146333

L 0990300031
Matthiessen & Hegeler Zinc Co.
ILO 000064782
SF/HRS

CERCLA
Integrated Site Assessment
Analytical Results

Illinois Environmental Protection Agency

2200 Churchill Road
P. O. Box 19276
Springfield, IL 62794-9276

Confidential material may be enclosed.

Printed on Recycled Paper

SITE NAME: MATTHIESSEN & HEGELER ZINC CO.
ILO NUMBER: 000084792

TABLE F-1
SUMMARY
M & H Property

SAMPLING POINT	X 101	X 102	X 103	X 104	X 105	X 106	X 107	X 108	X 109	X 201	X 202	X 203	X 204	X 205
	12-15-93	12-14-93	12-14-93	12-14-93	12-14-93	12-14-93	12-15-93	12-15-93	12-15-93	12-15-93	12-14-93	12-14-93	12-14-93	12-14-93
PARAMETER	(Background)									(Background)				
VOLATILES														
Methylene Chloride	13.0 U	130.0	--	100.0	--	--	--	--	--	--	--	--	--	--
Acetone	12.0 U	25.0	--	--	--	--	--	--	--	20.0	13.0 J	8.0 J	15.0	--
2-Butanone (MEK)	12.0 U	16.0	--	23.0 J	4.0 J	12.0 J	8.0 J	32.0	19.0	5.0 J	4.0 J	--	3.0 J	--
1,1,1-Trichloroethane	6.0 J	35.0 J	3.0 J	--	--	4.0 J	--	--	5.0 J	--	--	--	--	--
Toluene	12.0 UJ	9.0 J	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	12.0 UJ	6.0 J	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (total)	12.0 UJ	16.0	--	--	4.0 J	4.0 J	--	--	--	--	--	--	--	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
SEMIVOLATILES														
Naphthalene	380.0 U	1500.0 J	140.0 J	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	380.0 U	3400.0	120.0 J	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	380.0 U	1500.0 J	87.0 J	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	380.0 U	--	--	--	--	--	--	--	--	100.0 J	--	--	--	--
Hexachlorobenzene	380.0 U	--	--	--	--	7300.0	--	--	--	--	--	--	--	--
Pentachlorophenol	900.0 U	38000.0	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	380.0 U	6400.0	570.0	--	--	83.0 J	170.0 J	--	820.0 J	--	--	--	--	--
Fluoranthene	380.0 U	3800.0	1100.0	--	--	98.0 J	--	--	770.0 J	--	--	--	--	--
Pyrene	380.0 U	4000.0	710.0	--	--	89.0 J	--	--	800.0 J	--	--	--	--	--
Benzo(a)anthracene	380.0 U	2100.0 J	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	380.0 U	2400.0 J	540.0	--	--	--	--	--	340.0 J	--	--	--	--	--
Benzo(b)fluoranthene	380.0 U	2900.0 J	730.0	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	380.0 U	1200.0 J	--	--	--	--	--	--	--	--	--	--	--	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
PESTICIDES														
alpha-BHC	2.10 U	--	1.50 J		--	--	--	--	--	--	--	--	--	--
beta-BHC	2.10 U	--	--	--	--	35.00 P	8.90 P	1.80 JP	--	--	--	--	--	--
delta-BHC	2.10 U	--	--	--	--	3.10 P	--	--	--	2.80 U	1.20 JP	1.00 JP	1.00 JP	3.00
Aldrin	2.10 U	38.00	1.80 JP	--	0.64 J	--	0.42 JP	--	1.20 JP	--	--	--	--	--
Endosulfan I	2.10 U	12.00 P	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	0.75 JP	--	2.30 JP	--	0.51 JP	20.00 P	--	--	4.80 P	1.50 J	8.50 P	5.20 P	17.00 P	2.40 JP
4,4'-DDE	0.97 J	--	--	--	--	7.00	--	--	--	5.00 U	--	--	--	1.40 JP
Endrin	1.00 J	78.00 P	13.00 P	--	5.00 P	14.00	--	--	9.70 P	5.00 U	7.80	6.60	67.00	2.60 J
Endosulfan II	4.00 U	--	--	--	--	3.80 J	--	--	--	--	--	--	--	--
4,4'-DDD	4.00 U	37.00	7.80	--	--	5.00 P	--	--	--	5.00 U	2.70 JP	1.80 JP	9.70 P	0.79 JP
4,4'-DDT	0.92 JP	--	29.00	--	--	14.00	--	--	--	5.00 U	1.80 JP	1.70 JP	9.20 P	1.30 JP
Methoxychlor (Marlate)	21.00 U	--	--	1.20 P	--	--	--	--	--	--	--	--	--	--
Endrin Ketone	1.40 J	50.00	--	--	4.00 J	35.00 P	--	--	--	5.00 U	--	1.40 J	--	--
Endrin Aldehyde	4.0 U	--	--	--	--	--	--	--	--	--	--	--	9.6	--
alpha-Chlordane	0.29 J	--	1.10 J	--	--	--	--	--	1.10 JP	0.62 J	3.60	2.80	17.00 P	1.10 J
gamma-Chlordane	2.10 U	19.00	3.00	--	0.88 JP	3.00 P	1.10 JP	--	1.30 JP	2.80 U	1.40 JP	0.97 JP	5.10 P	0.56 JP
