dichloroethane	15	U	
78-93-3	2-Butanone	15	U	
71-55-6	1,1,1-Trichloroethane	15	U	
56-23-5	Carbon Tetrachloride	15	U	
75-27-4	Bromodichloromethane	15	U	
78-87-5	1,2-Dichloropropane	15	U	
10061-01-5	cis-1,3-Dichloropropene	15	U	
79-01-6	Trichloroethene	15	U	
124-48-1	Dibromochloromethane	15	U	
79-00-5	1,1,2-Trichloroethane	15	U	
71-43-2	Benzene	15	U	
10061-02-6	trans-1,3-Dichloropropene	15	U	
75-25-2	Bromoform	15	U	
108-10-1	4-Methyl-2-Pentanone	15	U	
591-78-6	2-Hexanone	15	U	
127-18-4	Tetrachloroethene	15	U	
79-34-5	1,1,2,2-Tetrachloroethane	15	U	
108-88-3	Toluene	15	U	
108-90-7	Chlorobenzene	15	U	
100-41-4	Ethylbenzene	15	U	
100-42-5	Styrene	15	U	
1330-20-7	Xylene (total)	15	U	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X111

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216285

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 33 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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.

X112

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216286

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 33 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X112

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216286

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 33 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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.

X113

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216287

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 21 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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	56	~~B~~ U	am
67-64-1	Acetone	49	~~B~~ U	am
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	25	~~B~~ U	am
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.

X113

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216287

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 21 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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.

X114

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216288

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 28 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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	14	U	
74-83-9	Bromomethane	14	U	
75-01-4	Vinyl Chloride	14	U	
75-00-3	Chloroethane	14	U	
75-09-2	Methylene Chloride	81	~~B~~U	am
67-64-1	Acetone	41	~~B~~U	am
75-15-0	Carbon Disulfide	14	U	
75-35-4	1,1-Dichloroethene	14	U	
75-34-3	1,1-Dichloroethane	14	U	
540-59-0	1,2-Dichloroethene (total)	14	U	
67-66-3	Chloroform	14	U	
107-06-2	1,2-Dichloroethane	14	U	
78-93-3	2-Butanone	26	~~B~~U	am
71-55-6	1,1,1-Trichloroethane	14	U	
56-23-5	Carbon Tetrachloride	14	U	
75-27-4	Bromodichloromethane	14	U	
78-87-5	1,2-Dichloropropane	14	U	
10061-01-5	cis-1,3-Dichloropropene	14	U	
79-01-6	Trichloroethene	14	U	
124-48-1	Dibromochloromethane	14	U	
79-00-5	1,1,2-Trichloroethane	14	U	
71-43-2	Benzene	14	U	
10061-02-6	trans-1,3-Dichloropropene	14	U	
75-25-2	Bromoform	14	U	
108-10-1	4-Methyl-2-Pentanone	14	U	
591-78-6	2-Hexanone	14	U	
127-18-4	Tetrachloroethene	14	U	
79-34-5	1,1,2,2-Tetrachloroethane	14	U	
108-88-3	Toluene	14	U	
108-90-7	Chlorobenzene	14	U	
100-41-4	Ethylbenzene	14	U	
100-42-5	Styrene	14	U	
1330-20-7	Xylene (total)	14	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X114

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216288

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0428LC06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: not dec. 28 Date Analyzed: 04/28/92

GC Column: DB-624 ID: 0.530 (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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216275

Sample wt/vol: 30.9 (g/mL) G Lab File ID: B0521W12

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	210	J
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	150	J
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	980	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	980	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	180	J
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	980	UJ
83-32-9	Acenaphthene	91	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216275

Sample wt/vol: 30.9 (g/mL) G Lab File ID: B0521W12

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	980	U
100-02-7	4-Nitrophenol	980	U
132-64-9	Dibenzofuran	190	J
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-10-6	4-Nitroaniline	980	U
534-52-1	4,6-Dinitro-2-methylphenol	980	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	1000	
120-12-7	Anthracene	2100	E
86-74-8	Carbazole	1300	
84-74-2	Di-n-Butylphthalate	410 ~~260~~	~~BJ~~ U
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	1100	
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)Phthalate	410	U
117-84-0	Di-n-Octyl Phthalate	410	U
205-99-2	Benzo(b)Fluoranthene	1400	
207-08-9	Benzo(k)Fluoranthene	1100	
50-32-8	Benzo(a)Pyrene	1100	
193-39-5	Indeno(1,2,3-cd)Pyrene	440	
53-70-3	Dibenz(a,h)Anthracene	410	U
191-24-2	Benzo(g,h,i)Perylene	380	J

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216275

Sample wt/vol: 30.9 (g/mL) G Lab File ID: B0521W12

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

Number TICs found: 27

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. METHYL PENTENONE	7.97	640	AJ
2.	UNKNOWN	8.50	2300	~~BJ~~ U
3.	UNKNOWN	8.59	1800	J
4.	UNK. HYDROXYMETHYLPENTANONE	9.40	46000	~~ABJ~~ U
5.	UNKNOWN	11.04	1100	~~BJ~~ U
6.	UNKNOWN	12.75	5800	~~BJ~~
7.	UNKNOWN	14.02	3200	~~BJ~~ U
8.	UNK. ALIP. ACID	27.86	730	J
9.	UNK. ANTHRACENEDIONE	28.76	560	AJ
10.	UNKNOWN	30.56	550	J
11.	UNKNOWN	31.59	840	J
12.	UNKNOWN	31.77	540	J
13.	UNKNOWN	31.91	270	J
14.	UNKNOWN	33.11	330	J
15.	UNKNOWN	33.44	360	J
16.	UNKNOWN	33.52	300	J
17.	UNKNOWN ALIP. HYDROCARBON	33.59	870	J
18.	UNKNOWN	33.71	260	J
19.	UNKNOWN	34.61	340	J
20.	UNKNOWN ALIP. HYDROCARBON	34.61	400	J
21.	UNKNOWN	34.81	1100	J
22.	UNKNOWN	34.99	170	J
23.	UNKNOWN	35.62	470	J
24.	UNKNOWN ALIP. HYDROCARBON	35.81	550	J
25.	UNKNOWN ALIP. HYDROCARBON	38.77	820	J
26.	UNKNOWN	38.87	1000	J
27.	UNK. BENZOFLUORANTHENE	39.91	1700	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216276

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0521W10

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 26 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	U
111-44-4	bis(2-Chloroethyl)Ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-oxybis(1-Chloropropane)	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-Propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	bis(2-Chloroethoxy)Methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-Methylphenol	450	U
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	UJ
83-32-9	Acenaphthene	450	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216276

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0521W10

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 26 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	450	U
100-10-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	450	U
120-12-7	Anthracene	450	U
86-74-8	Carbazole	450	U
84-74-2	Di-n-Butylphthalate	450 ~~280~~	~~BJ~~ U
206-44-0	Fluoranthene	340	J
129-00-0	Pyrene	330	J
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)Anthracene	170	J
218-01-9	Chrysene	450	U
117-81-7	bis(2-Ethylhexyl)Phthalate	450	U
117-84-0	Di-n-Octyl Phthalate	450	U
205-99-2	Benzo(b)Fluoranthene	250	J
207-08-9	Benzo(k)Fluoranthene	180	J
50-32-8	Benzo(a)Pyrene	450	U
193-39-5	Indeno(1,2,3-cd)Pyrene	450	U
53-70-3	Dibenz(a,h)Anthracene	450	U
191-24-2	Benzo(g,h,i)Perylene	450	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216276

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0521W10

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 26 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNK. TRIMETHYL DIOXOLANE	5.90	10000	~~BJ~~ U	am
2.	UNK. METHYL PENTENONE	8.02	4200	A~~B~~J	am
3.	UNKNOWN	8.54	2700	AJ	
4.	UNKNOWN	8.60	1800	J	
5.	UNK. HYDROXYMETHYLPENTANONE	9.44	51000	~~ABJ~~ U	am
6.	UNKNOWN	11.07	1100	~~BJ~~ U	am
7.	UNKNOWN	11.60	240	J	
8.	UNKNOWN	11.99	1200	~~BJ~~ U	am
9. 100-52-7	BENZALDEHYDE	12.19	180	~~JNB~~ U	am
10.	UNKNOWN	13.14	5400	~~BJ~~ U	am
11.	UNKNOWN	13.69	520	~~BJ~~ U	am
12.	UNKNOWN	14.05	3300	~~BJ~~ U	am
13.	UNKNOWN	14.32	1100	J	
14.	UNKNOWN	14.34	400	J	
15.	UNKNOWN	16.40	370	J	
16.	UNKNOWN ALIP. ACID	23.40	280	~~BJ~~ U	am
17.	UNKNOWN ALIP. HYDROCARBON	24.75	350	J	
18.	UNKNOWN	26.21	200	J	
19.	UNKNOWN	27.69	190	J	
20.	UNKNOWN ALIP. ACID	27.91	570	J	
21.	UNKNOWN	28.41	180	J	
22.	UNKNOWN	33.46	88	J	
23.	UNKNOWN ALIP. HYDROCARBON	33.62	590	J	
24.	UNKNOWN ALIP. HYDROCARBON	34.66	170	J	
25.	UNKNOWN ALIP. HYDROCARBON	35.84	520	J	
26.	UNKNOWN ALIP. HYDROCARBON	38.79	1200	J	
27.	UNKNOWN	38.89	480	J	
28.	UNKNOWN ALIP. HYDROCARBON	43.03	1300	J	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216277

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0522W06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 23 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4300	U
111-44-4	bis(2-Chloroethyl)Ether	4300	U
95-57-8	2-Chlorophenol	4300	U
541-73-1	1,3-Dichlorobenzene	4300	U
106-46-7	1,4-Dichlorobenzene	4300	U
95-50-1	1,2-Dichlorobenzene	4300	U
95-48-7	2-Methylphenol	4300	U
108-60-1	2,2'-oxybis(1-Chloropropane)	4300	U
106-44-5	4-Methylphenol	4300	U
621-64-7	N-Nitroso-Di-n-Propylamine	4300	U
67-72-1	Hexachloroethane	4300	U
98-95-3	Nitrobenzene	4300	U
78-59-1	Isophorone	4300	U
88-75-5	2-Nitrophenol	4300	U
105-67-9	2,4-Dimethylphenol	4300	U
111-91-1	bis(2-Chloroethoxy)Methane	4300	U
120-83-2	2,4-Dichlorophenol	4300	U
120-82-1	1,2,4-Trichlorobenzene	4300	U
91-20-3	Naphthalene	1600	J
106-47-8	4-Chloroaniline	4300	U
87-68-3	Hexachlorobutadiene	4300	U
59-50-7	4-Chloro-3-Methylphenol	4300	U
91-57-6	2-Methylnaphthalene	3600	J
77-47-4	Hexachlorocyclopentadiene	4300	U
88-06-2	2,4,6-Trichlorophenol	4300	U
95-95-4	2,4,5-Trichlorophenol	10000	U
91-58-7	2-Chloronaphthalene	4300	U
88-74-4	2-Nitroaniline	10000	U
131-11-3	Dimethylphthalate	4300	U
208-96-8	Acenaphthylene	4300	U
606-20-2	2,6-Dinitrotoluene	4300	U
99-09-2	3-Nitroaniline	10000	UJ
83-32-9	Acenaphthene	4300	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216277

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0522W06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 23 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	10000	U
100-02-7	4-Nitrophenol	10000	U
132-64-9	Dibenzofuran	1600	J
121-14-2	2,4-Dinitrotoluene	4300	U
84-66-2	Diethylphthalate	4300	U
7005-72-3	4-Chlorophenyl-phenylether	4300	U
86-73-7	Fluorene	4300	U
100-10-6	4-Nitroaniline	10000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	10000	U
86-30-6	N-Nitrosodiphenylamine (1)	4300	U
101-55-3	4-Bromophenyl-phenylether	4300	U
118-74-1	Hexachlorobenzene	4300	U
87-86-5	Pentachlorophenol	10000	U
85-01-8	Phenanthrene	4300	U
120-12-7	Anthracene	4300	U
86-74-8	Carbazole	4300	U
84-74-2	Di-n-Butylphthalate	4300	U
206-44-0	Fluoranthene	3100	J
129-00-0	Pyrene	2900	J
85-68-7	Butylbenzylphthalate	4300	U
91-94-1	3,3'-Dichlorobenzidine	4300	U
56-55-3	Benzo(a)Anthracene	1200	J
218-01-9	Chrysene	1900	J
117-81-7	bis(2-Ethylhexyl)Phthalate	4300	U
117-84-0	Di-n-Octyl Phthalate	4300	UJ
205-99-2	Benzo(b)Fluoranthene	1600	J
207-08-9	Benzo(k)Fluoranthene	4300	UJ
50-32-8	Benzo(a)Pyrene	4300	U
193-39-5	Indeno(1,2,3-cd)Pyrene	4300	U
53-70-3	Dibenz(a,h)Anthracene	4300	U
191-24-2	Benzo(g,h,i)Perylene	4300	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216277

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0522W06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 23 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.4

Number TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.44	4400	~~BJ~~ U am
2.	UNK. HYDROXYMETHYLPENTANONE	9.17	83000	~~B~~AJ am
3.	UNK. ETHYLIDENE INDENE	19.24	3900	J
4.	UNK. DIMETHYL NAPHTHALENE	21.00	4200	JN
5.	UNK. DIMETHYL NAPHTHALENE	21.05	2200	JN
6.	UNKNOWN ALIP. HYDROCARBON	21.25	3700	J
7.	UNK. DIMETHYL NAPHTHALENE	21.32	3700	JN
8.	UNKNOWN	22.52	3200	J
9.	UNK. TRIMETHYL NAPHTHALENE	23.22	3300	JN
10.	UNKNOWN ALIP. HYDROCARBON	23.25	2400	J
11.	UNK. METHYL DIBENZOFURAN	24.07	2200	J
12.	UNKNOWN	24.27	3000	J
13.	UNKNOWN ALIP. HYDROCARBON	24.72	21000	J
14.	UNKNOWN	25.62	2500	J
15.	UNKNOWN	25.66	2800	J
16.	UNKNOWN ALIP. HYDROCARBON	26.07	3700	J
17.	UNKNOWN	26.54	1900	J
18.	UNKNOWN	27.14	780	J
19.	UNKNOWN ALIP. HYDROCARBON	27.17	2400	J
20.	UNK. METHYL PHENANTHRENE	27.91	1300	JN
21.	UNK. METHYL PHENANTHRENE	28.16	2700	JN
22.	UNKNOWN ALIP. HYDROCARBON	29.51	2100	J
23.	UNKNOWN ALIP. HYDROCARBON	31.62	2600	J
24.	UNKNOWN ALIP. HYDROCARBON	32.64	2700	J
25.	UNKNOWN	33.44	730	J
26.	UNKNOWN ALIP. HYDROCARBON	33.59	4400	J
27.	UNKNOWN ALIP. HYDROCARBON	34.62	3100	J
28.	UNKNOWN ALIP. HYDROCARBON	35.81	4500	J
29.	UNKNOWN ALIP. HYDROCARBON	37.16	2500	J
30.	UNKNOWN ALIP. HYDROCARBON	38.77	4300	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216278

Sample wt/vol: 30.5 (g/mL) G Lab File ID: B0521W08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	1000	UJ
83-32-9	Acenaphthene	410	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216278

Sample wt/vol: 30.5 (g/mL) G Lab File ID: B0521W08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-10-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	130	J
120-12-7	Anthracene	170	J
86-74-8	Carbazole	110	J
84-74-2	Di-n-Butylphthalate	410 ~~250~~	~~B~~ U am
206-44-0	Fluoranthene	370	J
129-00-0	Pyrene	340	J
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	200	J
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)Phthalate	410	U
117-84-0	Di-n-Octyl Phthalate	410	U
205-99-2	Benzo(b)Fluoranthene	340	J
207-08-9	Benzo(k)Fluoranthene	240	J
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1,2,3-cd)Pyrene	130	J
53-70-3	Dibenz(a,h)Anthracene	410	U
191-24-2	Benzo(g,h,i)Perylene	110	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216278

Sample wt/vol: 30.5 (g/mL) G Lab File ID: B0521W08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNK. METHYLPENTENONE	7.98	540	~~BAJ~~ U	am
2.	UNKNOWN	8.50	2200	J	
3.	UNK. HYDROXYMETHYLPENTANONE	9.44	47000	~~BAJ~~ U	am
4.	UNKNOWN	9.69	1300	J	
5.	UNKNOWN ALIP. HYDROCARBON	9.82	450	~~BJ~~ U	am
6.	UNK. METHYLETHYLHEPTANE	10.00	360	J	
7.	UNK. CYCLOHEXENOL	10.40	290	AJ	
8.	UNKNOWN	11.05	1200	J	
9.	UNK. CYCLOHEXENONE	11.47	360	~~BAJ~~ U	am
10.	UNKNOWN	11.74	420	J	
11.	UNKNOWN	12.77	5600	~~B~~J	am
12.	UNKNOWN	13.07	1100	~~BJ~~ U	am
13.	UNKNOWN	13.20	590	J	
14.	UNKNOWN	13.29	450	J	
15.	UNKNOWN	13.65	590	J	
16.	UNKNOWN	14.04	3900	J	
17.	UNKNOWN ALIP. ACID	27.86	330	J	
18.	UNKNOWN	33.11	120	J	
19.	UNKNOWN ALIP. HYDROCARBON	33.59	370	J	
20.	UNKNOWN	33.71	81	J	
21.	UNKNOWN ALIP. HYDROCARBON	35.81	200	J	
22.	UNKNOWN	37.37	42	J	
23.	UNKNOWN	37.86	57	J	
24.	UNKNOWN ALIP. HYDROCARBON	38.77	500	J	
25.	UNKNOWN	39.31	55	J	
26.	UNKNOWN	39.87	410	J	
27.	UNKNOWN	40.41	27	J	
28.	UNKNOWN ALIP. HYDROCARBON	42.99	410	J	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0522W07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4000	U
111-44-4	bis(2-Chloroethyl)Ether	4000	U
95-57-8	2-Chlorophenol	4000	U
541-73-1	1,3-Dichlorobenzene	4000	U
106-46-7	1,4-Dichlorobenzene	4000	U
95-50-1	1,2-Dichlorobenzene	4000	U
95-48-7	2-Methylphenol	4000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	4000	U
106-44-5	4-Methylphenol	4000	U
621-64-7	N-Nitroso-Di-n-Propylamine	4000	U
67-72-1	Hexachloroethane	4000	U
98-95-3	Nitrobenzene	4000	U
78-59-1	Isophorone	4000	U
88-75-5	2-Nitrophenol	4000	U
105-67-9	2,4-Dimethylphenol	4000	U
111-91-1	bis(2-Chloroethoxy)Methane	4000	U
120-83-2	2,4-Dichlorophenol	4000	U
120-82-1	1,2,4-Trichlorobenzene	4000	U
91-20-3	Naphthalene	8600	
106-47-8	4-Chloroaniline	4000	U
87-68-3	Hexachlorobutadiene	4000	U
59-50-7	4-Chloro-3-Methylphenol	4000	U
91-57-6	2-Methylnaphthalene	6700	
77-47-4	Hexachlorocyclopentadiene	4000	U
88-06-2	2,4,6-Trichlorophenol	4000	U
95-95-4	2,4,5-Trichlorophenol	9800	U
91-58-7	2-Chloronaphthalene	4000	U
88-74-4	2-Nitroaniline	9800	U
131-11-3	Dimethylphthalate	4000	U
208-96-8	Acenaphthylene	4200	
606-20-2	2,6-Dinitrotoluene	4000	U
99-09-2	3-Nitroaniline	9800	UJ
83-32-9	Acenaphthene	2500	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0522W07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	9800	U
100-02-7	4-Nitrophenol	9800	U
132-64-9	Dibenzofuran	7600	
121-14-2	2,4-Dinitrotoluene	4000	U
84-66-2	Diethylphthalate	4000	U
7005-72-3	4-Chlorophenyl-phenylether	4000	U
86-73-7	Fluorene	17000	E
100-10-6	4-Nitroaniline	9800	UJ
534-52-1	4,6-Dinitro-2-methylphenol	9800	U
86-30-6	N-Nitrosodiphenylamine (1)	4000	U
101-55-3	4-Bromophenyl-phenylether	4000	U
118-74-1	Hexachlorobenzene	4000	U
87-86-5	Pentachlorophenol	9800	U
85-01-8	Phenanthrene	35000	E
120-12-7	Anthracene	110000	E
86-74-8	Carbazole	78000	E
84-74-2	Di-n-Butylphthalate	4000	U
206-44-0	Fluoranthene	55000	E
129-00-0	Pyrene	57000	E
85-68-7	Butylbenzylphthalate	4000	U
91-94-1	3,3'-Dichlorobenzidine	4000	U
56-55-3	Benzo(a)Anthracene	35000	E
218-01-9	Chrysene	55000	E
117-81-7	bis(2-Ethylhexyl)Phthalate	4000	U
117-84-0	Di-n-Octyl Phthalate	4000	UJ
205-99-2	Benzo(b)Fluoranthene	36000	E
207-08-9	Benzo(k)Fluoranthene	21000	EJ
50-32-8	Benzo(a)Pyrene	32000	E
193-39-5	Indeno(1,2,3-cd)Pyrene	10000	
53-70-3	Dibenz(a,h)Anthracene	4000	U
191-24-2	Benzo(g,h,i)Perylene	4000	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X105