Toxaphene	210.00 U	--	--	--	220.00	--	--	--	810.00	--	--	--	--	--
Aroclor-1242	40.00 U	--	--	--	--	--	--	--	100.00 P	50.00 U	--	73.00 P	810.00	38.00 JP
Aroclor-1254	40.00 U	1500.00	35.00 P	--	25.00 JP	88.00 P	--	--	80.00	50.00 U	66.00	82.00	820.00	32.00 J
Aroclor-1260	40.00 U	670.00	--	--	--	130.00 P	--	--	37.00 J	50.00 U	33.00 JP	23.00 JP	180.00 P	12.00 JP
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
TENTATIVELY IDENTIFIED COMPOUNDS														
Hexane, 2-Bromo-	1100.0 JN	--	--	--	1100.0 JN	--	--	--	--	--	--	780.0 JN	--	--
Ethene, 1,2-Diethoxy-	--	23.0 JN	--	--	--	--	--	--	--	--	--	--	--	--
2Pentanone, 4Hydroxy-4Methyl	--	80000.0 JNBA	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene, Dimethyl	--	6000.0 JN	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene, Trimethyl	--	5800.0 JN	--	--	--	--	--	--	--	--	--	--	--	--
Azulene, 7Ethyl-1,4Dimethyl	--	6100.0 JN	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene, Methyl	--	3800.0 JN	--	--	--	--	--	--	--	--	--	--	--	--
Benzene, Pentachloro-	--	--	--	--	--	350.0 JN	--	--	--	--	--	--	--	--
Benzene, Pentachloro(Trichlo	--	--	--	--	--	120.0 JN	--	--	--	--	--	--	--	--
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
INORGANICS														
Aluminum	4660.00	4580.00	2350.00	35300.00	22700.00	14100.00	7740.00	13300.00	10600.00	4170.00	5810.00	10000.00	11500.00	8410.00
Arsenic	3.30	43.10	16.20	21.30	65.00	110.00	45.30	63.50	94.90	3.20	3.60	7.00	7.90	15.80
Barium	38.80 B	118.00	37.10 B	188.00	410.00	181.00	310.00	347.00	145.00	47.00 B	38.70 B	67.60	109.00	66.70
Beryllium	0.38 B	1.40	0.24 B	1.60	12.70	1.70	--	--	0.69 B	0.24 U	0.48 B	0.82 B	0.61 B	0.55 B
Cadmium	0.87 B	67.70	11.40	36.10	39.80	181.00	1.20	2.70	1320.00	0.72 U	29.40	46.50	2.70	2.80
Calcium	11800.00	4430.00	725.00 B	24500.00	35400.00	50700.00	4980.00	5490.00	6940.00	32900.00	18200.00	29100.00	19600.00	53700.00
Chromium	6.00	15.60	5.70	43.30	31.80	36.10	10.10	20.00	68.80	5.30	8.50	14.30	18.70	20.10
Cobalt	7.20 B	12.60	3.30 b	4.66 B	48.40	21.20	--	1.60 B	94.90	3.70 B	4.40 B	8.10 B	8.70 B	7.80 B
Copper	9.90	407.00	60.60	906.00	428.00	4340.00	38.40	48.90	3650.00	3.50 B	109.00	258.00	16.20	16.40
Iron	14600.00	43600.00	13000.00	42900.00	85800.00	38100.00	25300.00	42400.00	103000.00	8790.00	11100.00	17800.00	19100.00	22000.00
Lead	13.30	1310.00	474.00	905.00	342.00	1370.00	646.00	4310.00	2340.00	6.80	164.00	325.00	28.80	15.40
Magnesium	6040.00	887.00 B	251.00 B	2000.00	1210.00	2510.00	947.00 B	2210.00	2900.00	8920.00	6160.00	8550.00	8290.00	7800.00
Manganese	378.00	736.00	125.00	101.00	5450.00	1290.00	23.80	95.40	1680.00	310.00	221.00	444.00	617.00	398.00
Mercury	0.06 U	0.68	0.92	--	1.40	2.10	0.20	96.00	9.50	0.07 U	0.40	0.51	0.06 B	--
Nickel	14.10	23.20	9.30	21.70	105.00	118.00	--	7.80 B	2470.00	3.80 B	12.80	22.00	17.70	23.30
Potassium	650.00 B	553.00 B	434.00 B	8100.00	1700.00	1880.00	1800.00	1080.00	1170.00	409.00 B	976.00 B	1650.00	1480.00	1040.00 B
Selenium	0.41 B	1.80	11.00	17.70	0.82	27.70	18.30	43.90	5.90	0.54 U	--	0.41 B	0.69 B	--
Silver	1.20 U	4.60	--	--	--	19.00	--	--	28.40	1.20 U	--	--	--	--
Sodium	82.80 U	--	--	1440.00	1190.00	790.00 B	422.00 B	463.00 B	726.00 B	97.40 U	--	--	--	--
Thallium	0.24 U	0.81 B	0.41 B	0.72 B	--	0.96 B	0.62 B	0.40 B	--	0.32 U	--	0.29 B	0.38 B	--
Vanadium	15.00	18.80	6.90 B	43.60	110.00	29.70	19.60	49.10	24.90	10.60 B	15.30	24.00	27.90	60.00
Zinc	95.30	16600.00	1650.00	10200.00	42000.00	37500.00	443.00	826.00	71200.00	48.20	4670.00	12100.00	292.00	130.00
Cyanide	1.00 U	--	--	--	--	--	--	--	4.40	1.30 U	--	--	--	--
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

P. 2

SITE NAME: MATTHIESSEN & HEGELER ZINC CO.
ILO NUMBER: 000004782

TABLE F-1
SUMMARY
(Residential)

SAMPLING POINT	X101 12-14-93 (Background)	X 111 12-15-93	X 112 12-15-93	X 113 12-15-93	X 114 12-15-93	X 115 12-15-93	X 116 12-15-93	X 117 12-15-93	X 119 12-15-93	X 120 12-15-93	X 121 12-15-93	X 122 12-15-93	X 123 12-15-93	X 124 12-15-93
PARAMETER														
INORGANICS														
Aluminum	4860.00	16500.00	11300.00	13900.00	13800.00	13400.00	15800.00	15800.00	18300.00	19900.00	16300.00	17500.00	16500.00	17400.00
Arsenic	5.50	9.00	12.00	10.80	12.80	24.80	15.10	24.10	18.80	26.10	17.10	21.50	21.40	17.70
Barium	36.80 B	233.00	196.00	188.00	204.00	283.00	251.00	195.00	190.00	228.00	297.00	159.00	215.00	179.00
Beryllium	0.39 B	0.86 B	0.86 B	1.00 B	1.20 B	1.10 B	0.99 B	1.80	1.40	1.30 B	1.20	1.10	1.70	1.50
Cadmium	0.87 B	7.80	74.80	40.10	39.20	94.40	32.70	110.00	92.50	71.10	60.60	12.40	16.90	23.50
Calcium	11800.00	10600.00	11900.00	38300.00	13600.00	14600.00	9800.00	14900.00	16800.00	26400.00	31300.00	20100.00	22800.00	34100.00
Chromium	8.00	27.00	20.70	22.60	20.30	26.50	21.40	24.70	32.90	33.00	25.10	25.80	25.90	25.00
Cobalt	7.20 B	6.70 B	6.10 B	6.50 B	11.20 B	11.50 B	7.00 B	8.80 B	12.00	13.30 B	15.20	10.60	10.40 B	11.80
Copper	9.90	29.20	113.00	75.50	64.80	149.00	62.90	153.00	85.80	111.00	81.70	40.20	54.40	60.10
Iron	14600.00	19100.00	20800.00	19600.00	20400.00	25300.00	19500.00	23400.00	26300.00	26800.00	23300.00	22900.00	29000.00	24700.00
Lead	13.30	100.00	748.00	456.00	315.00	996.00	346.00	1030.00	416.00	428.00	316.00	212.00	229.00	240.00
Magnesium	6040.00	4310.00	2790.00	10900.00	5250.00	3270.00	3420.00	4140.00	5260.00	7710.00	5930.00	4770.00	4020.00	3910.00
Manganese	376.00	992.00	835.00	843.00	1030.00	1060.00	784.00	1020.00	1170.00	3470.00	4340.00	1730.00	1160.00	1370.00
Mercury	0.06 U	0.09 B	0.09 B	0.20	0.22	0.54	0.17	0.45	0.38	0.34	0.29	0.29	1.00	0.24
Nickel	14.10	15.90	26.20	25.20	24.70	36.20	20.90	33.60	31.20	35.00	30.50	26.40	26.80	25.90
Potassium	650.00 B	2270.00	1770.00	3270.00	2250.00	2170.00	2290.00	2520.00	2800.00	3210.00	3230.00	2560.00	2900.00	2500.00
Selenium	0.41 B	0.51 B	--	--	--	1.90	--	2.20	2.00	2.20	--	--	0.54 B	2.20
Silver	1.20 U	--	2.50	1.40	1.40	3.00	1.70	3.40	1.60 B	2.40 B	1.60 B	--	--	--
Thallium	0.24 U	0.31 B	--	0.39 B	0.34 B	--	0.31 B	0.58 B	--	--	0.28 B	--	--	--
Vanadium	15.00	37.00	26.00	29.70	32.90	31.10	35.20	37.90	43.10	45.80	36.00	36.10	34.60	37.40
Zinc	85.30	1030.00	10700.00	4940.00	4300.00	13700.00	4050.00	13600.00	7970.00	7770.00	6010.00	1760.00	2330.00	3220.00
Cyanide	1.00 U	1.30	--	2.50	1.30	1.40	--	1.40	--	--	--	--	--	--
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chlorde	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroehtene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether
Hexachlorobutadiene	Anthracene