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0522W07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 27

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDYOXYMETHYLPENTANONE	9.20	64000	~~B~~AJ
2.	UNK. METHYL PHENANTHRENE	27.94	6900	JN
3.	UNK. METHYL PHENANTHRENE	28.07	19000	JN
4.	UNKNOWN	28.21	18000	J
5.	UNKNOWN ALIP. ALCOHOL	28.54	7000	AJ
6.	UNK. ANTHRACENEDIONE	28.79	14000	AJ
7.	UNKNOWN	29.61	11000	J
8.	UNKNOWN ALIP. KETONE	29.77	5400	AJ
9.	UNKNOWN	30.62	22000	J
10.	UNK. BENZONAPHTHOFURAN	30.97	11000	J
11.	UNKNOWN	31.11	7500	J
12.	UNKNOWN	31.31	14000	J
13.	UNK. FLUORENE	31.64	37000	J
14.	UNK. FLUORENE	31.82	30000	J
15.	UNKNOWN	31.96	9700	J
16.	UNKNOWN	32.22	7600	J
17.	UNKNOWN	32.32	6400	J
18.	UNKNOWN	33.16	8300	J
19.	UNKNOWN	33.49	12000	J
20.	UNKNOWN	33.59	11000	J
21.	UNKNOWN	33.66	11000	J
22.	UNKNOWN	33.76	5500	J
23.	UNKNOWN	34.66	12000	J
24.	UNKNOWN	34.87	54000	J
25.	UNKNOWN	35.67	15000	J
26.	UNKNOWN	36.22	7800	J
27. 205-82-3	BENZO(J)FLUORANTHENE	39.97	34000	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0527W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	20000	U
111-44-4	bis(2-Chloroethyl)Ether	20000	UJ
95-57-8	2-Chlorophenol	20000	U
541-73-1	1,3-Dichlorobenzene	20000	U
106-46-7	1,4-Dichlorobenzene	20000	U
95-50-1	1,2-Dichlorobenzene	20000	U
95-48-7	2-Methylphenol	20000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	20000	U
106-44-5	4-Methylphenol	20000	U
621-64-7	N-Nitroso-Di-n-Propylamine	20000	U
67-72-1	Hexachloroethane	20000	U
98-95-3	Nitrobenzene	20000	U
78-59-1	Isophorone	20000	U
88-75-5	2-Nitrophenol	20000	U
105-67-9	2,4-Dimethylphenol	20000	U
111-91-1	bis(2-Chloroethoxy)Methane	20000	U
120-83-2	2,4-Dichlorophenol	20000	U
120-82-1	1,2,4-Trichlorobenzene	20000	U
91-20-3	Naphthalene	13000	DJ
106-47-8	4-Chloroaniline	20000	UJ
87-68-3	Hexachlorobutadiene	20000	U
59-50-7	4-Chloro-3-Methylphenol	20000	U
91-57-6	2-Methylnaphthalene	9600	DJ
77-47-4	Hexachlorocyclopentadiene	20000	U
88-06-2	2,4,6-Trichlorophenol	20000	U
95-95-4	2,4,5-Trichlorophenol	49000	U
91-58-7	2-Chloronaphthalene	20000	U
88-74-4	2-Nitroaniline	49000	U
131-11-3	Dimethylphthalate	20000	U
208-96-8	Acenaphthylene	20000	U
606-20-2	2,6-Dinitrotoluene	20000	U
99-09-2	3-Nitroaniline	49000	UJ
83-32-9	Acenaphthene	20000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0527W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	49000	U
100-02-7	4-Nitrophenol	49000	UJ
132-64-9	Dibenzofuran	11000	DJ
121-14-2	2,4-Dinitrotoluene	20000	U
84-66-2	Diethylphthalate	20000	U
7005-72-3	4-Chlorophenyl-phenylether	20000	U
86-73-7	Fluorene	27000	D
100-10-6	4-Nitroaniline	49000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	49000	U
86-30-6	N-Nitrosodiphenylamine (1)	20000	U
101-55-3	4-Bromophenyl-phenylether	20000	U
118-74-1	Hexachlorobenzene	20000	U
87-86-5	Pentachlorophenol	49000	U
85-01-8	Phenanthrene	60000	D
120-12-7	Anthracene	290000	DE
86-74-8	Carbazole	170000	DEJ
84-74-2	Di-n-Butylphthalate	20000	U
206-44-0	Fluoranthene	110000	D
129-00-0	Pyrene	100000	D
85-68-7	Butylbenzylphthalate	20000	U
91-94-1	3,3'-Dichlorobenzidine	20000	UJ
56-55-3	Benzo(a)Anthracene	54000	D
218-01-9	Chrysene	98000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	20000	U
117-84-0	Di-n-Octyl Phthalate	20000	U
205-99-2	Benzo(b)Fluoranthene	66000	D
207-08-9	Benzo(k)Fluoranthene	48000	D
50-32-8	Benzo(a)Pyrene	58000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	20000	UJ
53-70-3	Dibenz(a,h)Anthracene	20000	UJ
191-24-2	Benzo(g,h,i)Perylene	33000	DJ

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X105DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0527W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDROXYMETHYLPENTANONE	9.12	53000	~~BADJ~~ u am
2.	UNK. METHYL PHENANTHRENE	28.04	11000	JND
3.	UNKNOWN	28.21	13000	DJ
4.	UNK. ANTHRACENEDIONE	28.79	8500	ADJ
5.	UNKNOWN	29.61	7300	J
6.	UNKNOWN	30.59	17000	DJ
7.	UNK. BENZOFLUORENE	31.61	28000	DJ
8.	UNKNOWN	31.81	19000	DJ
9.	UNKNOWN	31.94	7500	DJ
10.	UNKNOWN	33.56	7700	DJ
11.	UNKNOWN	33.62	8700	DJ
12.	UNKNOWN	34.62	7300	DJ
13.	UNKNOWN	34.84	33000	DJ
14.	UNKNOWN	35.64	9700	DJ
15. 205-82-3	BENZO(J)FLUORANTHENE	39.89	28000	JND

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0522W08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4200	U
111-44-4	bis(2-Chloroethyl)Ether	4200	U
95-57-8	2-Chlorophenol	4200	U
541-73-1	1,3-Dichlorobenzene	4200	U
106-46-7	1,4-Dichlorobenzene	4200	U
95-50-1	1,2-Dichlorobenzene	4200	U
95-48-7	2-Methylphenol	4200	U
108-60-1	2,2'-oxybis(1-Chloropropane)	4200	U
106-44-5	4-Methylphenol	4200	U
621-64-7	N-Nitroso-Di-n-Propylamine	4200	U
67-72-1	Hexachloroethane	4200	U
98-95-3	Nitrobenzene	4200	U
78-59-1	Isophorone	4200	U
88-75-5	2-Nitrophenol	4200	U
105-67-9	2,4-Dimethylphenol	4200	U
111-91-1	bis(2-Chloroethoxy)Methane	4200	U
120-83-2	2,4-Dichlorophenol	4200	U
120-82-1	1,2,4-Trichlorobenzene	4200	U
91-20-3	Naphthalene	3300	J
106-47-8	4-Chloroaniline	4200	U
87-68-3	Hexachlorobutadiene	4200	U
59-50-7	4-Chloro-3-Methylphenol	4200	U
91-57-6	2-Methylnaphthalene	2400	J
77-47-4	Hexachlorocyclopentadiene	4200	U
88-06-2	2,4,6-Trichlorophenol	4200	U
95-95-4	2,4,5-Trichlorophenol	10000	U
91-58-7	2-Chloronaphthalene	4200	U
88-74-4	2-Nitroaniline	10000	U
131-11-3	Dimethylphthalate	4200	U
208-96-8	Acenaphthylene	1600	J
606-20-2	2,6-Dinitrotoluene	4200	U
99-09-2	3-Nitroaniline	10000	UJ
83-32-9	Acenaphthene	780	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0522W08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	10000	U
100-02-7	4-Nitrophenol	10000	U
132-64-9	Dibenzofuran	3400	J
121-14-2	2,4-Dinitrotoluene	4200	U
84-66-2	Diethylphthalate	4200	U
7005-72-3	4-Chlorophenyl-phenylether	4200	U
86-73-7	Fluorene	4900	
100-10-6	4-Nitroaniline	10000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	10000	U
86-30-6	N-Nitrosodiphenylamine (1)	4200	U
101-55-3	4-Bromophenyl-phenylether	4200	U
118-74-1	Hexachlorobenzene	4200	U
87-86-5	Pentachlorophenol	10000	U
85-01-8	Phenanthrene	16000	
120-12-7	Anthracene	38000	E
86-74-8	Carbazole	22000	E
84-74-2	Di-n-Butylphthalate	4200	U
206-44-0	Fluoranthene	23000	E
129-00-0	Pyrene	24000	E
85-68-7	Butylbenzylphthalate	4200	U
91-94-1	3,3'-Dichlorobenzidine	4200	U
56-55-3	Benzo(a)Anthracene	14000	
218-01-9	Chrysene	29000	E
117-81-7	bis(2-Ethylhexyl)Phthalate	4200	U
117-84-0	Di-n-Octyl Phthalate	4200	UJ
205-99-2	Benzo(b)Fluoranthene	20000	E
207-08-9	Benzo(k)Fluoranthene	12000	J
50-32-8	Benzo(a)Pyrene	15000	
193-39-5	Indeno(1,2,3-cd)Pyrene	4200	U
53-70-3	Dibenz(a,h)Anthracene	4200	U
191-24-2	Benzo(g,h,i)Perylene	4200	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0522W08

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 29

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDROXYMETHYLPENTANONE	9.17	64000	AJ
2.	UNK. FLUORENONE	25.77	3900	AJ
3.	UNK. METHYL PHENANTHRENE	28.04	3700	JN
4.	UNKNOWN	28.17	5000	J
5.	UNK. ANTHRACENEDIONE	28.76	7000	AJ
6.	UNKNOWN	29.57	3300	J
7.	UNKNOWN ALIP. KETONE	29.74	4300	AJ
8.	UNKNOWN	30.59	10000	J
9.	UNK. BENZONAPHTHOFURAN	30.96	3900	J
10.	UNKNOWN	31.07	3800	J
11.	UNKNOWN	31.27	5100	J
12.	UNKNOWN	31.61	12000	J
13.	UNKNOWN	31.79	8000	J
14.	UNKNOWN	31.92	4100	J
15.	UNKNOWN	32.21	3400	J
16.	UNKNOWN	32.29	2600	J
17.	UNKNOWN	33.14	6200	J
18.	UNKNOWN	33.46	5500	J
19.	UNKNOWN	33.56	5300	J
20.	UNKNOWN	33.62	5300	J
21.	UNKNOWN	33.72	4800	J
22.	UNKNOWN	34.41	530	J
23.	UNKNOWN	34.62	4200	J
24.	UNKNOWN	34.82	20000	J
25.	UNKNOWN	35.01	2100	J
26.	UNKNOWN	35.64	6300	J
27.	UNKNOWN	35.81	2700	J
28.	UNKNOWN	36.19	4400	J
29. 205-82-3	BENZO(J)FLUORANTHENE	39.92	22000	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106DL

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0527W03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	8400	U
111-44-4	bis(2-Chloroethyl)Ether	8400	UJ
95-57-8	2-Chlorophenol	8400	U
541-73-1	1,3-Dichlorobenzene	8400	U
106-46-7	1,4-Dichlorobenzene	8400	U
95-50-1	1,2-Dichlorobenzene	8400	U
95-48-7	2-Methylphenol	8400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	8400	U
106-44-5	4-Methylphenol	8400	U
621-64-7	N-Nitroso-Di-n-Propylamine	8400	U
67-72-1	Hexachloroethane	8400	U
98-95-3	Nitrobenzene	8400	U
78-59-1	Isophorone	8400	U
88-75-5	2-Nitrophenol	8400	U
105-67-9	2,4-Dimethylphenol	8400	U
111-91-1	bis(2-Chloroethoxy)Methane	8400	U
120-83-2	2,4-Dichlorophenol	8400	U
120-82-1	1,2,4-Trichlorobenzene	8400	U
91-20-3	Naphthalene	3100	DJ
106-47-8	4-Chloroaniline	8400	UJ
87-68-3	Hexachlorobutadiene	8400	U
59-50-7	4-Chloro-3-Methylphenol	8400	U
91-57-6	2-Methylnaphthalene	2200	DJ
77-47-4	Hexachlorocyclopentadiene	8400	U
88-06-2	2,4,6-Trichlorophenol	8400	U
95-95-4	2,4,5-Trichlorophenol	20000	U
91-58-7	2-Chloronaphthalene	8400	U
88-74-4	2-Nitroaniline	20000	U
131-11-3	Dimethylphthalate	8400	U
208-96-8	Acenaphthylene	1300	DJ
606-20-2	2,6-Dinitrotoluene	8400	U
99-09-2	3-Nitroaniline	20000	UJ
83-32-9	Acenaphthene	8400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106DL

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0527W03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	20000	U
100-02-7	4-Nitrophenol	20000	UJ
132-64-9	Dibenzofuran	3200	DJ
121-14-2	2,4-Dinitrotoluene	8400	U
84-66-2	Diethylphthalate	8400	U
7005-72-3	4-Chlorophenyl-phenylether	8400	U
86-73-7	Fluorene	4300	DJ
100-10-6	4-Nitroaniline	20000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	20000	U
86-30-6	N-Nitrosodiphenylamine (1)	8400	U
101-55-3	4-Bromophenyl-phenylether	8400	U
118-74-1	Hexachlorobenzene	8400	U
87-86-5	Pentachlorophenol	20000	U
85-01-8	Phenanthrene	18000	D
120-12-7	Anthracene	50000	DE
86-74-8	Carbazole	29000	DJ
84-74-2	Di-n-Butylphthalate	8400	U
206-44-0	Fluoranthene	27000	D
129-00-0	Pyrene	26000	D
85-68-7	Butylbenzylphthalate	8400	U
91-94-1	3,3'-Dichlorobenzidine	8400	UJ
56-55-3	Benzo(a)Anthracene	14000	D
218-01-9	Chrysene	29000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	8400	U
117-84-0	Di-n-Octyl Phthalate	8400	U
205-99-2	Benzo(b)Fluoranthene	26000	D
207-08-9	Benzo(k)Fluoranthene	17000	D
50-32-8	Benzo(a)Pyrene	20000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	8400	UJ
53-70-3	Dibenz(a,h)Anthracene	8400	UJ
191-24-2	Benzo(g,h,i)Perylene	8400	UJ

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0527W03

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 18

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDROXYMETHYLPENTANONE	9.10	68000	~~J~~ADJ
2.	UNK. FLUORENONE	25.76	3400	ADJ
3.	UNK. METHYL PHENANTHRENE	27.91	2100	JND
4.	UNK. METHYL PHENANTHRENE	28.01	3500	JND
5.	UNKNOWN	28.17	4300	DJ
6.	UNK. ANTHRACENEDIONE	28.76	6400	ADJ
7.	UNKNOWN	29.57	2300	DJ
8.	UNKNOWN ALIP. KETONE	29.72	4100	ADJ
9.	UNK. BENZONAPHTHOFURAN	30.56	9700	DJ
10.	UNKNOWN	31.59	9900	DJ
11.	UNKNOWN	31.77	6900	DJ
12.	UNKNOWN	31.91	3800	DJ
13.	UNK. BENZANTHRACENONE	33.11	5200	ADJ
14.	UNKNOWN	33.44	5300	DJ
15.	UNKNOWN	33.52	4200	DJ
16.	UNKNOWN	33.59	4800	DJ
17.	UNKNOWN	34.79	15000	DJ
18. 205-82-3	BENZO(J)FLUORANTHENE	39.87	23000	JND