2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc
Iron	Cyanide
Lead	Sulfide
Magnesium	

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Date: 2/22/94

Subject: Review of CLP Data

From: Ron Turpin
Contract Laboratories Administrator
Division of Laboratories

To: Data User Bob Casper

The Quality Assurance Section has reviewed the following data package(s):

SITE NAME: Matthiessen & Hegler CASE/SDG No: 101, ~~102~~ & 348301

Date(s) Received for Review: Org 1-24-94 & Inorg 1-25-94 No. of Samples: 27

Laboratory(s): IEPA Hours Used for Review: 22.5 + .52 = 74.5

Reviewer(s): Chris Bridges
Jeri Long

The following narrative represents our findings:

The results are valid as qualified on the enclosed Forms!

- ☐ Data are acceptable for use.
- ☒ Data are acceptable for use with qualifications noted above.
- ☐ Data are preliminary - pending verification by laboratory.
- ☐ Data are unacceptable.

cc: Tom Crause

p. 7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348306

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK09

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 18 Date Analyzed: 12/20/93

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	13	~~B~~ U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	UJ
71-55-6	1,1,1-Trichloroethane	9	J
56-23-5	Carbon Tetrachloride	12	UJ
75-27-4	Bromodichloromethane	12	UJ
78-87-5	1,2-Dichloropropane	12	UJ
10061-01-5	cis-1,3-Dichloropropene	12	UJ
79-01-6	Trichloroethene	12	UJ
124-48-1	Dibromochloromethane	12	UJ
79-00-5	1,1,2-Trichloroethane	12	UJ
71-43-2	Benzene	12	UJ
10061-02-6	trans-1,3-Dichloropropene	12	UJ
75-25-2	Bromoform	12	UJ
108-10-1	4-Methyl-2-Pentanone	12	UJ
591-78-6	2-Hexanone	12	UJ
127-18-4	Tetrachloroethene	12	UJ
79-34-5	1,1,2,2-Tetrachloroethane	12	UJ
108-88-3	Toluene	12	UJ
108-90-7	Chlorobenzene	12	UJ
100-41-4	Ethylbenzene	12	UJ
100-42-5	Styrene	12	UJ
1330-20-7	Xylene (total)	12	UJ

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101

ıb Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348306

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK09

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 18 Date Analyzed: 12/20/93

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: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348306

ample wt/vol: 30.7 (g/mL) G Lab File ID: A1221K11

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 18 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ijection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-Di-n-Propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	UJ
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-Methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	950	U
131-11-3	Dimethylphthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	950	~~UR~~
83-32-9	Acenaphthene	390	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348306

ımple wt/vol: 30.7 (g/mL) G Lab File ID: A1221K11

ɔvel: (low/med) LOW Date Received: 12/16/93

Moisture: 18 decanted: (Y/N) N Date Extracted: 12/17/93

ɔncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ıjection Volume: 2.0(uL) Dilution Factor: 1.0

ᵊC 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	950	U
100-02-7	4-Nitrophenol	950	UJ
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
86-73-7	Fluorene	390	U
100-10-6	4-Nitroaniline	950	~~U~~ R
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine (1)	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-Butylphthalate	810	~~B~~ U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butylbenzylphthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	UJ
56-55-3	Benzo(a)Anthracene	390	U
218-01-9	Chrysene	390	U
117-81-7	bis(2-Ethylhexyl)Phthalate	390	U
117-84-0	Di-n-Octyl Phthalate	390	U
205-99-2	Benzo(b)Fluoranthene	390	U
207-08-9	Benzo(k)Fluoranthene	390	U
50-32-8	Benzo(a)Pyrene	390	U
193-39-5	Indeno(1,2,3-cd)Pyrene	390	U
53-70-3	Dibenz(a,h)Anthracene	390	UJ
191-24-2	Benzo(g,h,i)Perylene	390	U