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0522W09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 16 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3900	U
111-44-4	bis(2-Chloroethyl)Ether	3900	U
95-57-8	2-Chlorophenol	3900	U
541-73-1	1,3-Dichlorobenzene	3900	U
106-46-7	1,4-Dichlorobenzene	3900	U
95-50-1	1,2-Dichlorobenzene	3900	U
95-48-7	2-Methylphenol	3900	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3900	U
106-44-5	4-Methylphenol	3900	U
621-64-7	N-Nitroso-Di-n-Propylamine	3900	U
67-72-1	Hexachloroethane	3900	U
98-95-3	Nitrobenzene	3900	U
78-59-1	Isophorone	3900	U
88-75-5	2-Nitrophenol	3900	U
105-67-9	2,4-Dimethylphenol	3900	U
111-91-1	bis(2-Chloroethoxy)Methane	3900	U
120-83-2	2,4-Dichlorophenol	3900	U
120-82-1	1,2,4-Trichlorobenzene	3900	U
91-20-3	Naphthalene	3500	J
106-47-8	4-Chloroaniline	3900	U
87-68-3	Hexachlorobutadiene	3900	U
59-50-7	4-Chloro-3-Methylphenol	3900	U
91-57-6	2-Methylnaphthalene	2200	J
77-47-4	Hexachlorocyclopentadiene	3900	U
88-06-2	2,4,6-Trichlorophenol	3900	U
95-95-4	2,4,5-Trichlorophenol	9400	U
91-58-7	2-Chloronaphthalene	3900	U
88-74-4	2-Nitroaniline	9400	U
131-11-3	Dimethylphthalate	3900	U
208-96-8	Acenaphthylene	2200	J
606-20-2	2,6-Dinitrotoluene	3900	U
99-09-2	3-Nitroaniline	9400	UJ
83-32-9	Acenaphthene	900	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0522W09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 16 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	9400	U
100-02-7	4-Nitrophenol	9400	U
132-64-9	Dibenzofuran	3900	
121-14-2	2,4-Dinitrotoluene	3900	U
84-66-2	Diethylphthalate	3900	U
7005-72-3	4-Chlorophenyl-phenylether	3900	U
86-73-7	Fluorene	3900	U
100-10-6	4-Nitroaniline	9400	UJ
534-52-1	4,6-Dinitro-2-methylphenol	9400	U
86-30-6	N-Nitrosodiphenylamine (1)	3900	U
101-55-3	4-Bromophenyl-phenylether	3900	U
118-74-1	Hexachlorobenzene	3900	U
87-86-5	Pentachlorophenol	9400	U
85-01-8	Phenanthrene	21000	E
120-12-7	Anthracene	13000	
86-74-8	Carbazole	8200	
84-74-2	Di-n-Butylphthalate	3900	U
206-44-0	Fluoranthene	57000	E
129-00-0	Pyrene	62000	E
85-68-7	Butylbenzylphthalate	3900	U
91-94-1	3,3'-Dichlorobenzidine	3900	U
56-55-3	Benzo(a)Anthracene	35000	E
218-01-9	Chrysene	49000	E
117-81-7	bis(2-Ethylhexyl)Phthalate	3900	U
117-84-0	Di-n-Octyl Phthalate	3900	UJ
205-99-2	Benzo(b)Fluoranthene	46000	E
207-08-9	Benzo(k)Fluoranthene	25000	EJ
50-32-8	Benzo(a)Pyrene	25000	E
193-39-5	Indeno(1,2,3-cd)Pyrene	8900	
53-70-3	Dibenz(a,h)Anthracene	3900	U
191-24-2	Benzo(g,h,i)Perylene	3900	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0522W09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 16 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5

Number TICs found: 26

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDROXYMETHYLPENTANONE	9.19	52000	~~BAJ~~ U
2.	UNKNOWN	28.19	10000	J
3.	UNK. ANTHRACENEDIONE	28.79	11000	~~B~~AJ
4.	UNK. CYCLOPENTAPHENANTHRENON	29.77	13000	~~B~~AJ
5.	UNKNOWN	30.61	26000	J
6.	UNK. BENZONAPHTHOFURAN	30.97	8800	J
7.	UNKNOWN	31.09	8700	J
8.	UNKNOWN	31.27	6500	J
9.	UNKNOWN	31.31	16000	J
10.	UNKNOWN	31.61	26000	J
11.	UNKNOWN	31.94	12000	J
12.	UNK. METHYLPYRENE	32.22	8400	J
13.	UNKNOWN	32.29	5600	J
14.	UNK. BENZANTHRACENONE	33.14	19000	AJ
15.	UNKNOWN	33.47	16000	J
16.	UNKNOWN	33.56	15000	J
17.	UNKNOWN	33.64	14000	J
18.	UNKNOWN	33.66	11000	J
19.	UNK. BENZANTHRACENONE	33.76	16000	AJ
20.	UNKNOWN	34.64	7100	J
21.	UNKNOWN	35.02	4400	J
22.	UNKNOWN	35.02	5500	J
23.	UNKNOWN	35.67	14000	J
24.	UNKNOWN	35.82	6200	J
25.	UNKNOWN	38.61	20000	J
26. 205-82-3	BENZO(J)FLUORANTHENE	39.99	41000	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107DL

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0527W04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 16 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	7700	U
111-44-4	bis(2-Chloroethyl)Ether	7700	UJ
95-57-8	2-Chlorophenol	7700	U
541-73-1	1,3-Dichlorobenzene	7700	U
106-46-7	1,4-Dichlorobenzene	7700	U
95-50-1	1,2-Dichlorobenzene	7700	U
95-48-7	2-Methylphenol	7700	U
108-60-1	2,2'-oxybis(1-Chloropropane)	7700	U
106-44-5	4-Methylphenol	7700	U
621-64-7	N-Nitroso-Di-n-Propylamine	7700	U
67-72-1	Hexachloroethane	7700	U
98-95-3	Nitrobenzene	7700	U
78-59-1	Isophorone	7700	U
88-75-5	2-Nitrophenol	7700	U
105-67-9	2,4-Dimethylphenol	7700	U
111-91-1	bis(2-Chloroethoxy)Methane	7700	U
120-83-2	2,4-Dichlorophenol	7700	U
120-82-1	1,2,4-Trichlorobenzene	7700	U
91-20-3	Naphthalene	1700	DJ
106-47-8	4-Chloroaniline	7700	UJ
87-68-3	Hexachlorobutadiene	7700	U
59-50-7	4-Chloro-3-Methylphenol	7700	U
91-57-6	2-Methylnaphthalene	1000	DJ
77-47-4	Hexachlorocyclopentadiene	7700	U
88-06-2	2,4,6-Trichlorophenol	7700	U
95-95-4	2,4,5-Trichlorophenol	19000	U
91-58-7	2-Chloronaphthalene	7700	U
88-74-4	2-Nitroaniline	19000	U
131-11-3	Dimethylphthalate	7700	U
208-96-8	Acenaphthylene	7700	U
606-20-2	2,6-Dinitrotoluene	7700	U
99-09-2	3-Nitroaniline	19000	UJ
83-32-9	Acenaphthene	7700	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107DL

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0527W04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 16 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	19000	U
100-02-7	4-Nitrophenol	19000	UJ
132-64-9	Dibenzofuran	1700	DJ
121-14-2	2,4-Dinitrotoluene	7700	U
84-66-2	Diethylphthalate	7700	U
7005-72-3	4-Chlorophenyl-phenylether	7700	U
86-73-7	Fluorene	7700	U
100-10-6	4-Nitroaniline	19000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	19000	U
86-30-6	N-Nitrosodiphenylamine (1)	7700	U
101-55-3	4-Bromophenyl-phenylether	7700	U
118-74-1	Hexachlorobenzene	7700	U
87-86-5	Pentachlorophenol	19000	U
85-01-8	Phenanthrene	11000	D
120-12-7	Anthracene	6700	DJ
86-74-8	Carbazole	4300	DJ
84-74-2	Di-n-Butylphthalate	7700	U
206-44-0	Fluoranthene	40000	DE
129-00-0	Pyrene	40000	DE
85-68-7	Butylbenzylphthalate	7700	U
91-94-1	3,3'-Dichlorobenzidine	7700	UJ
56-55-3	Benzo(a)Anthracene	19000	D
218-01-9	Chrysene	26000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	7700	U
117-84-0	Di-n-Octyl Phthalate	7700	U
205-99-2	Benzo(b)Fluoranthene	27000	D
207-08-9	Benzo(k)Fluoranthene	18000	D
50-32-8	Benzo(a)Pyrene	15000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	7700	UJ
53-70-3	Dibenz(a,h)Anthracene	7700	UJ
191-24-2	Benzo(g,h,i)Perylene	7700	UJ

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0527W04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 16 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.5

Number TICs found: 18

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDROXYMETHYLPENTANONE	9.09	26000	~~BADJU~~ am
2.	UNK. FLUORENONE	25.76	3300	ADJ
3.	UNK. METHYL PHENANTHRENE	27.89	2100	JND
4.	UNKNOWN	28.16	4400	DJ
5.	UNK. ANTHRACENEDIONE	28.76	4400	ADJ
6.	UNK.CYCLOPENTAPHENANTHRENONE	29.72	5700	ADJ
7.	UNK. BENZONAPHTHOFURAN	30.56	14000	DJ
8.	UNK. BENZONAPHTHOFURAN	30.92	3700	DJ
9.	UNKNOWN	31.26	7100	DJ
10.	UNKNOWN	31.57	11000	DJ
11.	UNKNOWN	31.91	5100	DJ
12.	UNKNOWN ALIP. KETONE	33.11	7900	ADJ
13.	UNKNOWN	33.44	6100	DJ
14.	UNKNOWN	33.52	6200	DJ
15.	UNK. BENZOFLUORANTHENE	33.59	6100	DJ
16.	UNKNOWN ALIP. KETONE	33.71	6300	ADJ
17.	UNKNOWN	35.61	5600	DJ
18. 205-82-3	BENZO(J)FLUORANTHENE	39.86	21000	JND

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216282

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0521W09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 23 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430	U
111-44-4	bis(2-Chloroethyl)Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-Di-n-Propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	bis(2-Chloroethoxy)Methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	430	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	430	U
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	1000	UJ
83-32-9	Acenaphthene	430	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216282

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0521W09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 23 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	430	U
121-14-2	2,4-Dinitrotoluene	430	U
84-66-2	Diethylphthalate	430	U
7005-72-3	4-Chlorophenyl-phenylether	430	U
86-73-7	Fluorene	430	U
100-10-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	180	J
86-74-8	Carbazole	120	J
84-74-2	Di-n-Butylphthalate	430 ~~270~~	~~BJ~~ U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	310	J
85-68-7	Butylbenzylphthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	430	U
56-55-3	Benzo(a)Anthracene	130	J
218-01-9	Chrysene	430	U
117-81-7	bis(2-Ethylhexyl)Phthalate	430	U
117-84-0	Di-n-Octyl Phthalate	430	U
205-99-2	Benzo(b)Fluoranthene	140	J
207-08-9	Benzo(k)Fluoranthene	130	J
50-32-8	Benzo(a)Pyrene	63	J
193-39-5	Indeno(1,2,3-cd)Pyrene	430	U
53-70-3	Dibenz(a,h)Anthracene	430	U
191-24-2	Benzo(g,h,i)Perylene	330	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216282

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B0521W09

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 23 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 3.8

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNK. TRIMETHYLDIOXOLANE	5.90	9700	~~BJ~~ U	am
2.	UNKNOWN	6.73	180	J	
3.	UNK. METHYLPENTENEONE	8.03	9600	~~B~~AJ	am
4.	UNKNOWN	8.50	2800	~~BJ~~ U	am
5.	UNKNOWN	8.57	1400	~~B~~J	am
6.	UNKNOWN	9.07	77	~~BJ~~ U	am
7.	UNK. HYDROXYMETHYLPENTANONE	9.40	53000	~~BAJ~~ U	am
8.	UNKNOWN ALIP. HYDROCARBON	9.70	300	J	
9.	UNKNOWN ALIP. HYDROCARBON	9.84	540	~~BJ~~ U	am
10.	UNK. METHYLETHYL HEPTANE	10.00	440	~~BJ~~ U	am
11.	UNKNOWN	10.45	130	J	
12.	UNKNOWN	11.05	1000	~~BJ~~ U	am
13.	UNKNOWN	11.59	280	J	
14.	UNKNOWN	11.99	2700	~~BJ~~ U	am
15. 100-52-7	BENZALDEHYDE	12.17	630	~~JNB~~ U	am
16.	UNKNOWN	13.10	3100	~~BJ~~ U	am
17.	UNKNOWN	13.67	250	~~BJ~~ U	am
18.	UNKNOWN	14.05	3700	~~BJ~~ U	am
19.	UNKNOWN ALIP. ALCOHOL	14.30	1100	~~B~~J	am
20.	UNKNOWN	16.40	480	J	
21.	UNKNOWN	16.69	510	J	
22.	UNKNOWN ALIP. ACID	22.72	5400	~~B~~J	am
23.	UNKNOWN ALIP. ACID	23.40	240	~~BJ~~ U	am
24.	UNKNOWN	27.87	240	J	
25.	UNKNOWN ALIP. ACID ESTER	32.69	220	~~BJ~~ U	am
26.	UNKNOWN ALIP. HYDROCARBON	33.61	210	J	
27.	UNKNOWN ALIP. HYDROCARBON	35.81	110	J	
28.	UNKNOWN	49.64	1200	J	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216283

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)Methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	1000	UJ
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

ıb Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216283

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-10-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-Butylphthalate	420 ~~280~~	~~B~~ U am
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)Anthracene	420	U
218-01-9	Chrysene	420	U
117-81-7	bis(2-Ethylhexyl)Phthalate	420	U
117-84-0	Di-n-Octyl Phthalate	420	U
205-99-2	Benzo(b)Fluoranthene	420	U
207-08-9	Benzo(k)Fluoranthene	420	U
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
53-70-3	Dibenz(a,h)Anthracene	420	U
191-24-2	Benzo(g,h,i)Perylene	420	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X109

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216283

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number TICs found: 27

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNK. TRIMETHYL DIOXOLANE	5.88	90	~~BJ~~ U	am
2.	UNK. METHYL PENTENEONE	7.97	2	~~BAJ~~ U	am
3.	UNKNOWN	8.49	3	~~BJ~~ U	am
4.	UNKNOWN	8.57	950	J	
5.	UNKNOWN	9.05	81	~~BJ~~ U	am
6.	UNK. HYDROXYMETHYLPENTANONE	9.42	56	~~BAJ~~ U	am
7.	UNKNOWN	9.67	15	~~BJ~~ U	am
8.	UNK. METHYLETHYL HEPTANE	10.00	490	~~BJ~~ U	am
9.	UNK. CYCLOHEXENEOL	10.39	2	~~BAJ~~ U	am
10.	UNKNOWN	11.02	1200	~~BJ~~ U	am
11.	UNK. CYCLOHEXENEONE	11.45	250	~~BAJ~~ U	am
12.	UNKNOWN	11.72	71	~~BJ~~ U	am
13.	UNKNOWN	11.95	1200	~~BJ~~ U	am
14.	UNKNOWN	12.74	5100	~~BJ~~ U	am
15.	UNKNOWN	13.07	6000	~~B~~J	am
16.	UNKNOWN	13.65	490	~~BJ~~ U	am
17.	UNKNOWN	14.02	4300	~~B~~J	am
18.	UNKNOWN	14.19	350	~~BJ~~ U	am
19.	UNKNOWN	16.37	350	~~BJ~~ U	am
20.	UNKNOWN ALIP. ACID	22.65	2000	~~B~~J	am
21.	UNKNOWN ALIP. ACID	23.37	290	~~BJ~~ U	am
22.	UNKNOWN ALIP. HYDROCARBON	24.70	530	J	
23.	UNKNOWN ALIP. ACID	27.84	430	J	
24.	UNKNOWN ALIP. ACID ESTER	32.67	270	J	
25.	UNKNOWN ALIP. HYDROCARBON	33.57	290	J	
26.	UNKNOWN ALIP. HYDROCARBON	35.79	200	J	
27.	UNKNOWN ALIP. HYDROCARBON	38.74	220	J	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284

Sample wt/vol: 30.3 (g/mL) G Lab File ID: B0522W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)Methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	1000	UJ
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284

Sample wt/vol: 30.3 (g/mL) G Lab File ID: B0522W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-10-6	4-Nitroaniline	1000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	1700	E
120-12-7	Anthracene	79	J
86-74-8	Carbazole	420	U
84-74-2	Di-n-Butylphthalate	610	~~B~~ U am
206-44-0	Fluoranthene	450	
129-00-0	Pyrene	780	
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)Anthracene	420	U
218-01-9	Chrysene	470	
117-81-7	bis(2-Ethylhexyl)Phthalate	420	U
117-84-0	Di-n-Octyl Phthalate	420	UJ
205-99-2	Benzo(b)Fluoranthene	240	J
207-08-9	Benzo(k)Fluoranthene	420	UJ
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
53-70-3	Dibenz(a,h)Anthracene	420	U
191-24-2	Benzo(g,h,i)Perylene	420	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X110

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284

Sample wt/vol: 30.3 (g/mL) G Lab File ID: B0522W05

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.6

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. HYDROXYMETHYLPENTANONE	9.45	43000	~~BAJ~~ U am
2.	UNKNOWN	12.79	4100	~~BJ~~ U an
3.	UNKNOWN ALIP. HYDROCARBON	24.75	4300	J
4.	UNKNOWN ALIP. HYDROCARBON	27.22	2300	J
5.	UNK. METHYL PHENANTHRENE	27.87	1400	JN
6.	UNKNOWN	27.94	1200	J
7.	UNK. METHYL PHENANTHRENE	27.96	1200	JN
8.	UNKNOWN ALIP. HYDROCARBON	28.41	2100	J
9.	UNKNOWN ALIP. HYDROCARBON	29.54	2000	J
10.	UNKNOWN ALIP. HYDROCARBON	31.67	2900	J
11.	UNKNOWN	31.97	750	J
12.	UNKNOWN	32.26	650	J
13.	UNKNOWN	32.34	260	J
14.	UNKNOWN ALIP. HYDROCARBON	32.69	3700	J
15.	UNKNOWN	33.42	250	J
16.	UNKNOWN	33.51	330	J
17.	UNKNOWN	33.59	220	J
18.	UNKNOWN ALIP. HYDROCARBON	33.66	3800	J
19.	UNKNOWN ALIP. HYDROCARBON	34.69	3500	J
20.	UNKNOWN ALIP. HYDROCARBON	35.87	3500	J
21.	UNKNOWN ALIP. HYDROCARBON	37.24	2700	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216285

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W11

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 33 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	490	U
111-44-4	bis(2-Chloroethyl)Ether	490	U
95-57-8	2-Chlorophenol	490	U
541-73-1	1,3-Dichlorobenzene	490	U
106-46-7	1,4-Dichlorobenzene	490	U
95-50-1	1,2-Dichlorobenzene	490	U
95-48-7	2-Methylphenol	490	U
108-60-1	2,2'-oxybis(1-Chloropropane)	490	U
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-Di-n-Propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
111-91-1	bis(2-Chloroethoxy)Methane	490	U
120-83-2	2,4-Dichlorophenol	490	U
120-82-1	1,2,4-Trichlorobenzene	490	U
91-20-3	Naphthalene	490	U
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
59-50-7	4-Chloro-3-Methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	490	U
208-96-8	Acenaphthylene	490	U
606-20-2	2,6-Dinitrotoluene	490	U
99-09-2	3-Nitroaniline	1200	UJ
83-32-9	Acenaphthene	490	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216285

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W11

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 33 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	490	U
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	490	U
100-10-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	320	J
120-12-7	Anthracene	490	U
86-74-8	Carbazole	490	U
84-74-2	Di-n-Butylphthalate	490 ~~330~~	~~BJ~~ U am
206-44-0	Fluoranthene	840	
129-00-0	Pyrene	720	
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)Anthracene	350	J
218-01-9	Chrysene	490	U
117-81-7	bis(2-Ethylhexyl)Phthalate	490	U
117-84-0	Di-n-Octyl Phthalate	490	U
205-99-2	Benzo(b)Fluoranthene	790	
207-08-9	Benzo(k)Fluoranthene	620	
50-32-8	Benzo(a)Pyrene	410	J
193-39-5	Indeno(1,2,3-cd)Pyrene	230	J
53-70-3	Dibenz(a,h)Anthracene	490	U
191-24-2	Benzo(g,h,i)Perylene	490	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X111

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216285

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W11

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 33 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 29

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNKNOWN METHYLPENTENONE	8.02	750	~~BAJ~~ U	am
2.	UNKNOWN	8.54	2800	~~BJ~~ U	am
3.	UNKNOWN	8.67	2900	J	
4.	UNK. HYDROXYMETHYLPENTANONE	9.49	63000	~~BAJ~~ U	am
5.	UNKNOWN	9.74	740	~~BJ~~ U	am
6.	UNKNOWN	11.10	1700	~~BJ~~ U	am
7.	UNK. CYCLOHEXENEONE	11.50	540	~~BAJ~~ U	am
8.	UNKNOWN	11.77	680	~~BJ~~ U	am
9.	UNKNOWN	12.80	6600	~~B~~J	am
10.	UNKNOWN	13.24	740	J	
11.	UNKNOWN	14.09	4400	~~BJ~~ U	am
12.	UNKNOWN ALIP. ACID	27.91	820	J	
13.	UNKNOWN	29.99	240	J	
14.	UNK. ALIP. ACID ESTER	32.72	1600	~~BJ~~ U	am
15.	UNKNOWN	33.04	67	J	
16.	UNKNOWN	33.12	4	J	
17.	UNKNOWN ALIP. KETONE	33.16	220	AJ	
18.	UNKNOWN	33.49	140	J	
19.	UNKNOWN ALIP. HYDROCARBON	33.64	690	J	
20.	UNKNOWN	33.76	170	J	
21.	UNKNOWN	34.02	100	J	
22.	UNKNOWN ALIP. HYDROCARBON	34.67	200	J	
23.	UNKNOWN ALIP. HYDROCARBON	35.86	730	J	
24.	UNKNOWN ALIP. HYDROCARBON	37.21	230	J	
25.	UNKNOWN	38.62	910	J	
26.	UHKNOWN ALIP. HYDROCARBON	38.82	1400	J	
27.	UNKNOWN	38.91	630	J	
28.	UNKNOWN	39.94	1000	J	
29.	UNKNOWN ALIP. HYDROCARBON	43.06	2300	J	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216286

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 33 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	490	U
111-44-4	bis(2-Chloroethyl)Ether	490	U
95-57-8	2-Chlorophenol	490	U
541-73-1	1,3-Dichlorobenzene	490	U
106-46-7	1,4-Dichlorobenzene	490	U
95-50-1	1,2-Dichlorobenzene	490	U
95-48-7	2-Methylphenol	490	U
108-60-1	2,2'-oxybis(1-Chloropropane)	490	U
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-Di-n-Propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
111-91-1	bis(2-Chloroethoxy)Methane	490	U
120-83-2	2,4-Dichlorophenol	490	U
120-82-1	1,2,4-Trichlorobenzene	490	U
91-20-3	Naphthalene	490	U
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
59-50-7	4-Chloro-3-Methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	490	U
208-96-8	Acenaphthylene	490	U
606-20-2	2,6-Dinitrotoluene	490	U
99-09-2	3-Nitroaniline	1200	UJ
83-32-9	Acenaphthene	490	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216286

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 33 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	490	U
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	490	U
100-10-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	490	U
120-12-7	Anthracene	490	U
86-74-8	Carbazole	490	U
84-74-2	Di-n-Butylphthalate	490 ~~220~~	~~BJ~~ U am
206-44-0	Fluoranthene	87	J
129-00-0	Pyrene	85	J
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)Anthracene	490	U
218-01-9	Chrysene	490	U
117-81-7	bis(2-Ethylhexyl)Phthalate	490	U
117-84-0	Di-n-Octyl Phthalate	490	U
205-99-2	Benzo(b)Fluoranthene	490	U
207-08-9	Benzo(k)Fluoranthene	490	U
50-32-8	Benzo(a)Pyrene	490	U
193-39-5	Indeno(1,2,3-cd)Pyrene	490	U
53-70-3	Dibenz(a,h)Anthracene	490	U
191-24-2	Benzo(g,h,i)Perylene	490	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X112

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216286

Sample wt/vol: 30.2 (g/mL) G Lab File ID: B0521W06

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 33 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNKNOWN METHYLPENTENEONE	7.95	780	~~BAJ~~ U	am
2.	UNKNOWN	8.49	3200	J	
3.	UNKNOWN	8.57	3300	~~BJ~~ U	am
4.	UNK. HYDROXYMETHYLPENTANEONE	9.40	71000	~~B~~AJ	am
5.	UNKNOWN	9.67	2800	~~BJ~~ U	am
6.	UNKNOWN ALIP. HYDROCARBON	9.80	590	~~BJ~~ U	am
7.	UNKNOWN CYCLOHEXENEOL	10.39	590	~~BAJ~~ U	am
8.	UNKNOWN	11.02	1700	~~BJ~~ U	am
9.	UNKNOWN CYCLOHEXENEONE	11.44	610	~~BAJ~~ U	am
10.	UNKNOWN	11.95	660	~~BJ~~ U	am
11.	UNKNOWN	12.74	4400	~~BJ~~ U	am
12.	UNKNOWN	13.07	3500	~~BJ~~ U	am
13.	UNKNOWN	13.65	740	~~BJ~~ U	am
14.	UNKNOWN	14.02	5600	~~B~~J	am
15.	UNKNOWN	14.17	280	~~BJ~~ U	am
16.	UNKNOWN	14.55	230	J	
17.	UNKNOWN	16.37	280	J	
18.	UNKNOWN ALIP. ACID	22.59	370	~~BJ~~ U	am
19.	UNKNOWN ALIP. ACID	23.37	240	~~BJ~~ U	am
20.	UNKNOWN ALIP. ACID	27.84	450	J	
21.	UNKNOWN	29.29	330	J	
22.	UNKNOWN ALIP. ACID ESTER	32.67	6300	~~BJ~~ U	am
23.	UNKNOWN	33.56	470	J	
24.	UNKNOWN ALIP. HYDROCARBON	33.56	460	J	
25.	UNKNOWN ALIP. HYDROCARBON	35.79	410	J	
26.	UNKNOWN ALIP. HYDROCARBON	38.74	800	J	
27.	UNKNOWN ALIP. HYDROCARBON	42.98	710	J	
28.	UNKNOWN	43.19	430	J	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216287

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0521W04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)Methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	1000	UJ
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113

Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216287

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0521W04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-10-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-Butylphthalate	420 ~~270~~	~~BJ~~ U am
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	420	U
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)Anthracene	420	U
218-01-9	Chrysene	420	U
117-81-7	bis(2-Ethylhexyl)Phthalate	420	U
117-84-0	Di-n-Octyl Phthalate	420	U
205-99-2	Benzo(b)Fluoranthene	420	U
207-08-9	Benzo(k)Fluoranthene	420	U
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
53-70-3	Dibenz(a,h)Anthracene	420	U
191-24-2	Benzo(g,h,i)Perylene	420	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X113

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216287

Sample wt/vol: 30.4 (g/mL) G Lab File ID: B0521W04

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 4.4

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNK. METHYLPENTENEONE	8.00	740	~~BAJ~~ U	am
2.	UNKNOWN	8.54	2700	~~BJ~~ U	am
3.	UNKNOWN	8.60	2400	~~BJ~~ U	am
4.	UNKNOWN	9.09	75	~~BJ~~ U	am
5.	UNK. HYDROXYMETHYLPENTANONE	9.45	58000	~~BAJ~~	am
6.	UNKNOWN	9.70	1800	~~BJ~~ U	am
7.	UNK. METHYLETHYL HEPTANE	10.04	480	~~BJ~~ U	am
8.	UNK. CYCLOHEXENEOL	10.42	340	~~BAJ~~ U	am
9.	UNKNOWN	11.05	1400	~~BJ~~ U	am
10.	UNK.CYCLOHEXENEONE	11.49	340	~~BAJ~~ U	am
11.	UNKNOWN	11.75	440	~~BJ~~ U	am
12.	UNKNOWN	11.99	870	~~BJ~~ U	am
13.	UNKNOWN	12.77	4200	~~BJ~~ U	am
14.	UNKNOWN	13.10	2100	~~BJ~~ U	am
15.	UNKNOWN	13.24	220	J	
16.	UNKNOWN	13.30	440	J	
17.	UNKNOWN	13.69	390	~~BJ~~ U	am
18.	UNKNOWN	13.79	220	J	
19.	UNKNOWN	14.05	4000	~~BJ~~	am
20.	UNKNOWN	14.20	220	~~BJ~~ U	am
21.	UNKNOWN	16.40	250	J	
22.	UNKNOWN ALIP. ACID	22.65	630	~~BJ~~ U	am
23.	UNKNOWN ALIP. ACID	23.40	190	~~BJ~~ U	am
24.	UNKNOWN	27.69	120	J	
25.	UNKNOWN ALIP. ACID	27.89	340	J	
26.	UNK. ALIP. ACID ESTER	32.71	9000	~~BJ~~ U	am
27.	UNKNOWN ALIP. HYDROCARBON	33.61	330	J	
28.	UNKNOWN ALIP. HYDROCARBON	38.87	500	J	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216288

Sample wt/vol: 30.8 (g/mL) G Lab File ID: B0521W07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	U
111-44-4	bis(2-Chloroethyl)Ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-oxybis(1-Chloropropane)	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-Propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	bis(2-Chloroethoxy)Methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-Methylphenol	450	U
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	UJ
83-32-9	Acenaphthene	450	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216288

Sample wt/vol: 30.8 (g/mL) G Lab File ID: B0521W07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	450	U
100-10-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	450	U
120-12-7	Anthracene	450	U
86-74-8	Carbazole	450	U
84-74-2	Di-n-Butylphthalate	450 ~~360~~	~~B~~ U am
206-44-0	Fluoranthene	270	J
129-00-0	Pyrene	310	J
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)Anthracene	200	J
218-01-9	Chrysene	450	U
117-81-7	bis(2-Ethylhexyl)Phthalate	450	U
117-84-0	Di-n-Octyl Phthalate	450	U
205-99-2	Benzo(b)Fluoranthene	340	J
207-08-9	Benzo(k)Fluoranthene	230	J
50-32-8	Benzo(a)Pyrene	46	J
193-39-5	Indeno(1,2,3-cd)Pyrene	140	J
53-70-3	Dibenz(a,h)Anthracene	450	U
191-24-2	Benzo(g,h,i)Perylene	450	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X114

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216288

Sample wt/vol: 30.8 (g/mL) G Lab File ID: B0521W07

Level: (low/med) LOW Date Received: 04/23/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/21/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNK.METHYLPENTENEONE	7.98	730	~~BAJ~~ U	am
2.	UNKNOWN	8.52	2700	~~BJ~~ U	am
3.	UNKNOWN	8.64	3200	J	
4.	UNK. HYDROXYMETHYLPENTANONE	9.45	60000	~~BAJ~~ U	am
5.	UNKNOWN	9.70	2200	~~BJ~~ U	am
6.	UNK.CYCLOHEXENEOL	10.42	450	~~BAJ~~ U	am
7.	UNKNOWN	11.05	1600	J	
8.	UNK. CLOHEXENEONE	11.47	560	~~BAJ~~ U	am
9.	UNKNOWN	11.99	880	~~BJ~~ U	am
10.	UNKNOWN	12.75	3300	~~BJ~~ U	am
11.	UNKNOWN	13.10	3600	J	
12.	UNKNOWN	13.30	200	J	
13.	UNKNOWN	13.69	880	~~BJ~~ U	am
14.	UNKNOWN	14.05	4500	~~BJ~~	am
15.	UNKNOWN	14.20	170	~~BJ~~ U	am
16.	UNKNOWN	14.30	200	J	
17.	UNKNOWN	14.59	160	J	
18.	UNKNOWN	16.40	240	J	
19.	UNKNOWN ALIP. ACID	23.40	220	~~BJ~~ U	am
20.	UNKNOWN	27.69	320	J	
21.	UNKNOWN ALIP. ACID	27.87	870	J	
22.	UNKNOWN ALIP. ACID ESTER	32.71	10000	~~BJ~~ U	am
23.	UNKNOWN	33.59	540	J	
24.	UNKNOWN PHTHALATE	34.37	880	J	
25.	UNKNOWN	35.82	710	J	
26.	UNKNOWN ALIP. HYDROCARBON	38.77	1100	J	
27.	UNKNOWN	38.87	200	J	
28.	UNKNOWN BENZOPYRENE	39.87	430	J	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X1010L

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216275

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

% Moisture: 21 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	21	U
319-85-7	beta-BHC	21	U
319-86-8	delta-BHC	21	U
58-89-9	gamma-BHC (Lindane)	5.0	JD
76-44-8	Heptachlor	21	U
309-00-2	Aldrin	21	U
1024-57-3	Heptachlor epoxide	21	U
959-98-8	Endosulfan I	21	U
60-57-1	Dieldrin	41	U
72-55-9	4,4'-DDE	41	U
72-20-8	Endrin	41	U
33213-65-9	Endosulfan II	44	D
72-54-8	4,4'-DDD	41	U
1031-07-8	Endosulfan sulfate	41	U
50-29-3	4,4'-DDT	41	U
72-43-5	Methoxychlor	25	JPD
53494-70-5	Endrin ketone	41	U
7421-36-3	Endrin aldehyde	41	U
5103-71-9	alpha-Chlordane	21	U
5103-74-2	gamma-Chlordane	21	U
8001-35-2	Toxaphene	2100	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	830	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	410	U
11096-82-5	Aroclor-1260	410	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216276

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

% Moisture: 26 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

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	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	22	U
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	22	U
309-00-2	Aldrin	22	U
1024-57-3	Heptachlor epoxide	11	JD
959-98-8	Endosulfan I	22	U
60-57-1	Dieldrin	43	U
72-55-9	4,4'-DDE	43	U
72-20-8	Endrin	43	U
33213-65-9	Endosulfan II	43	U
72-54-8	4,4'-DDD	43	U
1031-07-8	Endosulfan sulfate	43	U
50-29-3	4,4'-DDT	43	U
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	43	U
7421-36-3	Endrin aldehyde	43	U
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	880	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	430	U
11096-82-5	Aroclor-1260	430	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216277

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 23 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	5.9	JPD
58-89-9	gamma-BHC (Lindane)	5.3	JPD
76-44-8	Heptachlor	22	U
309-00-2	Aldrin	8.5	JPD
1024-57-3	Heptachlor epoxide	37	PD
959-98-8	Endosulfan I	14	JD
60-57-1	Dieldrin	42	U
72-55-9	4,4'-DDE	42	U
72-20-8	Endrin	5.6	JPD
33213-65-9	Endosulfan II	42	JPD
72-54-8	4,4'-DDD	11	JPD
1031-07-8	Endosulfan sulfate	20	JD
50-29-3	4,4'-DDT	130	PD
72-43-5	Methoxychlor	13	JPD
53494-70-5	Endrin ketone	42	U
7421-36-3	Endrin aldehyde	14	JPD
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	860	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	420	U
12672-29-6	Aroclor-1248	390	JPD
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216278

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 21 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	21	U
319-85-7	beta-BHC	21	U
319-86-8	delta-BHC	21	U
58-89-9	gamma-BHC (Lindane)	21	U
76-44-8	Heptachlor	21	U
309-00-2	Aldrin	21	U
1024-57-3	Heptachlor epoxide	21	U
959-98-8	Endosulfan I	21	U
60-57-1	Dieldrin	41	U
72-55-9	4,4'-DDE	41	U
72-20-8	Endrin	41	U
33213-65-9	Endosulfan II	41	U
72-54-8	4,4'-DDD	41	U
1031-07-8	Endosulfan sulfate	41	U
50-29-3	4,4'-DDT	41	U
72-43-5	Methoxychlor	10	JP D
53494-70-5	Endrin ketone	41	U
7421-36-3	Endrin aldehyde	41	U
5103-71-9	alpha-Chlordane	16	JP D
5103-74-2	gamma-Chlordane	4.2	JP D
8001-35-2	Toxaphene	2100	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	830	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	410	U
11096-82-5	Aroclor-1260	410	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216279

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 19 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	15	JPD
319-86-8	delta-BHC	12	JPD
58-89-9	gamma-BHC (Lindane)	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	23	PD
1024-57-3	Heptachlor epoxide	110	PD
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	660	PD
72-55-9	4,4'-DDE	40	U
72-20-8	Endrin	62	PD
33213-65-9	Endosulfan II	40	U
72-54-8	4,4'-DDD	93	PD
1031-07-8	Endosulfan sulfate	40	U
50-29-3	4,4'-DDT	40	U
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin ketone	25	JPD
7421-36-3	Endrin aldehyde	40	U
5103-71-9	alpha-Chlordane	20	U
5103-74-2	gamma-Chlordane	20	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	400	U
11104-28-2	Aroclor-1221	800	U
11141-16-5	Aroclor-1232	400	U
53469-21-9	Aroclor-1242	400	U
12672-29-6	Aroclor-1248	400	U
11097-69-1	Aroclor-1254	400	U
11096-82-5	Aroclor-1260	400	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216280

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

% Moisture: 22 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	22	U
58-89-9	gamma-BHC (Lindane)	11	JP D
76-44-8	Heptachlor	31	P D
309-00-2	Aldrin	26	P D
1024-57-3	Heptachlor epoxide	74	P D
959-98-8	Endosulfan I	22	U
60-57-1	Dieldrin	270	P D
72-55-9	4,4'-DDE	42	U
72-20-8	Endrin	22	JP D
33213-65-9	Endosulfan II	42	U
72-54-8	4,4'-DDD	73	P D
1031-07-8	Endosulfan sulfate	42	U
50-29-3	4,4'-DDT	42	U
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	31	JP D
7421-36-3	Endrin aldehyde	42	U
5103-71-9	alpha-Chlordane	17	J D
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	860	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	420	U
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216281

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	20	U
319-86-8	delta-BHC	20	U
58-89-9	gamma-BHC (Lindane)	12	JP D
76-44-8	Heptachlor	41	P D
309-00-2	Aldrin	34	D
1024-57-3	Heptachlor epoxide	43	P D
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	340	P D
72-55-9	4,4'-DDE	39	U
72-20-8	Endrin	44	P D
33213-65-9	Endosulfan II	20	JP D
72-54-8	4,4'-DDD	84	P D
1031-07-8	Endosulfan sulfate	39	U
50-29-3	4,4'-DDT	39	U
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin ketone	53	P D
7421-36-3	Endrin aldehyde	27	JP D
5103-71-9	alpha-Chlordane	20	U
5103-74-2	gamma-Chlordane	20	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	780	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	390	U
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	2600	P D

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216282

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 23 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 3.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	22	U
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	22	U
309-00-2	Aldrin	22	U
1024-57-3	Heptachlor epoxide	22	U
959-98-8	Endosulfan I	22	U
60-57-1	Dieldrin	43	U
72-55-9	4,4'-DDE	43	U
72-20-8	Endrin	43	U
33213-65-9	Endosulfan II	43	U
72-54-8	4,4'-DDD	43	U
1031-07-8	Endosulfan sulfate	43	U
50-29-3	4,4'-DDT	43	U
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	43	U
7421-36-3	Endrin aldehyde	43	U
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	860	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	430	U
11096-82-5	Aroclor-1260	430	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109 DL

b Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216283

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	22	U
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	22	U
309-00-2	Aldrin	22	U
1024-57-3	Heptachlor epoxide	22	U
959-98-8	Endosulfan I	22	U
60-57-1	Dieldrin	42	U
72-55-9	4,4'-DDE	42	U
72-20-8	Endrin	42	U
33213-65-9	Endosulfan II	42	U
72-54-8	4,4'-DDD	42	U
1031-07-8	Endosulfan sulfate	42	U
50-29-3	4,4'-DDT	42	U
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	42	U
7421-36-3	Endrin aldehyde	42	U
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	860	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	420	U
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X110 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216284