(1) - Cannot be separated from Diphenylamine

p. 12

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348306

mple wt/vol: 30.7 (g/mL) G Lab File ID: A1221K11

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 18 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

jection Volume: 2.0 (uL) Dilution Factor: 1.0

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

mber TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.95	1900	~~BJ~~ U
2.	UNKNOWN ALIP. HYDROCARBON	9.50	170	~~BJ~~ U
. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.85	28000	~~JNBA~~ U
4.	UNKNOWN ALIP. HYDROCARBON	10.05	340	~~BJ~~ U
5.	UNKNOWN	10.12	310	~~BJ~~ U
6.	UNKNOWN	11.30	140	~~BJ~~ U
7.	UNKNOWN	11.47	1100	~~BJ~~ U
8.	UNKNOWN	11.69	130	J
9. 3377-86-4	HEXANE, 2-BROMO-	11.79	1100	JN
10. 80-56-8	~~BICYCLO-HEPT-ENE,TRIMETHYL~~ unknown	12.04	640	JN
11.	UNKNOWN ALIP. KETONE	12.15	740	~~BAJ~~ U
12.	UNKNOWN	12.57	200	J
13.	UNKNOWN	13.17	3600	J
14.	UNKNOWN	14.50	4900	BJ
15.	UNKNOWN	21.00	230	J
16.	UNKNOWN ALIP. ACID	23.80	190	~~BJ~~ U
17.	UNKNOWN ALIP. HYDROCARBON	25.12	170	J
18.	UNKNOWN ALIP. ACID	26.59	200	J
19.	UNKNOWN	28.09	170	J
20.	UNKNOWN ALIP. ACID	28.27	410	J
21.	UNKNOWN	31.99	210	J
22.	UNKNOWN ALIP. ACID ESTER	33.07	12000	J
23.	UNKNOWN	33.97	610	J
24.	UNKNOWN ALIP. HYDROCARBON	36.29	510	J
25.	UNKNOWN ALIP. HYDROCARBON	36.34	920	J
26.	UNKNOWN	38.44	980	J
27.	UNKNOWN ALIP. HYDROCARBON	39.41	1100	J
.	UNKNOWN	39.56	560	J
29.	UNKNOWN	42.56	580	J
30.	UNKNOWN ALIP. HYDROCARBON	43.89	850	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348306

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

Moisture: 18 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/21/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	0.75	JP
72-55-9	4,4'-DDE	0.97	J
72-20-8	Endrin	1.0	J
33213-65-9	Endosulfan II	4.0	U
50-29-3	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	0.92	JP
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	1.4	J
7421-36-3	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	0.29	J
5103-74-2	gamma-Chlordane	2.1	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

p. 13

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102RE

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348307RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1221BK10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 20 Date Analyzed: 12/21/93

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	UJ
75-09-2	Methylene Chloride	130	~~B~~
67-64-1	Acetone	25	
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	16	
71-55-6	1,1,1-Trichloroethane	35	J
56-23-5	Carbon Tetrachloride	12	UJ
75-27-4	Bromodichloromethane	12	UJ
78-87-5	1,2-Dichloropropane	12	UJ
10061-01-5	cis-1,3-Dichloropropene	12	UJ
79-01-6	Trichloroethene	12	UJ
124-48-1	Dibromochloromethane	12	UJ
79-00-5	1,1,2-Trichloroethane	12	UJ
71-43-2	Benzene	12	UJ
10061-02-6	trans-1,3-Dichloropropene	12	UJ
75-25-2	Bromoform	12	UJ
108-10-1	4-Methyl-2-Pentanone	12	UJ
591-78-6	2-Hexanone	12	UJ
127-18-4	Tetrachloroethene	12	UJ
79-34-5	1,1,2,2-Tetrachloroethane	12	UJ
108-88-3	Toluene	9	J
108-90-7	Chlorobenzene	12	UJ
100-41-4	Ethylbenzene	6	J
100-42-5	Styrene	12	UJ
1330-20-7	Xylene (total)	16	

p. 16

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102RE

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348307RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1221BK10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 20 Date Analyzed: 12/21/93

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. 629-14-1	ETHANE, 1,2-DIETHOXY-	6.45	23	JN

p. 11

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348307

ample wt/vol: 30.1 (g/mL) G Lab File ID: A1222K09

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 20 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

njection Volume: 2.0 (uL) Dilution Factor: 8.0

PC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3300	U
111-44-4	bis(2-Chloroethyl)Ether	3300	U
95-57-8	2-Chlorophenol	3300	U
541-73-1	1,3-Dichlorobenzene	3300	U
106-46-7	1,4-Dichlorobenzene	3300	U
95-50-1	1,2-Dichlorobenzene	3300	U
95-48-7	2-Methylphenol	3300	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3300	U
106-44-5	4-Methylphenol	3300	U
621-64-7	N-Nitroso-Di-n-Propylamine	3300	U
67-72-1	Hexachloroethane	3300	U
98-95-3	Nitrobenzene	3300	U
78-59-1	Isophorone	3300	U
88-75-5	2-Nitrophenol	3300	U
105-67-9	2,4-Dimethylphenol	3300	U
111-91-1	bis(2-Chloroethoxy)Methane	3300	U
120-83-2	2,4-Dichlorophenol	3300	U
120-82-1	1,2,4-Trichlorobenzene	3300	U
91-20-3	Naphthalene	1500	J
106-47-8	4-Chloroaniline	3300	UJ
87-68-3	Hexachlorobutadiene	3300	U
59-50-7	4-Chloro-3-Methylphenol	3300	U
91-57-6	2-Methylnaphthalene	3400	
77-47-4	Hexachlorocyclopentadiene	3300	U
88-06-2	2,4,6-Trichlorophenol	3300	U
95-95-4	2,4,5-Trichlorophenol	8000	U
91-58-7	2-Chloronaphthalene	3300	U
88-74-4	2-Nitroaniline	8000	U
131-11-3	Dimethylphthalate	3300	U
208-96-8	Acenaphthylene	3300	U
606-20-2	2,6-Dinitrotoluene	3300	U
99-09-2	3-Nitroaniline	8000	UJ
83-32-9	Acenaphthene	3300	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348307

ımple wt/vol: 30.1 (g/mL) G Lab File ID: A1222K09

ɜvel: (low/med) LOW Date Received: 12/16/93

Moisture: 20 decanted: (Y/N) N Date Extracted: 12/17/93

ɔncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ıjection Volume: 2.0(uL) Dilution Factor: 8.0

ɔC Cleanup: (Y/N) Y pH: 6.4

ımber TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2PENTANONE,4HYDROXY-4METHYL	9.60	60000	JNBA
?. 573-98-8	NAPHTHALENE, DIMETHYL	21.44	6000	JN
..	UNKNOWN ALIP. HYDROCARBON	21.65	7400	J
4. 2131-42-2	NAPHTHALENE, TRIMETHYL	23.65	5800	JN
5.	UNKNOWN ALIP. HYDROCARBON	25.12	43000	J
6. 529-05-5	AZULENE, 7ETHYL-1,4DIMETHYL	26.11	6100	JN
7.	UNKNOWN ALIP. HYDROCARBON	26.34	6300	J
8.	UNKNOWN ALIP. HYDROCARBON	26.49	5800	J
9.	UNKNOWN ALIP. HYDROCARBON	27.57	5900	J
10.	PHENANTHRENE, METHYL	28.34	1800	J
11.	UNKNOWN	28.59	1000	J
12.	ANTHRACENE, METHYL	28.61	4100	J
13.	UNKNOWN ALIP. HYDROCARBON	28.76	4700	J
14.	UNKNOWN ALIP. HYDROCARBON	29.89	4600	J
15.	UNKNOWN	30.01	890	J
16.	UNKNOWN	30.17	1000	J
17.	UNKNOWN ALIP. HYDROCARBON	30.97	5400	J
18.	UNKNOWN	31.01	2900	J
19.	UNKNOWN	31.37	840	J
20.	UNKNOWN	31.69	1500	J
21.	UNKNOWN ALIP. HYDROCARBON	32.01	5700	J
22.	UNKNOWN	32.22	720	J
23.	UNKNOWN	32.34	1200	J
24.	UNKNOWN	32.61	1200	J
25.	UNKNOWN	32.64	1800	J
26.	UNKNOWN	32.71	820	J
27.	UNKNOWN ALIP. ACID ESTER	33.06	13000	J
.	UNKNOWN	33.56	1800	J
29.	UNKNOWN	33.89	1200	J
30.	UNKNOWN ALIP. HYDROCARBON	33.97	7300	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102DL

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348307

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A1223E06

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 20 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/23/93