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	4.8	J D
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	57	P D
309-00-2	Aldrin	4.7	JPD
1024-57-3	Heptachlor epoxide	55	D
959-98-8	Endosulfan I	8.4	JPD
60-57-1	Dieldrin	110	
72-55-9	4,4'-DDE	42	U
72-20-8	Endrin	42	U
33213-65-9	Endosulfan II	42	U
72-54-8	4,4'-DDD	53	
1031-07-8	Endosulfan sulfate	42	U
50-29-3	4,4'-DDT	140	P D
72-43-5	Methoxychlor	11	JPD
53494-70-5	Endrin ketone	42	U
7421-36-3	Endrin aldehyde	42	U
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	850	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	480	P D
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216285

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 33 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	25	U
319-85-7	beta-BHC	25	U
319-86-8	delta-BHC	25	U
58-89-9	gamma-BHC (Lindane)	25	U
76-44-8	Heptachlor	25	U
309-00-2	Aldrin	25	U
1024-57-3	Heptachlor epoxide	28	D
959-98-8	Endosulfan I	25	U
60-57-1	Dieldrin	48	U
72-55-9	4,4'-DDE	48	U
72-20-8	Endrin	48	U
33213-65-9	Endosulfan II	48	U
72-54-8	4,4'-DDD	48	U
1031-07-8	Endosulfan sulfate	48	U
50-29-3	4,4'-DDT	48	U
72-43-5	Methoxychlor	250	U
53494-70-5	Endrin ketone	48	U
7421-36-3	Endrin aldehyde	48	U
5103-71-9	alpha-Chlordane	4.7	JPD
5103-74-2	gamma-Chlordane	25	U
8001-35-2	Toxaphene	2500	U
12674-11-2	Aroclor-1016	480	U
11104-28-2	Aroclor-1221	980	U
11141-16-5	Aroclor-1232	480	U
53469-21-9	Aroclor-1242	480	U
12672-29-6	Aroclor-1248	480	U
11097-69-1	Aroclor-1254	480	U
11096-82-5	Aroclor-1260	480	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112 D4

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216286

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 33 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	25	U
319-85-7	beta-BHC	25	U
319-86-8	delta-BHC	25	U
58-89-9	gamma-BHC (Lindane)	25	U
76-44-8	Heptachlor	25	U
309-00-2	Aldrin	25	U
1024-57-3	Heptachlor epoxide	25	U
959-98-8	Endosulfan I	25	U
60-57-1	Dieldrin	49	U
72-55-9	4,4'-DDE	49	U
72-20-8	Endrin	49	U
33213-65-9	Endosulfan II	49	U
72-54-8	4,4'-DDD	49	U
1031-07-8	Endosulfan sulfate	49	U
50-29-3	4,4'-DDT	49	U
72-43-5	Methoxychlor	250	U
53494-70-5	Endrin ketone	49	U
7421-36-3	Endrin aldehyde	49	U
5103-71-9	alpha-Chlordane	25	U
5103-74-2	gamma-Chlordane	25	U
8001-35-2	Toxaphene	2500	U
12674-11-2	Aroclor-1016	490	U
11104-28-2	Aroclor-1221	990	U
11141-16-5	Aroclor-1232	490	U
53469-21-9	Aroclor-1242	490	U
12672-29-6	Aroclor-1248	490	U
11097-69-1	Aroclor-1254	490	U
11096-82-5	Aroclor-1260	490	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216287

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 4.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	22	U
319-85-7	beta-BHC	22	U
319-86-8	delta-BHC	22	U
58-89-9	gamma-BHC (Lindane)	22	U
76-44-8	Heptachlor	22	U
309-00-2	Aldrin	22	U
1024-57-3	Heptachlor epoxide	22	U
959-98-8	Endosulfan I	22	U
60-57-1	Dieldrin	41	J P
72-55-9	4,4'-DDE	42	U
72-20-8	Endrin	42	U
33213-65-9	Endosulfan II	42	U
72-54-8	4,4'-DDD	42	U
1031-07-8	Endosulfan sulfate	42	U
50-29-3	4,4'-DDT	42	U
72-43-5	Methoxychlor	220	U
53494-70-5	Endrin ketone	42	U
7421-36-3	Endrin aldehyde	42	U
5103-71-9	alpha-Chlordane	22	U
5103-74-2	gamma-Chlordane	22	U
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	850	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	420	U
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114 DL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216288

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 28 decanted: (Y/N) N Date Received: 04/23/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/30/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/30/92

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	23	U
319-85-7	beta-BHC	23	U
319-86-8	delta-BHC	23	U
58-89-9	gamma-BHC (Lindane)	23	U
76-44-8	Heptachlor	23	U
309-00-2	Aldrin	23	U
1024-57-3	Heptachlor epoxide	23	U
959-98-8	Endosulfan I	23	U
60-57-1	Dieldrin	45	U
72-55-9	4,4'-DDE	45	U
72-20-8	Endrin	45	U
33213-65-9	Endosulfan II	45	U
72-54-8	4,4'-DDD	45	U
1031-07-8	Endosulfan sulfate	45	U
50-29-3	4,4'-DDT	45	U
72-43-5	Methoxychlor	230	U
53494-70-5	Endrin ketone	45	U
7421-36-3	Endrin aldehyde	45	U
5103-71-9	alpha-Chlordane	23	U
5103-74-2	gamma-Chlordane	23	U
8001-35-2	Toxaphene	2300	U
12674-11-2	Aroclor-1016	450	U
11104-28-2	Aroclor-1221	920	U
11141-16-5	Aroclor-1232	450	U
53469-21-9	Aroclor-1242	450	U
12672-29-6	Aroclor-1248	450	U
11097-69-1	Aroclor-1254	450	U
11096-82-5	Aroclor-1260	450	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205879
Level (Low/Med): Date Received: 4/24/92
% Solids: 83.3

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16600			PM	
7440-36-0	Antimony	5.0	U	N	PM	R
7440-38-2	Arsenic	12.7			FM	
7440-39-3	Barium	184			PM	
7440-41-7	Beryllium	0.74			PM	
7440-43-9	Cadmium	0.60	U		PM	
7440-70-2	Calcium	9230			PM	
7440-47-3	Chromium	24.1		N	PM	J
7440-48-4	Cobalt	10.5			PM	
7440-50-8	Copper	19.4			PM	
7439-89-6	Iron	21100			PM	
7439-92-1	Lead	37.9			FM	
7439-95-4	Magnesium	5440			PM	
7439-96-5	Manganese	836			PM	
7439-97-6	Mercury	~~0.22~~ 0.23			AS	J
7440-02-2	Nickel	20.6			PM	
7440-09-7	Potassium	2170			PM	
7782-49-2	Selenium	0.12	U	W,N	FM	J
7440-22-4	Silver	0.60	U		PM	
7440-23-5	Sodium	130	~~R~~ U		PM	
7440-28-0	Thallium	0.70	B		FM	
7440-62-2	Vanadium	39.0			PM	
7440-66-6	Zinc	150			PM	
	Cyanide	0.99	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Colorless Clarity After: Clear Artifacts:
Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 72
Matrix (Soil): ——— Lab Sample ID: B205880
Level (Low/Med): ——— Date Received: 4/24/92
% Solids: 73.4

Concentration Units (mg/kg dry weight): ———

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15700			PM	
7440-36-0	Antimony	6.1	U	N	PM	R
7440-38-2	Arsenic	16.2			FM	
7440-39-3	Barium	227			PM	
7440-41-7	Beryllium	0.86			PM	
7440-43-9	Cadmium	0.91			PM	
7440-70-2	Calcium	7810			PM	
7440-47-3	Chromium	26.8		N	PM	J
7440-48-4	Cobalt	10.2			PM	
7440-50-8	Copper	29.7			PM	
7439-89-6	Iron	22500			PM	
7439-92-1	Lead	121			FM	
7439-95-4	Magnesium	2920			PM	
7439-96-5	Manganese	1090			PM	
7439-97-6	Mercury	~~0.07~~ 0.08 CA	B		AS	J
7440-02-2	Nickel	19.7			PM	
7440-09-7	Potassium	2270			PM	
7782-49-2	Selenium	0.26	B	W,N	FM	J
7440-22-4	Silver	0.72	U		PM	
7440-23-5	Sodium	148	~~B~~ U Ra		PM	
7440-28-0	Thallium	0.46	B		FM	
7440-62-2	Vanadium	47.8			PM	
7440-66-6	Zinc	178			PM	
———	Cyanide	1.1	U		AS	
———	———					
———	———					

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Green Clarity After: Clear Artifacts: ———
Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205881
Level (Low/Med): Date Received: 4/24/92
% Solids: 76.8

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13500			PM	
7440-36-0	Antimony	5.8	U	N	PM	R
7440-38-2	Arsenic	17.4			FM	
7440-39-3	Barium	81.6			PM	
7440-41-7	Beryllium	0.94			PM	
7440-43-9	Cadmium	3.1			PM	
7440-70-2	Calcium	6350			PM	
7440-47-3	Chromium	27.5		N	PM	J
7440-48-4	Cobalt	11.9			PM	
7440-50-8	Copper	199			PM	
7439-89-6	Iron	120000			PM	
7439-92-1	Lead	133			FM	
7439-95-4	Magnesium	544	B		PM	
7439-96-5	Manganese	479			PM	
7439-97-6	Mercury	0.07	B		AS	J
7440-02-2	Nickel	45.7			PM	
7440-09-7	Potassium	1060			PM	
7782-49-2	Selenium	1.22		S,N	FM	J
7440-22-4	Silver	0.70	U		PM	
7440-23-5	Sodium	496	B		PM	
7440-28-0	Thallium	0.42	U	W	FM	J
7440-62-2	Vanadium	24.9			PM	
7440-66-6	Zinc	638			PM	
	Cyanide	1.1	U		AS	

Color Before: Black Clarity Before: Opaque Texture: Fine
Color After: Brown Clarity After: Clear Artifacts:
Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205882
Level (Low/Med): Date Received: 4/24/92
% Solids: 77.7

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12500			PM	
7440-36-0	Antimony	5.8	U	N	PM	R
7440-38-2	Arsenic	6.0			FM	
7440-39-3	Barium	174			PM	
7440-41-7	Beryllium	0.65	B		PM	
7440-43-9	Cadmium	0.68	U		PM	
7440-70-2	Calcium	4860			PM	
7440-47-3	Chromium	19.4		N	PM	J
7440-48-4	Cobalt	6.8	B		PM	
7440-50-8	Copper	17.6			PM	
7439-89-6	Iron	17700			PM	
7439-92-1	Lead	14.4			FM	
7439-95-4	Magnesium	3400			PM	
7439-96-5	Manganese	634			PM	
7439-97-6	Mercury	~~0.006~~ 0.0076	U		AS	J
7440-02-2	Nickel	17.2			PM	
7440-09-7	Potassium	1090			PM	
7782-49-2	Selenium	0.15	B	W,N	FM	J
7440-22-4	Silver	0.68	U		PM	
7440-23-5	Sodium	109	U ~~R~~		PM	
7440-28-0	Thallium	0.41	U		FM	
7440-62-2	Vanadium	19.2			PM	
7440-66-6	Zinc	77.4			PM	
	Cyanide	1.1	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Colorless Clarity After: Clear Artifacts:
Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205883
Level (Low/Med): Date Received: 4/24/92
% Solids: 81.1

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16900			PM	
7440-36-0	Antimony	5.6	U	N	PM	R
7440-38-2	Arsenic	9.4			FM	
7440-39-3	Barium	213			PM	
7440-41-7	Beryllium	0.81			PM	
7440-43-9	Cadmium	0.67	U		PM	
7440-70-2	Calcium	10500			PM	
7440-47-3	Chromium	23.8		N	PM	J
7440-48-4	Cobalt	9.6			PM	
7440-50-8	Copper	23.5			PM	
7439-89-6	Iron	23800			PM	
7439-92-1	Lead	42.3			FM	
7439-95-4	Magnesium	3670			PM	
7439-96-5	Manganese	905			PM	
7439-97-6	Mercury	0.06	B		AS	J
7440-02-2	Nickel	26.2			PM	
7440-09-7	Potassium	1920			PM	
7782-49-2	Selenium	0.13	U	W,N	FM	J
7440-22-4	Silver	0.67	U		PM	
7440-23-5	Sodium	174	U ~~B~~		PM	
7440-28-0	Thallium	0.47	B		FM	
7440-62-2	Vanadium	35.1			PM	
7440-66-6	Zinc	119			PM	
	Cyanide	1.0	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Colorless Clarity After: Clear Artifacts:
Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205884
Level (Low/Med): Date Received: 4/24/92
% Solids: 80.8

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12300			PM	
7440-36-0	Antimony	7.1	~~R~~ UCB	N	PM	J
7440-38-2	Arsenic	8.3			FM	
7440-39-3	Barium	158			PM	
7440-41-7	Beryllium	0.68			PM	
7440-43-9	Cadmium	1.4			PM	
7440-70-2	Calcium	55100			PM	
7440-47-3	Chromium	41.2		N	PM	J
7440-48-4	Cobalt	7.0			PM	
7440-50-8	Copper	29.3			PM	
7439-89-6	Iron	25100			PM	
7439-92-1	Lead	65.0			FM	
7439-95-4	Magnesium	7290			PM	
7439-96-5	Manganese	833			PM	
7439-97-6	Mercury	0.06	B		AS	J
7440-02-2	Nickel	20.3			PM	
7440-09-7	Potassium	1960			PM	
7782-49-2	Selenium	0.63	U	W,N	FM	J
7440-22-4	Silver	0.63	U		PM	
7440-23-5	Sodium	246	B		PM	
7440-28-0	Thallium	0.43	B	W	FM	J
7440-62-2	Vanadium	70.3			PM	
7440-66-6	Zinc	402			PM	
	Cyanide	1.0	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Green Clarity After: Clear Artifacts: Same
Comments: small rocks

U.S. EPA - CLP
1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205885
Level (Low/Med): Date Received: 4/24/92
% Solids: 87.3

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10700			PM	
7440-36-0	Antimony	9.97	U	N	PM	J
7440-38-2	Arsenic	7.2			FM	
7440-39-3	Barium	112			PM	
7440-41-7	Beryllium	0.86			PM	
7440-43-9	Cadmium	0.62	U		PM	
7440-70-2	Calcium	73600			PM	
7440-47-3	Chromium	25.9		N	PM	J
7440-48-4	Cobalt	5.6	B		PM	
7440-50-8	Copper	45.0			PM	
7439-89-6	Iron	19100			PM	
7439-92-1	Lead	85.0			FM	
7439-95-4	Magnesium	8900			PM	
7439-96-5	Manganese	473			PM	
7439-97-6	Mercury	0.06	B		AS	J
7440-02-2	Nickel	16.2			PM	
7440-09-7	Potassium	1540			PM	
7782-49-2	Selenium	0.69		W,N	FM	J
7440-22-4	Silver	0.62	U		PM	
7440-23-5	Sodium	305	B		PM	
7440-28-0	Thallium	0.38	U		FM	
7440-62-2	Vanadium	26.7			PM	
7440-66-6	Zinc	148			PM	
	Cyanide	0.96	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Green Clarity After: Clear Artifacts:
Comments:

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SOIL

B000008 3/90

U.S. EPA - CLP
1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

X108

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205886
Level (Low/Med): Date Received: 4/24/92
% Solids: 79.5

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13600			PM	
7440-36-0	Antimony	5.2	U	N	PM	R
7440-38-2	Arsenic	4.8			FM	
7440-39-3	Barium	232			PM	
7440-41-7	Beryllium	0.81			PM	
7440-43-9	Cadmium	0.62	U		PM	
7440-70-2	Calcium	1620			PM	
7440-47-3	Chromium	17.3		N	PM	J
7440-48-4	Cobalt	8.4			PM	
7440-50-8	Copper	13.6			PM	
7439-89-6	Iron	16400			PM	
7439-92-1	Lead	14.9			FM	
7439-95-4	Magnesium	1510			PM	
7439-96-5	Manganese	871			PM	
7439-97-6	Mercury	0.02	B		AS	J
7440-02-2	Nickel	11.9			PM	
7440-09-7	Potassium	1570			PM	
7782-49-2	Selenium	0.36	B	W,N	FM	J
7440-22-4	Silver	0.62	U		PM	
7440-23-5	Sodium	107	U ~~B~~		PM	
7440-28-0	Thallium	0.49	B		FM	
7440-62-2	Vanadium	29.3			PM	
7440-66-6	Zinc	93.6			PM	
	Cyanide	1.0	U		AS	

Color Before: Black Clarity Before: Opaque Texture: Fine
Color After: Green Clarity After: Clear Artifacts:
Comments:

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SOIL

U.S. EPA - CLP
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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205887
Level (Low/Med): Date Received: 4/24/92
% Solids: 77.7

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10300			PM	
7440-36-0	Antimony	5.8	U	N	PM	R
7440-38-2	Arsenic	5.8			FM	
7440-39-3	Barium	198			PM	
7440-41-7	Beryllium	0.60	B		PM	
7440-43-9	Cadmium	0.68	U		PM	
7440-70-2	Calcium	3790			PM	
7440-47-3	Chromium	15.8		N	PM	J
7440-48-4	Cobalt	7.11			PM	
7440-50-8	Copper	14.8			PM	
7439-89-6	Iron	13400			PM	
7439-92-1	Lead	22.0			FM	
7439-95-4	Magnesium	1670			PM	
7439-96-5	Manganese	862			PM	
7439-97-6	Mercury	0.06	B		AS	J
7440-02-2	Nickel	17.3			PM	
7440-09-7	Potassium	1540			PM	
7782-49-2	Selenium	0.18	B	W,N	FM	J
7440-22-4	Silver	0.68	U		PM	
7440-23-5	Sodium	95	U ~~B~~		PM	
7440-28-0	Thallium	0.41	U		FM	
7440-62-2	Vanadium	24.5			PM	
7440-66-6	Zinc	80.5			PM	
	Cyanide	1.1	U		AS	

Color Before: Black Clarity Before: Opaque Texture: Fine
Color After: Green Clarity After: Clear Artifacts:
Comments:

U.S. EPA - CLP
1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
X110

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205888
Level (Low/Med): Date Received: 4/24/92
% Solids: 80.3

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8420			PM	
7440-36-0	Antimony	5.5	U	N	PM	R
7440-38-2	Arsenic	12.2			FM	
7440-39-3	Barium	119			PM	
7440-41-7	Beryllium	1.2			PM	
7440-43-9	Cadmium	3.4			PM	
7440-70-2	Calcium	6100			PM	
7440-47-3	Chromium	17.1		N	PM	J
7440-48-4	Cobalt	12.1		~~N~~ Sp	PM	
7440-50-8	Copper	31.6			PM	
7439-89-6	Iron	33400			PM	
7439-92-1	Lead	58.8		S	FM	
7439-95-4	Magnesium	1300			PM	
7439-96-5	Manganese	652			PM	
7439-97-6	Mercury	~~0.04~~ 0.05 CS	B		AS	J
7440-02-2	Nickel	29.6			PM	
7440-09-7	Potassium	1580			PM	
7782-49-2	Selenium	2.7		N	FM	J
7440-22-4	Silver	0.65	U		PM	
7440-23-5	Sodium	804			PM	
7440-28-0	Thallium	0.52	B	W	FM	J
7440-62-2	Vanadium	25.4			PM	
7440-66-6	Zinc	577			PM	
	Cyanide	1.0	U		AS	

Color Before: Black Clarity Before: Opaque Texture: Fine
Color After: Brown Clarity After: Clear Artifacts:
Comments:

U.S. EPA - CLP
1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X111

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205889
Level (Low/Med): Date Received: 4/24/92
% Solids: 69.8

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13300			PM	
7440-36-0	Antimony	6.4	U	N	PM	R
7440-38-2	Arsenic	7.4			FM	
7440-39-3	Barium	175			PM	
7440-41-7	Beryllium	0.70	B		PM	
7440-43-9	Cadmium	0.77			PM	
7440-70-2	Calcium	6030			PM	
7440-47-3	Chromium	19.7		N	PM	J
7440-48-4	Cobalt	8.7			PM	
7440-50-8	Copper	16.9			PM	
7439-89-6	Iron	19600			PM	
7439-92-1	Lead	97.2			FM	
7439-95-4	Magnesium	2710			PM	
7439-96-5	Manganese	1170			PM	
7439-97-6	Mercury	0.007	U		AS	J
7440-02-2	Nickel	22.4			PM	
7440-09-7	Potassium	1560			PM	
7782-49-2	Selenium	0.32	B	W,N	FM	J
7440-22-4	Silver	0.76	U		PM	
7440-23-5	Sodium	98.1	U ~~B~~		PM	
7440-28-0	Thallium	0.46	U		FM	
7440-62-2	Vanadium	32.1			PM	
7440-66-6	Zinc	108			PM	
	Cyanide	1.2	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Green Clarity After: Clear Artifacts:
Comments:

U.S. EPA - CLP
1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X112

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205890
Level (Low/Med): Date Received: 4/24/92
% Solids: 71.8

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13400			PM	
7440-36-0	Antimony	6.8	B	N	PM	J
7440-38-2	Arsenic	9.8			FM	
7440-39-3	Barium	186			PM	
7440-41-7	Beryllium	0.67	B		PM	
7440-43-9	Cadmium	0.67	U		PM	
7440-70-2	Calcium	6220			PM	
7440-47-3	Chromium	18.3		N	PM	J
7440-48-4	Cobalt	12.3			PM	
7440-50-8	Copper	15.3			PM	
7439-89-6	Iron	20500			PM	
7439-92-1	Lead	22.0			FM	
7439-95-4	Magnesium	2580			PM	
7439-96-5	Manganese	1550			PM	
7439-97-6	Mercury	0.007	U		AS	J
7440-02-2	Nickel	18.5			PM	
7440-09-7	Potassium	1340			PM	
7782-49-2	Selenium	0.31	B	W,N	FM	J
7440-22-4	Silver	0.67	U		PM	
7440-23-5	Sodium	113	U~~B~~ R		PM	
7440-28-0	Thallium	0.40	U		FM	
7440-62-2	Vanadium	34.5			PM	
7440-66-6	Zinc	76.3			PM	
	Cyanide	1.2	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Colorless Clarity After: Clear Artifacts:
Comments:

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SOIL

3/90

B000013

U.S. EPA - CLP
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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X113

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205891
Level (Low/Med): Date Received: 4/24/92
% Solids: 79.2

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11900			PM	
7440-36-0	Antimony	5.3	U	N	PM	R
7440-38-2	Arsenic	6.5			FM	
7440-39-3	Barium	183			PM	
7440-41-7	Beryllium	0.54	B		PM	
7440-43-9	Cadmium	0.63	U		PM	
7440-70-2	Calcium	1540			PM	
7440-47-3	Chromium	17.1		N	PM	J
7440-48-4	Cobalt	6.2	B		PM	
7440-50-8	Copper	12.1			PM	
7439-89-6	Iron	13700			PM	
7439-92-1	Lead	14.4			FM	
7439-95-4	Magnesium	1530			PM	
7439-96-5	Manganese	991			PM	
7439-97-6	Mercury	~~0.006~~ 0.007 CS	U		AS	J
7440-02-2	Nickel	15.2			PM	
7440-09-7	Potassium	2050			PM	
7782-49-2	Selenium	0.19	B	W,N	FM	J
7440-22-4	Silver	0.63	U		PM	
7440-23-5	Sodium	78	~~B~~ U CS		PM	
7440-28-0	Thallium	0.38	U		FM	
7440-62-2	Vanadium	26.3			PM	
7440-66-6	Zinc	56.9			PM	
	Cyanide	1.0	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Colorless Clarity After: Clear Artifacts:
Comments:

FORM I - IN
SOIL

3/90

B000014

U.S. EPA - CLP
1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X114

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: KETTLE RIVER CREOSOTE
Lab Code: Case No.: SAS No.: SDG No.: 72
Matrix (Soil): Lab Sample ID: B205892
Level (Low/Med): Date Received: 4/24/92
% Solids: 68.5

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15400			PM	
7440-36-0	Antimony	8.1	B	N	PM	J
7440-38-2	Arsenic	7.4			FM	
7440-39-3	Barium	134			PM	
7440-41-7	Beryllium	0.58	B		PM	
7440-43-9	Cadmium	0.72	U		PM	
7440-70-2	Calcium	31600			PM	
7440-47-3	Chromium	22.6		N	PM	J
7440-48-4	Cobalt	7.5			PM	
7440-50-8	Copper	30.5			PM	
7439-89-6	Iron	21800			PM	
7439-92-1	Lead	23.4			FM	
7439-95-4	Magnesium	20800			PM	
7439-96-5	Manganese	382			PM	
7439-97-6	Mercury	0.05	B		AS	J
7440-02-2	Nickel	18.5			PM	
7440-09-7	Potassium	2050			PM	
7782-49-2	Selenium	0.72	U	W,N	FM	J
7440-22-4	Silver	0.72	U		PM	
7440-23-5	Sodium	136	U ~~B~~		PM	
7440-28-0	Thallium	0.43	U		FM	
7440-62-2	Vanadium	35.1			PM	
7440-66-6	Zinc	70.5			PM	
	Cyanide	1.2	U		AS	

Color Before: Brown Clarity Before: Opaque Texture: Fine
Color After: Colorless Clarity After: Clear Artifacts:
Comments:

FORM I - IN
SOIL

3/90

Data Validation Checklist
Site Name: Kettle River Creosote
SDG
No.: 216275
Laboratory: IEPA
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PRELIMINARY REVIEW

1. *Chain-of-Custody*

	YES	NO	
a.	[X]	[ ]	Check chain-of-custody documentation for date/time sampled, date/time received in laboratory.
b.	[X]	[ ]	Check chain-of-custody documentation for proper documentation of transfers and signoffs.
c.	[X]	[ ]	Check chain-of-custody documentation for any inconsistencies or anomalies.

Comments:

2. *Case Narrative*

	YES	NO	
a.	[X]	[ ]	Review entire case narrative.
b.	[X]	[ ]	Check case narrative for completeness.
c.	[X]	[ ]	Check for proper authorization signature.

Comments:

Data Validation Checklist
Site Name: Kettle River Creosote
SDG No.: 216275
Laboratory: IEPA
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I. Holding Times

YES NO
[X] [ ] Check that all technical and/or contractual holding times were met, as required, for all fractions.

EPA Number	Lab Number	Date Coll.	Date Rec'd.	VOA Date Anal.	Semi-VOA Date Extr	Semi-VOA Date Anal.	Pesticide Date Extr	Pesticide Date Anal.
X101	D216275	4/21/92	4/23/92	4/27/92	4/29/92	5/21/92	X	X
X101DL	"	4/21/92	4/23/92	X	X	X	4/30/92	6/30/92
X102	D216276	4/21	4/23	4/27	4/29	5/21	X	X
X102DL	"	4/21	4/23	X	X	X	4/30	6/30
X103	-277	4/21	4/23	4/29	4/29	5/22	X	X
X103DL	"	4/21	4/23	X	X	X	4/30	6/30
X103RE	"	4/21	4/23	4/29	X	X	X	X
X104	-278	4/21	4/23	4/27	4/29	5/21	X	X
X104DL	"	4/21	4/23	X	X	X	4/30	6/30
X105	-279	4/21	4/23	4/27	4/29	5/22	X	X
X105DL	"	4/21	4/23	X	4/29	5/27	4/30	6/30
X106	-280	4/21	4/23	4/27	4/29	5/22	X	X
X106DL	"	4/21	4/23	X	4/29	5/27	4/30	6/30
X107	-281	4/21	4/23	4/27	4/29	5/22	X	X
X107DL	"	4/21	4/23	X	4/29	5/27	4/30	6/30
X108	-282	4/21	4/23	4/27	4/29	5/21	X	X
X108DL	"	4/21	4/23	X	X	X	4/30	6/30
X109	-283	4/21	4/23	4/27	4/29	5/21	X	X
X109DL	"	4/21	4/23	X	X	X	4/30	6/30

List below all samples (by sample number and fraction) qualified due to holding times.

VOA - OK
SV - OK
Pest - Extraction to analysis - 61 days

Data Validation Checklist
Site Name: Kettle River Creosote
SDG No.: 216275
Laboratory: EPA
Page 3 of 44

I. Holding Times

YES NO
[X] [ ] Check that all technical and/or contractual holding times were met, as required, for all fractions.

EPA Number	Lab Number	Date Coll.	Date Rec'd.	VOA Date Anal.	Semi-VOA Date Extr	Semi-VOA Date Anal.	Pesticide Date Extr	Pesticide Date Anal.
X110	D216284	4/21/92	4/23/92	4/27/92	4/29/92	5/22/92	X	X
X110RE	-284	4/21	4/23	4/28	X	X	X	X
5x X110DL	-284	4/21	4/23	4/28	X	X	X	X
2 DLs 10x X110DL	-284	4/21	4/23	X	X	X	4/30/92	6/30/92
X111	-285	4/21	4/23	4/28	4/29	5/21	X	X
X111DL	-285	4/21	4/23	X	X	X	4/30	6/30
X112	-286	4/21	4/23	4/28	4/29	5/21	X	X
X112DL	-286	4/21	4/23	X	X	X	4/30	6/30
X113	-287	4/21	4/23	4/28	4/29	5/21	X	X
X113DL	-287	4/21	4/23	X	X	X	4/30	6/30
X114	-288	4/21	4/23	4/28	4/29	5/21	X	X
X114DL	-288	4/21	4/23	X	X	X	4/30	6/30

List below all samples (by sample number and fraction) qualified due to holding times.

Data Validation Checklist
Site Name: Kettle River Creosote
SDG No.: 216275
Laboratory: LEPA
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II. GC/MS Instrument Performance Check

Fraction: (VOA) SemiVOA (*circle one*)

1. Evaluate Forms V and Raw Data

	YES	NO	
a.	[X]	[ ]	Check that Forms V are present and completed for each 12 hour time period.
b.	[X]	[ ]	Check for transcription errors between raw data and Forms V.
c.	[X]	[ ]	Check that the appropriate number of significant figures has been reported and that rounding errors have not occurred.
d.	[X]	[ ]	Check for calculation errors.

2. Verify Raw Data Format

YES	NO	
[X]	[ ]	Check mass spectral listing to determine that the mass assignment is correct and that the mass listing is normalize to the specified ion (m/z 95 for VOA, m/z 198 for SemiVOA).

3. Verify Ion Abundance Criteria

YES	NO	
[X]	[ ]	Check that all ion abundance criteria has been met.

4. Verify Background Correction

YES	NO	
[X]	[ ]	Check that tuning compound spectra were generated using appropriate background correction.

Comments:

Data Validation Checklist
Site Name: Kettle River Creosote
SDG
No.: 216275
Laboratory: IEPA
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III. Initial Calibration

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify that the Correct Standard Concentrations Were Used.***

YES	NO	
[X]	[ ]	Check the Forms VI and the raw data to verify that the correct standard concentrations were used to calibrate the GC/MS instrument(s).

2. ***Verify that the Correct Initial Calibration was Used for Water and Low Level Soils.***

YES	NO	N/A	
[X]	[ ]	[ ]	Check that initial calibrations were performed as required for water/med. level soil and low level soil.

3. ***Verify Use of Correct Standards.***

YES	NO	N/A	
[X]	[ ]	[X]	Check that the correct standard was used for quantitation of samples, if samples were analyzed immediately subsequent to initial calibration.

4. ***Evaluate Initial Calibration*** RRFs ***and*** $\overline{\text{RRF}}$s.

	YES	NO	
a.	[X]	[ ]	Check and recalculate the RRFs and $\overline{\text{RRF}}$s for several target compounds (at least one associated with each internal standard).
b.	[X]	[ ]	Check that, for all target compounds and surrogates, the $\overline{\text{RRF}}$s meet the applicable criteria. Note any "outliers" on the Calibration Outliers Form.

5. ***Evaluate Initial Calibration %RSDs.***

	YES	NO	
a.	[X]	[ ]	Check and recalculate the *%RSD* for several target compounds.
b.	[X]	[ ]	Check that the applicable *%RSD* criteria have been met. Note any "outliers" on the Calibration Outliers Form.

Comments:

_____

_____

IV. Continuing Calibration

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify Continuing Calibration Frequency.***

YES	NO	
[X]	[ ]	Check the continuing calibration raw data and Forms VII to verify that continuing calibration standards were analyzed at the proper frequency and that each continuing calibration was compared to the appropriate initial calibration.

2. ***Evaluate Continuing Calibration RRFs.***

	YES	NO	
a.	[X]	[ ]	Check and recalculate the continuing calibration *RRFs* for several compounds.
b.	[X]	[ ]	Check that all target compound and surrogate *RRFs* meet the criteria.

3. ***Evaluate Continuing Calibration %Ds.***

	YES	NO	
a.	[X]	[ ]	Check and recalculate the continuing calibration *%Ds* for several compounds.
b.	[X]	[ ]	Check that all target compound and surrogate *%Ds* meet the applicable criteria.

Comments:

VOLATILE CALIBRATION OUTLIERS

3/90 SOW

Lab Name: IEPA

Case: Kettle River Creosote 216275

Instrument # 5100B DATE/TIME: non-heated	Minimum RRF	Initial Cal. 4/24/92 1154			Contin. Cal. 4/29/92 1109			Contin. Cal.			Contin. Cal.			Contin. Cal.		
		RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Chloromethane	0.010															
Bromomethane	0.100															
Vinyl Chloride	0.100															
Chloroethane	0.010															
Methylene Chloride	0.010					29.7	J									
Acetone	0.010															
Carbon Disulfide	0.010															
1,1-Dichloroethene	0.100					27.2	J									
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	0.500															
Toluene	0.400															
Chlorobenzene	0.500															
Ethylbenzene	0.100															
Styrene	0.300															
Xylene(total)	0.300															
Bromofluorobenzene	0.300															

AFFECTED SAMPLES:

VBLKSM
X103
X102MS
X102MSD
X103RF

Reviewer's Initials/Date GM 8/8/92

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

VOLATILE CALIBRATION OUTLIERS

3/90 SOW

Lab Name: IEPA

Case: Kettle River Creosote 216275

Instrument # 5100B	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	4/23/92 1031			4/27/92 1022			4/28/92 1242								
heated purge		RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Chloromethane	0.010															
Bromomethane	0.100															
Vinyl Chloride	0.100															
Chloroethane	0.010															
Methylene Chloride	0.010															
Acetone	0.010															
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	0.500															
Toluene	0.400															
Chlorobenzene	0.500															
Ethylbenzene	0.100															
Styrene	0.300															
Xylene(total)	0.300															
Bromofluorobenzene	0.300															

AFFECTED SAMPLES:

VBLKSL1	VBLKSL2
X101	X112
X102	X113
X104	X114
X105	X111
X106	X104MS
X107	X104MSD
X108	X110DL
X109	X110RE
X110	

Reviewer's Initials/Date: Cmk 8/8/92

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

Data Validation Checklist
Site Name: Kettle River Creosote
SDG
No.: 216275
Laboratory: IEPA
Page 9 of 44

V. Blanks

Fraction: VOA SemiVOA Pest. (*circle one*)

1. ***Review Blank Results.***

YES NO
[X] [ ] Check all associated blanks for the presence of TCL compounds or TICs. Note all contaminated blanks ~~and associated samples~~ below.

2. ***Verify Blank Frequency.***

YES NO
[X] [ ] Check that blank analyses have been performed at the required frequency.

Blank Summary

Blank Sample No.	VBLKSL1	VBLKSL2	VBLKSM	
Date Anal. or Extr.	4/27/92	4/28/92	4/29/92	
Instrument	5100B	5100B	5100B	

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
MeCl2	8	MeCl2	6				
Acetone	7	Acetone	9				
		2-But	3				

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
Trichlorofluoromethane	5						

VI. Surrogate Spikes

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Review Raw Data.***

YES NO
[X] [ ] Check raw data to verify that the recoveries on the Form II are accurate and within the limits.

2. ***Evaluate Surrogate Recovery Calculations.***

YES NO
[X] [ ] Check that the surrogate spike recoveries were calculated correctly and are free from transcription errors.

3 ***Evaluate Surrogate Recoveries.***

YES NO
a. [X] [ ] Check that reanalyses were performed as required.

b. [X] [ ] Check that surrogate recoveries in blanks met criteria.

4. ***Evaluate Reanalyses.***

YES NO
[X] [ ] Whenever there are two or more analyses for a particular sample, determine which are the best analyses to use. This determination must be performed in conjunction with the evaluation of the internal standard area response criteria. List below the results of the reviewers determinations.

Comments:
X110RE Toluene ds high %R
X104MSD BFB high %R
X103 Toluene ds low %R
X103RE 1,2 Dichloroethane ds high %R

4.) Use X103 instead of X103RE
Use X110 instead of X110RE

VII. Matrix Spikes/Matrix Spike Duplicates

Fraction: (VOA) SemiVOA Pesticide (*circle one*)

1. ***Verify Frequency***

YES NO
[X] [ ] Check that MS and MSD samples were analyzed at the correct frequency.

2. ***Evaluate MS/MSD Criteria.***

YES NO
[X] [ ] Check MS/MSD results for *%R* and *RPD* are within the advisory limits.

3. ***Verify MS/MSD Calculations.***

YES NO
a. [X] [ ] Check raw data and verify that results are calculated correctly and are free from transcription errors.

b. [X] [ ] Check that *%Rs* and *RPDs* were calculated correctly.

4. ***Evaluate Sample Precision.***

YES NO
[X] [ ] Compare *%RSD* results of non-spiked compounds between the original result, MS and MSD.

	Compound	Orig. Result	MS Result	MSD Result	%RSD
X104	$MeCl_2$	9	11	9	12%
	2-But	3	U	U	—
X102	$MeCl_2$	21	U	U	—

Comments:
X102 (low level soil) was used as MS/MSD for med level soil.

VIII. Laboratory Control Samples

N/A

IX. Project Specific QA/QC

Evaluation Procedures must follow the project QAPjP.

N/A

X. Internal Standards

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Evaluate Raw Data.***

YES	NO	
[X]	[ ]	Check raw data and verify that the internal standard retention times and areas reported on the Forms VIII are correct.

2. ***Verify RT and IS Area Criteria.***

YES	NO	
[X]	[ ]	Check that retention times and internal standard area meet the appropriate criteria.