Injection Volume: 2.0(uL) Dilution Factor: 16.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	6600	U
111-44-4	bis(2-Chloroethyl)Ether	6600	U
95-57-8	2-Chlorophenol	6600	U
541-73-1	1,3-Dichlorobenzene	6600	U
106-46-7	1,4-Dichlorobenzene	6600	U
95-50-1	1,2-Dichlorobenzene	6600	U
95-48-7	2-Methylphenol	6600	U
108-60-1	2,2'-oxybis(1-Chloropropane)	6600	U
106-44-5	4-Methylphenol	6600	U
621-64-7	N-Nitroso-Di-n-Propylamine	6600	U
67-72-1	Hexachloroethane	6600	U
98-95-3	Nitrobenzene	6600	U
78-59-1	Isophorone	6600	U
88-75-5	2-Nitrophenol	6600	U
105-67-9	2,4-Dimethylphenol	6600	U
111-91-1	bis(2-Chloroethoxy)Methane	6600	U
120-83-2	2,4-Dichlorophenol	6600	U
120-82-1	1,2,4-Trichlorobenzene	6600	U
91-20-3	Naphthalene	1600	J
106-47-8	4-Chloroaniline	6600	UJ
87-68-3	Hexachlorobutadiene	6600	U
59-50-7	4-Chloro-3-Methylphenol	6600	U
91-57-6	2-Methylnaphthalene	3400	J
77-47-4	Hexachlorocyclopentadiene	6600	U
88-06-2	2,4,6-Trichlorophenol	6600	U
95-95-4	2,4,5-Trichlorophenol	16000	U
91-58-7	2-Chloronaphthalene	6600	U
88-74-4	2-Nitroaniline	16000	U
131-11-3	Dimethylphthalate	6600	U
208-96-8	Acenaphthylene	6600	U
606-20-2	2,6-Dinitrotoluene	6600	U
99-09-2	3-Nitroaniline	16000	UJ
83-32-9	Acenaphthene	6600	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Name: ILLINOIS EPA Contract: 0990000000

.b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

:trix: (soil/water) SOIL Lab Sample ID: D348307

mple wt/vol: 30.1 (g/mL) G Lab File ID: A1222K09

:vel: (low/med) LOW Date Received: 12/16/93

Moisture: 20 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

:jection Volume: 2.0 (uL) Dilution Factor: 8.0

'C Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	8000	U
100-02-7	4-Nitrophenol	8000	~~U~~ R
132-64-9	Dibenzofuran	1500	J
121-14-2	2,4-Dinitrotoluene	3300	U
84-66-2	Diethylphthalate	3300	U
7005-72-3	4-Chlorophenyl-phenylether	3300	U
86-73-7	Fluorene	3300	U
100-10-6	4-Nitroaniline	8000	~~U~~ R
534-52-1	4,6-Dinitro-2-methylphenol	8000	U
86-30-6	N-Nitrosodiphenylamine (1)	3300	U
101-55-3	4-Bromophenyl-phenylether	3300	U
118-74-1	Hexachlorobenzene	3300	U
87-86-5	Pentachlorophenol	31000	E
85-01-8	Phenanthrene	5400	
120-12-7	Anthracene	3300	U
86-74-8	Carbazole	3300	U
84-74-2	Di-n-Butylphthalate	3300 ~~770~~	~~BJ~~ U
206-44-0	Fluoranthene	3900	
129-00-0	Pyrene	4000	
85-68-7	Butylbenzylphthalate	3300	U
91-94-1	3,3'-Dichlorobenzidine	3300	UJ
56-55-3	Benzo(a)Anthracene	2100	J
218-01-9	Chrysene	2400	J
117-81-7	bis(2-Ethylhexyl)Phthalate	3300	U
117-84-0	Di-n-Octyl Phthalate	3300	U
205-99-2	Benzo(b)Fluoranthene	2900	J
207-08-9	Benzo(k)Fluoranthene	3300	U
50-32-8	Benzo(a)Pyrene	1200	J
193-39-5	Indeno(1,2,3-cd)Pyrene	3300	U
53-70-3	Dibenz(a,h)Anthracene	3300	UJ
191-24-2	Benzo(g,h,i)Perylene	3300	U

(1) - Cannot be separated from Diphenylamine

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102DL

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348307

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A1223E06

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 20 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/23/93