3. ***Evaluate Reanalyses.***

YES	NO	
[X]	[ ]	Whenever there are two or more analyses for a particular sample, determine which are the best analyses to use. This determination must be performed in conjunction with the evaluation of the surrogate spike recovery criteria. List the results of the reviewers determinations in Section VI., Surrogate Spikes.

Comments:

X110 Chlorobenzene-d5 low area
X110RE Chlorobenzene-d5 low area

XI. Target Compound Identification

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify Relative Retention Time (RRT) Criteria.***

YES	NO	
[X]	[ ]	Check that the RRT of reported compounds is within the criteria.

2. ***Evaluate Target Compound Spectra.***

YES	NO	
[X]	[ ]	Check the sample target compound spectra against the laboratory standard spectra; verify that the specified criteria are met.

3. ***Evaluate Possible Carryover.***

YES	NO	
[X]	[ ]	Check the raw data of the samples as related to the samples analyzed previously to verify that sample carryover has not adversely affected results.

4. ***Evaluate Chromatograms.***

YES	NO	
[X]	[ ]	Check the sample chromatograms to verify that peaks are accounted for.

Comments:

XII. Compound Quantitation and Reported CRQLs

Fraction: (VOA) SemiVOA Pesticide (*circle one*)

1. ***Evaluate Quantitation of Sample Results.***

YES	NO	
[X]	[ ]	Check raw data to verify calculation of sample results.

2. ***Evaluate Quantitation Parameters.***

YES	NO	N/A	
[X]	[ ]	[ ]	For GC/MS analyses, check that the correct internal standard, quantitation ion, and *RRF* were used to quantitate results. Verify that the same internal standard, quantitation ion, and *RRF* are used throughout, in both the calibration and as well as the quantitation process.

3. ***Evaluate CRQLs.***

YES	NO	
[X]	[ ]	Check that the CRQLs have been adjusted to reflect all sample dilutions, concentrations, splits, cleanup activities, and dry weight factors.

Comments:

XIII. Tentatively Identified Compounds

GC/MS Only

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Evaluate Tentative Identifications.***

   YES NO
   [X] [ ] Check that all TICs reported meet the identification guidelines.

2. ***Evaluate Raw Data.***

   YES NO
   [X] [ ] Check raw data to verify that the laboratory has generated a library search for all required peaks in the chromatograms for samples and blanks.

3. ***Evaluate Blanks.***

   YES NO
   [X] [ ] Check blank sample chromatograms to verify that TIC peaks present in samples are not found in blanks.

4. ***Examine Mass Spectra.***

   YES NO
   [X] [ ] Check all mass spectra for every sample.

5. ***Evaluate TIC Identifications.***

   YES NO
   [X] [ ] Since TIC library searches often yield several candidate compounds, all reasonable choices must be considered.

6. ***Evaluate Laboratory Artifacts and Contaminants.***

   YES NO
   [X] [ ] Check sample results and raw data to verify that common laboratory artifacts and contaminants are not reported as sample contaminants.

XIII. TICs continued

7. Evaluate Possibility of False Negatives.

	YES	NO	N/A	
a.	[X]	[ ]	[ ]	Check to determine if target compounds have been identified and quantitated as TICs.
b.	[ ]	[ ]	[X]	If target compounds have been identified and quantitated as TICs, check to determine whether the false negative is an isolated occurrence or whether additional data may be affected. Comment on all such false negatives below.

8. Determine That Results Are From Proper Fraction.

YES	NO	N/A	
[ ]	[ ]	[X]	Target compounds could be identified in more than one fraction; if this occurs, check that quantitation is from the proper fraction.

9. Verify That Internal Standards And Surrogates Are Not Searched.

YES	NO	
[X]	[ ]	Check that library searches were not performed on internal standards or surrogates.

10. Verify Estimated Quantitation of TICs.

YES	NO	
[X]	[ ]	Check that the estimated concentration of the TICs was made using an assumed *RRF* of one.

Comments:

XIV. GC/MS System Performance

Fraction: (VOA) SemiVOA (*circle one*)

1. Evaluate Overall System Performance.

	YES	NO	
a.	[X]	[ ]	Check for high RIC background levels or shifts in absolute retention times of internal standards.
b.	[X]	[ ]	Check for excessive baseline rise at elevated temperature.
c.	[X]	[ ]	Check for extraneous peaks.
d.	[X]	[ ]	Check for loss of resolution.
e.	[X]	[ ]	Check for peak tailing or peak splitting that may result in inaccurate quantitation.

Comments:

II. GC/MS Instrument Performance Check

Fraction: VOA SemiVOA (*circle one*)

1. Evaluate Forms V and Raw Data

	YES	NO	
a.	[X]	[ ]	Check that Forms V are present and completed for each 12 hour time period.
b.	[X]	[ ]	Check for transcription errors between raw data and Forms V.
c.	[X]	[ ]	Check that the appropriate number of significant figures has been reported and that rounding errors have not occurred.
d.	[X]	[ ]	Check for calculation errors.

2. Verify Raw Data Format

YES	NO	
[X]	[ ]	Check mass spectral listing to determine that the mass assignment is correct and that the mass listing is normalize to the specified ion (m/z 95 for VOA, m/z 198 for SemiVOA).

3. Verify Ion Abundance Criteria

YES	NO	
[X]	[ ]	Check that all ion abundance criteria has been met.

4. Verify Background Correction

YES	NO	
[X]	[ ]	Check that tuning compound spectra were generated using appropriate background correction.

Comments:

III. Initial Calibration

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Verify that the Correct Standard Concentrations Were Used.***

YES	NO	
[X]	[ ]	Check the Forms VI and the raw data to verify that the correct standard concentrations were used to calibrate the GC/MS instrument(s).

2. ***Verify that the Correct Initial Calibration was Used for Water and Low Level Soils.***

YES	NO	N/A	
[ ]	[ ]	[X]	Check that initial calibrations were performed as required for water/med. level soil and low level soil.

3. ***Verify Use of Correct Standards.***

YES	NO	N/A	
[ ]	[ ]	[X]	Check that the correct standard was used for quantitation of samples, if samples were analyzed immediately subsequent to initial calibration.

4. ***Evaluate Initial Calibration*** RRFs ***and*** $\overline{\text{RRF}}$s.

	YES	NO	
a.	[X]	[ ]	Check and recalculate the RRFs and $\overline{\text{RRF}}$s for several target compounds (at least one associated with each internal standard).
b.	[X]	[ ]	Check that, for all target compounds and surrogates, the $\overline{\text{RRF}}$s meet the applicable criteria. Note any "outliers" on the Calibration Outliers Form.

5. ***Evaluate Initial Calibration %RSDs.***

	YES	NO	
a.	[X]	[ ]	Check and recalculate the *%RSD* for several target compounds.
b.	[X]	[ ]	Check that the applicable *%RSD* criteria have been met. Note any "outliers" on the Calibration Outliers Form.

Comments:

_____

_____

IV. Continuing Calibration

GC/MS

Fraction: VOA SemiVOA (*circle one*)

1. ***Verify Continuing Calibration Frequency.***

YES	NO	
[X]	[ ]	Check the continuing calibration raw data and Forms VII to verify that continuing calibration standards were analyzed at the proper frequency and that each continuing calibration was compared to the appropriate initial calibration.

2. ***Evaluate Continuing Calibration RRFs.***

	YES	NO	
a.	[X]	[ ]	Check and recalculate the continuing calibration *RRFs* for several compounds.
b.	[X]	[ ]	Check that all target compound and surrogate *RRFs* meet the criteria.

3. ***Evaluate Continuing Calibration %Ds.***

	YES	NO	
a.	[X]	[ ]	Check and recalculate the continuing calibration *%Ds* for several compounds.
b.	[X]	[ ]	Check that all target compound and surrogate *%Ds* meet the applicable criteria.

Comments:

SEMIVOLATILE CALIBRATION OUTLIERS

Page 1

Lab Name: IEPA

Case: Kettle River Creosote 216275

Instrument # /NC5GO	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	5/19/92 1456			5/20/92 0920			5/21/92 0845			5/22/92 0934			5/27/92 1042		
		RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Phenol	0.800															
bis(2-Chloroethyl)ether	0.700														38.4	J
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-Chloropropanol)	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		37.8	J											63.7	J
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	1.300															
2,6-Dinitrotoluene	0.200															
3-Nitroaniline	0.010					50.9	J		26.8	J		26.8	J		61.6	J
Acenaphthene	0.800															
2,4-Dinitrophenol	0.010															
4-Nitrophenol	0.010														31.4	J
Dibenzofuran	0.800															
2,4-Dinitrotoluene	0.200															

AFFECTED SAMPLES:

S3LK5L	X113	X114MS	X106DL
	X109	X114MSD	X107DL
	X112	X110	X105DL
	X114	X103	
	X104	X105	
	X108	X106	
	X102	X107	
	X111		
	X101		

Reviewer's Initials/Date: Am 8/8/92

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

SEMIVOLATILE CALIBRATION OUTLIERS

Page 2

Name: IEPA

Case: Kettle River Creosote
21627S

Instrument # INC500	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	5/19/92 1456			5/20/92 0920			5/21/92 0845			5/22/92 0934			5/27/92 1042		
		RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Diethylphthalate	0.010															
4-Chlorophenyl-phenylether	0.400															
Fluorene	0.900															
4-Nitroaniline	0.010											44.7	J		66.5	J
4,6-Dinitro-2-methylphenol	0.010															
N-Nitrosodiphenylamine (1)	0.010															
4-Bromophenyl-ethylether	0.100															
Hexachlorobenzene	0.100															
Pentachlorophenol	0.050															
Phenanthrene	0.700															
Anthracene	0.700															
Carbazole	0.010														34.1	J
Di-n-butylphthalate	0.010															
Fluoranthene	0.600															
Pyrene	0.600															
Butylbenzylphthalate	0.010															
3,3'-Dichlorobenzidine	0.010														43.1	J
Benzo(a)anthracene	0.800															
Chrysene	0.700															
bis(2-Ethylhexyl)phthalate	0.010															
n-octylphthalate	0.010											34.6	J			
Benzo(b)fluoranthene	0.700															
Benzo(k)fluoranthene	0.700											33.3	J			
Benzo(a)pyrene	0.700															
Indeno(1,2,3-cd)pyrene	0.500														33.1	J
Dibenz(a,h)anthracene	0.400														37.0	J
Benzo(g,h,i)perylene	0.500														33.9	J
Nitrobenzene-d5	0.200															
2-Fluorobiphenol	0.700															
Terphenyl-d14	0.500															
Phenol-d6	0.800															
2-Fluorophenol	0.600															
2-Chlorophenol-d4	0.800															
1,2-Dichlorobenzene-d4	0.400															
4-Nitrophenol	0.010															
Dibenzofuran	0.800															
2,4-Dinitrotoluene	0.200															

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

SEE PAGE 1 FOR AFFECTED SAMPLES

Reviewer's Initials/Date AM 8/8/92

Data Validation Checklist
Site Name: Kettle River Creosote
SDG No.: 216275
Laboratory: IEPA
Page 24 of 44

V. Blanks

Fraction: VOA (SemiVOA) Pest. *(circle one)*

1. ***Review Blank Results.***

YES NO
[X] [ ] Check all associated blanks for the presence of TCL compounds or TICs. Note all contaminated blanks ~~and associated samples~~ below.

2. ***Verify Blank Frequency.***

YES NO
[X] [ ] Check that blank analyses have been performed at the required frequency.

Blank Summary

Blank Sample No.	SBLKSL	SBLKGPC1	SBLKGPC2	
Date Anal. or Extr.	Ext 4/29/92	4/29 5/20	4/29 5/20	
Instrument	INC500	INC500	INC500	

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
4,6-Din	64						
Di-n-Bu	220						

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
		UNK 9.65	270	UNK(1) 9.15	330		
				UNK 9.67	230		

See next pg for SBLKSL TIC's

(1) Hydroxymethylpentanone

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKSL

Lab Name: ILLINOIS EPA Contract: 1190000000

Lab Code: SPFLD Case No.: KETTLE SAS No.: _____ SDG No.: 216275

Matrix: (soil/water) SOIL Lab Sample ID: D216590

Sample wt/vol: 30.1 (g/mL) G Lab File ID: B0520W10

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

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/29/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/20/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 25

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNK. TRIMETHYL DIOXOLANE	5.90	2200	J
2.	UNK. METHYL PENTENONE	7.98	580	AJ
3.	UNKNOWN	8.50	1400	J
4.	UNKNOWN	9.07	76	J
5.	UNK. HYDROXYMETHYLPENTANONE	9.40	8900	AJ
6.	UNKNOWN	9.70	590	J
7.	UNKNOWN ALIP. HYDROCARBON	9.84	370	J
8.	UNK. METHYLETHYL HEPTANE	10.02	340	J
9.	UNK. CYCLOHEXENEOL	10.39	190	AJ
10.	UNKNOWN	11.04	980	J
11.	UNK. CYCLOHEXENEONE	11.47	230	AJ
12.	UNKNOWN	11.74	690	J
13.	UNKNOWN	11.99	1200	J
14. 100-52-7	BENZALDEHYDE	12.15	130	JN
15.	UNKNOWN	12.74	840	J
16.	UNKNOWN	13.07	900	J
17.	UNKNOWN	13.67	870	J
18.	UNKNOWN	14.00	600	J
19.	UNKNOWN	14.20	110	J
20.	UNKNOWN ALIP. ALCOHOL	14.29	150	AJ
21.	UNKNOWN	15.84	72	J
22.	UNKNOWN	18.19	50	J
23.	UNKNOWN ALIP. ACID	22.62	120	J
24.	UNKNOWN ALIP. ACID	23.40	160	J
25.	UNKNOWN ALIP. ACID ESTER	32.71	8000	J

VI. Surrogate Spikes

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Review Raw Data.***

YES NO
[X] [ ] Check raw data to verify that the recoveries on the Form II are accurate and within the limits.

2. ***Evaluate Surrogate Recovery Calculations.***

YES NO
[X] [ ] Check that the surrogate spike recoveries were calculated correctly and are free from transcription errors.

3 ***Evaluate Surrogate Recoveries.***

YES NO
a. [X] [ ] Check that reanalyses were performed as required.

b. [X] [ ] Check that surrogate recoveries in blanks met criteria.

4. ***Evaluate Reanalyses.***

YES NO
[X] [ ] Whenever there are two or more analyses for a particular sample, determine which are the best analyses to use. This determination must be performed in conjunction with the evaluation of the internal standard area response criteria. List below the results of the reviewers determinations.

No reanalyses.

Comments:
X105DL - 2-Fluorophenol, 2,4,6-Tribromophenol + 2-Chlorophenol d14 low % R
X106DL - Phenol d5 + 2-Fluorophenol low % R
SBLKSL - 2,4,6-Tribromophenol low % R

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VII. Matrix Spikes/Matrix Spike Duplicates

Fraction: VOA (SemiVOA) Pesticide *(circle one)*

1. ***Verify Frequency***

YES NO
[X] [ ] Check that MS and MSD samples were analyzed at the correct frequency.

2. ***Evaluate MS/MSD Criteria.***

YES NO
[X] [ ] Check MS/MSD results for *%R* and *RPD* are within the advisory limits.

3. ***Verify MS/MSD Calculations.***

YES NO
a. [X] [ ] Check raw data and verify that results are calculated correctly and are free from transcription errors.

b. [X] [ ] Check that *%Rs* and *RPDs* were calculated correctly.

4. ***Evaluate Sample Precision.***

YES NO
[X] [ ] Compare *%RSD* results of non-spiked compounds between the original result, MS and MSD.

Compound	Orig. Result	MS Result	MSD Result	%RSD
X114 Di-n-Butylphthalate	360	290	250	19%
Fluoranthene	270	360	170	36%
Benzo(a)anthracene	200	260	120	36%
Benzo(b)Fluoranthene	340	520	200	45%
Benzo(k) Fluoranthene	230	360	140	45%
Benzo(a) Pyrene	46	120	76	46%
Indeno (1,2,3-cd) Pyrene	140	230	100	43%

Comments:

X. Internal Standards

GC/MS

Fraction: VOA SemiVOA (*circle one*)

1. ***Evaluate Raw Data.***

YES NO
[X] [ ] Check raw data and verify that the internal standard retention times and areas reported on the Forms VIII are correct.

2. ***Verify RT and IS Area Criteria.***

YES NO
[X] [ ] Check that retention times and internal standard area meet the appropriate criteria.

3. ***Evaluate Reanalyses.***

YES NO
[X] [ ] Whenever there are two or more analyses for a particular sample, determine which are the best analyses to use. This determination must be performed in conjunction with the evaluation of the surrogate spike recovery criteria. List the results of the reviewers determinations in Section VI., Surrogate Spikes.

No reanalyses.

Comments:
all i.s. OK.

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XI. Target Compound Identification

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Verify Relative Retention Time (RRT) Criteria.***

YES NO
[X] [ ] Check that the RRT of reported compounds is within the criteria.

2. ***Evaluate Target Compound Spectra.***

YES NO
[X] [ ] Check the sample target compound spectra against the laboratory standard spectra; verify that the specified criteria are met.

3. ***Evaluate Possible Carryover.***

YES NO
[X] [ ] Check the raw data of the samples as related to the samples analyzed previously to verify that sample carryover has not adversely affected results.

4. ***Evaluate Chromatograms.***

YES NO
[X] [ ] Check the sample chromatograms to verify that peaks are accounted for.

Comments:
X103 - Phenanthrene is reported on quant report & there is a spectrum included for Phenanthrene, but it is not reported on Form 1.

XII. Compound Quantitation and Reported CRQLs

Fraction: VOA SemiVOA Pesticide (*circle one*)

1. ***Evaluate Quantitation of Sample Results.***

YES	NO	
[X]	[ ]	Check raw data to verify calculation of sample results.

2. ***Evaluate Quantitation Parameters.***

YES	NO	N/A	
[X]	[ ]	[ ]	For GC/MS analyses, check that the correct internal standard, quantitation ion, and *RRF* were used to quantitate results. Verify that the same internal standard, quantitation ion, and *RRF* are used throughout, in both the calibration and as well as the quantitation process.

3. ***Evaluate CRQLs.***

YES	NO	
[X]	[ ]	Check that the CRQLs have been adjusted to reflect all sample dilutions, concentrations, splits, cleanup activities, and dry weight factors.

Comments:
X101 – Anthracene exceeds calibration range.
X105DL - Anthracene + Carbazole exceed calibration range.
X106DL - Anthracene exceeds calibration range.
X107DL - Fluoranthrene & Pyrene exceed calibration range
X110 - Phenanthrene exceeds calibration range.

XIII. Tentatively Identified Compounds

GC/MS Only

Fraction: VOA SemiVOA (*circle one*)

1. ***Evaluate Tentative Identifications.***

YES	NO	
[X]	[ ]	Check that all TICs reported meet the identification guidelines.

2. ***Evaluate Raw Data.***

YES	NO	
[X]	[ ]	Check raw data to verify that the laboratory has generated a library search for all required peaks in the chromatograms for samples and blanks.

3. ***Evaluate Blanks.***

YES	NO	
[X]	[ ]	Check blank sample chromatograms to verify that TIC peaks present in samples are not found in blanks.

4. ***Examine Mass Spectra.***

YES	NO	
[X]	[ ]	Check all mass spectra for every sample.

5. ***Evaluate TIC Identifications.***

YES	NO	
[X]	[ ]	Since TIC library searches often yield several candidate compounds, all reasonable choices must be considered.

6. ***Evaluate Laboratory Artifacts and Contaminants.***

YES	NO	
[X]	[ ]	Check sample results and raw data to verify that common laboratory artifacts and contaminants are not reported as sample contaminants.

XIII. TICs continued

7. Evaluate Possibility of False Negatives.

	YES	NO	N/A	
a.	[X]	[ ]	[ ]	Check to determine if target compounds have been identified and quantitated as TICs.
b.	[ ]	[ ]	[X]	If target compounds have been identified and quantitated as TICs, check to determine whether the false negative is an isolated occurrence or whether additional data may be affected. Comment on all such false negatives below.

8. Determine That Results Are From Proper Fraction.

YES	NO	N/A	
[ ]	[ ]	[X]	Target compounds could be identified in more than one fraction; if this occurs, check that quantitation is from the proper fraction.

9. Verify That Internal Standards And Surrogates Are Not Searched.

YES	NO	
[X]	[ ]	Check that library searches were not performed on internal standards or surrogates.

10. Verify Estimated Quantitation of TICs.

YES	NO	
[X]	[ ]	Check that the estimated concentration of the TICs was made using an assumed *RRF* of one.

Comments:

XIV. GC/MS System Performance

Fraction: VOA SemiVOA (*circle one*)

1. Evaluate Overall System Performance.

	YES	NO	
a.	[X]	[ ]	Check for high RIC background levels or shifts in absolute retention times of internal standards.
b.	[X]	[ ]	Check for excessive baseline rise at elevated temperature.
c.	[X]	[ ]	Check for extraneous peaks.
d.	[X]	[ ]	Check for loss of resolution.
e.	[X]	[ ]	Check for peak tailing or peak splitting that may result in inaccurate quantitation.

Comments:

II. Pesticide Instrument Performance Check

1. Resolution Check Mixture

	YES	NO	
a.	[X]	[ ]	Check the Form VIII PEST. to determine that the resolution check mixture(s) was analyzed in the proper sequence.
b.	[X]	[ ]	Check the resolution check mixture data and the Form VI PEST.-4 to verify that the resolution criterion was met.

2. Performance Evaluation Mixture

	YES	NO	
a.	[X]	[ ]	Check the Form VII PEST. to determine that the PEM(s) was analyzed at the proper frequency and position in the initial calibration sequence.
b.	[X]	[ ]	Check the PEM data from the initial and continuing calibrations to verify that the resolution criterion was met.
c.	[X]	[ ]	Check the PEM data from the initial and continuing calibrations and Form VII PEST.-1 to verify that the retention times are within the retention time windows.
d.	[X]	[ ]	Check that the *RPDs* meet the criterion.
e.	[X]	[ ]	Check that the breakdowns for 4,4'-DDT and Endrin meet the criteria.

Comments:
PEM01 (DB608) - Endrin % breakdown high 20.9%
02 " - OK
03 " - OK
PEM01 (DB1701) - β-BHC - Endrin high RPD's
02 " - OK
03 " - OK

III. Initial Calibration

PESTICIDES

1. ***Individual Standard Mixtures.***

	YES	NO	
a.	[X]	[ ]	Check the Form VIII PEST to verify that the Individual Standard Mixtures were analyzed at the proper frequency for each GC column and instrument. Check that the proper concentrations were used.
b.	[X]	[ ]	Check the raw data to determine that the midpoint standard is at the proper concentration and verify that the resolution criterion has been met for each midpoint concentration standard.
c.	[X]	[ ]	Check the Individual Standard Mixture data and Form VI PEST.-1 and review the calculated retention time windows for calculation and transcription errors.
d.	[X]	[ ]	Check the Individual Standard Mixture data and Form VI PEST.-2 to verify that the *%RSDs* for the calibration factors meet the criterion. Check and recalculate several *%RSDs* for errors.

2. ***Multi Component Compounds.***

a.	[X]	[ ]	Check the raw data and the Form VIII PEST. to verify that the Multi-component Standards were analyzed at the proper concentration and frequency for each GC column and instrument.
b.	[X]	[ ]	Check the raw data and Form VI PEST.-3 to verify that at least three peaks were used for calibration and that retention time and calibration factor data are available for each peak.

Comments:

IV. Continuing Calibration

PESTICIDES

1. ***Evaluate Continuing Calibration Standards.***

YES NO
[X] [ ] Check the Form VIII PEST to verify that the Instrument Blanks, PEMs, and Individual Standard Mixtures were analyzed at the proper frequency and that no more than 12:00 hours elapsed between calibration brackets in an ongoing analytical sequence.

2. ***Individual Standard Mixtures Resolution.***

YES NO
[X] [ ] Check the data for the midpoint concentration of the Individual Standard Mixtures to verify that the resolution criteria was met.

3. ***Individual Standard Mixtures Retention Times***

YES NO
[X] [ ] Check the data for each of the single component pesticides and surrogates in the midpoint concentration of the Individual Standard Mixtures to verify that the retention times are within the appropriate windows.

4. ***Evaluate Continuing Calibration RPDs.***

YES NO
[X] [ ] Check the data for the midpoint concentration of the Individual Standard Mixtures and Form VII PEST.-2 to verify that the *RPDs* between the calculated amount and the true amount for each of the pesticides and surrogates meet the criterion.

Comments:

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V. Blanks

Fraction: VOA SemiVOA Pest. (*circle one*)

1. ***Review Blank Results.***

YES NO
[X] [ ] Check all associated blanks for the presence of TCL compounds or TICs. Note all contaminated blanks ~~and associated samples~~ below.

2. ***Verify Blank Frequency.***

YES NO
[X] [ ] Check that blank analyses have been performed at the required frequency. All instrument blks OK.

Blank Summary

Blank Sample No.	PBLKS1			
Date Anal. or Extr.	4/30 6/30			
Instrument	HP			

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
N/A							

VI. Surrogate Spikes

Pesticides

1. ***Review Raw Data.***

YES	NO	
[X]	[ ]	Check raw data to verify that the recoveries on the Form II are accurate and within the limits.

2. ***Evaluate Surrogate Recovery Calculations.***

YES	NO	
[X]	[ ]	Check that the surrogate spike recoveries were calculated correctly and are free from transcription errors.

3 ***Evaluate Possible Interferences.***

YES	NO	N/A	
[X]	[ ]	[ ]	If surrogate spike recoveries are not acceptable, check the raw data for possible interferences which may have effected surrogate recoveries.

4. ***Evaluate Retention Times.***

YES	NO	N/A	
[ ]	[ ]	[X]	If retention time limits are not met, check the raw data for possible misidentification of GC peaks.

5. ***Evaluate Any Low Recoveries.***

YES	NO	N/A	
[X]	[ ]	[ ]	If low surrogate recoveries are observed, check whether low recoveries are due to sample dilution.

6. ***Evaluate Surrogate Analyses in Blanks.***

YES	NO	
[X]	[ ]	Check that all surrogate analysis criteria (retention time and advisory recovery criteria) were met in all blank samples.

Comments:
see next page

Pesticide Surrogate %R

PBLK51 - both surrogates (both col.) low %R
X101 DCB (col 608) low %R
X102 TCX (col 1701) low %R
X103 TCX (col 608) high %R
(col 1701) low %R
DCB (col 1701) low %R
X105 TCX (col 608) high %R
(col 1701) OK
DCB (both col) high %R
X106 TCX (col 608) high %R
(col 1701) low %R
DCB (col 608) high %R
(col 1701) low %R
X107 TCX + DCB (col 608) high %R
X108 TCX (both col) low %R
DCB (col 1701) low %R
X110 TCX + DCB (col 608) high %R
X112
X113
X114
X114MS
X114MSD
} TCX + DCB (both col) low %R

VII. Matrix Spikes/Matrix Spike Duplicates

Fraction: VOA SemiVOA (Pesticide) *(circle one)*

1. ***Verify Frequency***

YES NO
[X] [ ] Check that MS and MSD samples were analyzed at the correct frequency.

2. ***Evaluate MS/MSD Criteria.***

YES NO
[X] [ ] Check MS/MSD results for *%R* and *RPD* are within the advisory limits.

3. ***Verify MS/MSD Calculations.***

YES NO
a. [X] [ ] Check raw data and verify that results are calculated correctly and are free from transcription errors.

b. [X] [ ] Check that *%Rs* and *RPDs* were calculated correctly.

4. ***Evaluate Sample Precision.***

YES NO
[ ] [X] Compare *%RSD* results of non-spiked compounds between the original result, MS and MSD.

Compound	Orig. Result	MS Result	MSD Result	%RSD
no nonspiked compounds detected.				

Comments:
X114MS gamma BHC low %R
X114MSD gamma BHC low %R
Aldrin low %R

X. Pesticide Cleanup Checks

1. ***Florisil Cartridge Check.***

	YES	NO	
a.	[X]	[ ]	Check the data from the Florisil cartridge solution analyses and the Form IX PEST.-1 and check some of the *%R* calculations; verify that there are no calculation or transcription errors.
b.	[X]	[ ]	Check all criteria have been met.

2. ***Gel Permeation Chromatography.***

	YES	NO	
a.	[X]	[ ]	Check the data from the GPC calibration check analyses and the Form IX PEST.-2 and recalculate some of the *%R* results; verify that there are no calculation or transcription errors.
b.	[X]	[ ]	Check all criteria have been met and that Arochlor patterns are similar *to those of previous standards.*

Comments:
Florisil Cartridge Check - 4,4-DDT high %R (slightly)
TCX high %R (slightly)
GPC - all %R extremely high (~300%)
- No Aroclor patterns observed in GPC calib check.

XI. Target Compound Identification

Pesticides

1. ***Evaluate Reported Results.***

	YES	NO	
a.	[X]	[ ]	Check the Form I PEST., the associated raw data, and Form X PEST.-1 and Form X PEST.-2 to confirm reported detected analytes.
b.	[X]	[ ]	Check the Form I PEST., the associated raw data, and Form X PEST.-1 and Form X PEST.-2 to confirm reported non-detects.
c.	[X]	[ ]	Check the associated blank data for potential interferences to evaluate sample data for false positives.
d.	[X]	[ ]	Check the calibration data for adequate retention time windows to evaluate the sample data for false positives and false negatives.

2. ***Evaluate Multi-Component Analyte Results.***

YES	NO	
[X]	[ ]	Compare the retention times and relative peak height ratios of major multi-component analyte peaks against appropriate standard chromatograms.

3. ***Verify GC/MS Confirmations if Applicable.***

YES	NO	N/A	
[ ]	[ ]	[X]	Check that GC/MS confirmation was performed for pesticide concentrations in the final sample extract which exceeded 10 ng/ul.

Comments:

XII. Compound Quantitation and Reported CRQLs

Fraction: VOA SemiVOA (Pesticide) *(circle one)*

1. ***Evaluate Quantitation of Sample Results.***

YES	NO	
[X]	[ ]	Check raw data to verify calculation of sample results.

2. ***Evaluate Quantitation Parameters.***

YES	NO	N/A	
[ ]	[ ]	[X]	For GC/MS analyses, check that the correct internal standard, quantitation ion, and *RRF* were used to quantitate results. Verify that the same internal standard, quantitation ion, and *RRF* are used throughout, in both the calibration and as well as the quantitation process.

3. ***Evaluate CRQLs.***

YES	NO	
[X]	[ ]	Check that the CRQLs have been adjusted to reflect all sample dilutions, concentrations, splits, cleanup activities, and dry weight factors.

Comments:

XV. Overall Assessment of Data

Evaluate the Overall Quality of the Data.

YES	NO	
[X]	[ ]	Evaluate any technical problems which have not been previously addressed.
[X]	[ ]	Review all available materials to assess the overall quality of the dada, keeping in mind the additive nature of analytical problems.
[X]	[ ]	If appropriate information is available, assess the usability of the data to assist the data user in avoiding inappropriate use of the data. Review all available information, including the QAPjP, SAP, and communications with the data user that concerns the intended use of the data.

Provide a brief narrative to give the data user an indication of the analytical limitations of the data. Include any details from the above checks. Any inconsistency of the data with the Case Narrative should be noted. If sufficient information is available, the reviewer should give an assessment of the usability of the data within the given context.

Data qualified as indicated on Form I's.

AM.

IEPA DIVISION of LABORATORIES

QUALITY ASSURANCE SECTION

INORGANIC DATA VALIDATION

Site: Kettle River Creosote Laboratory: IEPA Champaign Lab

SDG: 72 Analytical Protocol ILM01.0 Review Date: 8-7-92

Reviewer: Chris Bridges Reviewer Signature: Chris Bridges

Number Aqueous Samples: NA Analytes: Trace Metals, Hg, CN, Sulfide, Sulfate, Others:

Number Solid/Soil Samples: 14 Analytes: Trace Metals, Hg, CN, Sulfide, Sulfate, Others:

	YES	NO	N/A
Cover Page - Present?	(X)		
Do sample numbers on cover page agree with sample numbers on:			
(a) Chain - of - Custody Forms?	(X)		
(b) Form I's?	(X)		
Form I (Final Data)			
Are all Form I's present and complete?	(X)		
Are correct units (ug/l - waters & mg/kg - soils) indicated on Form I's?	(X)		
Are soil sample results corrected for percent solids?	(X)		

I. Holding Times:

		YES	NO	N/A
Mercury (28 days)	exceeded?	X		
Cyanide (14 days)	exceeded?		X	
other Metals (6 months)	exceeded?		X	

ACTIONS: Hg held 31 days. The criteria for water samples was applied to these soil samples. All data for Hg is estimated (J)

II. Calibrations:

A. Initial Calibration Procedures:

		YES	NO	N/A
Are acceptable 2 point calibrations present for ICP?		(X)		
Are acceptable 4 point calibrations present for:	AA?	(X)		
	Mercury?	(X)		
	Cyanide?	(X)		
Are acceptable calibration present for other parameters?		( )		X

ACTIONS: (Analyte, Sample(s) affected, Qualifications)

None

	YES	NO	N/A
B. Form 2 (Initial and Continuing Calibration Verification):			
All necessary Form 2s present and complete?	(X)	___	___
ICVs and CCVs analyzed at the correct frequency?	(X)	___	___
All Calibration Verification % Recoveries meet criteria?	(X)	___	___

ACTIONS: (Analyte, % Recovery, Sample(s) affected and Qualifications)

None

III. Form 3 (Blanks)			
All necessary Form 3s present and complete?	(X)	___	___
A. Initial and Continuing Calibration Blanks			
Analyzed at Correct Frequencies?	(X)	___	___
All ICBs and CCBs meet no contamination criteria?	( )	X	___

ACTIONS: Analyte, (ICB or CCB/ IDL), Sample(s) affected, Qualifications

Sb (56.7/42.0) X101, X102, X103, X104, X105, X106, X107, X108 are flagged (U)

Pb, Ba, & Co; contamination noted, however, no data affected

	YES	NO	N/A
Preparation Blanks			
Was one preparation blank prepared for:			
each 20 samples?	X		
each batch?	X		
each matrix type?	X		
Were prep blanks analyzed at correct frequency?	X		
Were prep blanks reported in the appropriate concentration units?	X		
All prep blank results meet no contamination criteria?		X	

ACTIONS: (Analyte, (PB / IDL), Sample(s) affected, Qualificatons)

Na (305/114) X101, X102, X104, X105, X108, X109, X111, X112, X113 X114 are flagged (U)

Pb, Ca, Cr, Cu, Fe, & Mg; contamination noted; however, no data affected

IV. Form IV (ICP Interference Check Sample)

	YES	NO	N/A
Form IV Present and complete?	X		
All % Recoveries of ICSAB Solution +/- 20 % of True Value	X		
For all elements not present in ICSA, is the absolute value of the ICSA result greater than the IDL	X		

ACTIONS: (Analyte, %Recovery, Sample(s) affected, Qualifications)

Sb, Co, Cu, Mn & V; results are greater than IDL's, however, no data is affected

	YES	NO	N/A
V. Form VII Laboratory Control Sample: (Note: LCS - not required for aqueous Hg.)			
Was one LCS prepared and analyzed for:			
every 20 or fewer water samples?	( )	___	X
every digestion batch of water samples?	( )	___	X
every 20 or fewer solid samples?	(X)	___	___
every digestion batch of solid samples?	(X)	___	___
Were all of the Aqueous LCS % Recoveries within criteria?	( )	___	X
Were all of the Solid LCS % Recoveries within criteria?	(X)	___	___

ACTIONS: (Element, % Recovery, Sample(s) affected, Qualifications)

None

	YES	NO	N/A
VI. Form 6 Duplicate Sample Analysis:			
Present and complete for:			
each 20 samples?	(X)	___	___
each matrix type?	(X)	___	___
For both AA and ICP when both are used for same analyte?	(X)	___	___
Were all Duplicate Analyses differences within criteria?	(X)	___	___

ACTIONS: (Element, Differences, Sample(s) affected, Qualifications)

None

	YES	NO	N/A
VII. Form 5 (Spike Sample Recovery)			
Present and complete for: each 20 samples?	(X)		
each matrix type?	(X)		
Were all Matrix Spike % Recoveries within criteria?	( )	X	

ACTIONS: (Analyte, % Recovery, Sample(s) affected, Qualifications)

Sb 17.4%R X106, X107, X112, X114 are estimated (J)

Sb 17.4%R X101, X102, X103, X104, X105, X108, X109, X110, X111, X113 are unusable (R)

Cr 189.4%R X101, X102, X103, X104, X105, X106, X107, X108, X109, X110, X111, X112, X113, X114 are estimated (J)

Se 57.5%R X102, X104, X108, X109, X111, X112 X113, X107, X110, X103 are estimated (J)

Se 57.5%R X101, X105, X106, & X114 are flagged ~~(UJ)~~ CB (UJ)

	YES	NO	N/A
VIII. Furnace Atomic Absorption (AA) QC:			
Did the laboratory utilize duplicate injections for all non-MSA analyses?	(X)		
Does the GFAA flow chart appear to have been followed for all analyses?	(X)		
Did the laboratory properly flag the GFAA results on the Form 1s	(X)		

ACTIONS: (Analyte, Sample(s) affected, Qualifications)

all results flagged "W" by lab are estimated (J)

	YES	NO	N/A
IX. Form IX (ICP Serial Dilution)			
Was Serial Dilution analysis performed for:			
each 20 or fewer samples?	X		
each matrix type?	X		
Were all serial dilution results within criteria?	X		

ACTIONS: (Analyte, Sample(s) affected, Qualifications:)

None

	YES	NO	N/A
Raw Data			
Digestion Log for flame AA/ICP present?	X		
Digestion Log for furnace AA present?	X		
Digestion Log for mercury present?	X		
Digestion Log for cyanides present?	X		
Weights, dilutions and volumes used to obtain values present?	X		
Percent solids calculation present for soil (sediments)?	X		
Are preparation dates present on Digestion Logs?	X		
Are standards Preparation logs present and dated?	X		
Measurement read out records present for:			
ICP?	X		
Flame AA?			X
Furnace AA?	X		
Mercury?	X		
Cyanide?	X		
Other Inorganics?			X
Are all raw data to support all sample analyses and QC operations present?	X		
Legible?	X		
Properly Labeled?	X		