Injection Volume: 2.0(uL) Dilution Factor: 16.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	16000	U
100-02-7	4-Nitrophenol	16000	UJ
132-64-9	Dibenzofuran	1400	J
121-14-2	2,4-Dinitrotoluene	6600	U
84-66-2	Diethylphthalate	6600	U
7005-72-3	4-Chlorophenyl-phenylether	6600	U
86-73-7	Fluorene	6600	U
100-10-6	4-Nitroaniline	16000	~~UR~~
534-52-1	4,6-Dinitro-2-methylphenol	16000	U
86-30-6	N-Nitrosodiphenylamine (1)	6600	U
101-55-3	4-Bromophenyl-phenylether	6600	U
118-74-1	Hexachlorobenzene	6600	U
87-86-5	Pentachlorophenol	36000	
85-01-8	Phenanthrene	5700	J
120-12-7	Anthracene	6600	U
86-74-8	Carbazole	6600	U
84-74-2	Di-n-Butylphthalate	6600	U
206-44-0	Fluoranthene	3800	J
129-00-0	Pyrene	5200	J
85-68-7	Butylbenzylphthalate	6600	U
91-94-1	3,3'-Dichlorobenzidine	6600	U
56-55-3	Benzo(a)Anthracene	2100	J
218-01-9	Chrysene	2600	J
117-81-7	bis(2-Ethylhexyl)Phthalate	6600	U
117-84-0	Di-n-Octyl Phthalate	6600	U
205-99-2	Benzo(b)Fluoranthene	6600	U
207-08-9	Benzo(k)Fluoranthene	6600	U
50-32-8	Benzo(a)Pyrene	6600	U
193-39-5	Indeno(1,2,3-cd)Pyrene	6600	U
53-70-3	Dibenz(a,h)Anthracene	6600	U
191-24-2	Benzo(g,h,i)Perylene	6600	U

(1) - Cannot be separated from Diphenylamine

p. cc

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102DL

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348307

mple wt/vol: 30.1 (g/mL) G Lab File ID: A1223E06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 20 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/23/93

jection Volume: 2.0(uL) Dilution Factor: 16.0

C Cleanup: (Y/N) Y pH: 6.4

mber TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.57	99000	JNBAu
2.	UNKNOWN	11.90	3100	J
3.	UNKNOWN ALIP. HYDROCARBON	12.55	3900	J
4.	UNKNOWN ALIP. HYDROCARBON	19.04	3000	J
5.	METHYL NAPHTHALENE	19.67	4900	J
6. 5573-98-8	NAPHTHALENE, DIMETHYL	21.44	6100	JN
7.	UNKNWON ALIP. HYDROCARBON	21.65	6800	J
8. 573-98-8	NAPHTHALENE, DIMETHYL	21.77	4400	JN
9.	UNKNOWN ALIP. HYDROCARBON	22.20	3000	J
10.	UNKNOWN	22.94	3400	J
11. 2131-42-2	NAPHTHALENE, TRIMETHYL	23.12	3000	JN
12. 2131-42-2	NAPHTHALENE, TRIMETHYL	23.65	6100	JN
13. 2131-42-2	NAPHTHALENE, TRIMETHYL	24.04	3200	JN
14.	UNKNOWN ALIP. HYDROCARBON	24.34	4900	J
15.	UNKNOWN ALIP. HYDROCARBON	25.02	4100	J
16.	UNKNOWN ALIP. HYDROCARBON	25.12	43000	J
17. 529-05-5	AZULENE, 7ETHYL-1,4DIMETHYL	26.09	6900	JN
18.	UNKNOWN ALIP. HYDROCARBON	26.34	5500	J
19.	UNKNOWN ALIP. HYDROCARBON	26.47	6200	J
20.	UNKNOWN ALIP. HYDROCARBON	27.57	5900	J
21. 613-12-7	ANTHRACENE, METHYL	28.59	3800	JN
22.	UNKNOWN ALIP. HYDROCARBON	28.76	4500	J
23.	UNKNOWN ALIP. HYDROCARBON	29.87	4200	J
24.	UNKNOWN ALIP. HYDROCARBON	30.96	6800	J
25.	UNKNOWN	30.99	3600	J
26.	UNKNOWN ALIP. HYDROCARBON	31.99	7400	J
27.	UNKNOWN ALIP. ACID ESTER	33.04	18000	J
28.	UNKNOWN ALIP. HYDROCARBON	33.97	9400	J
29.	UNKNOWN ALIP. HYDROCARBON	35.02	5700	J
30.	UNKNOWN ALIP. HYDROCARBON	36.26	8200	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348307

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

Moisture: 20 decanted: (Y/N) N Date Received: 12/16/93

traction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

ncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/23/93

jection Volume: 1.00 (uL) Dilution Factor: 1.00

C Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	36	
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	12	P
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	76	P
33213-65-9	Endosulfan II	4.1	U
50-29-3	4,4'-DDD	37	
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	50	
7421-36-3	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	19	
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	1500	
11096-82-5	Aroclor-1260	670	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102DL

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348307D

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

Moisture: 20 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/27/93

njection Volume: 1.00 (uL) Dilution Factor: 10.0

PC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	10	JPD
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	33	D
1024-57-3	Heptachlor epoxide	26	D
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	160	D
33213-65-9	Endosulfan II	41	U
50-29-3	4,4'-DDD	41	U
1031-07-8	Endosulfan sulfate	41	U
50-29-3	4,4'-DDT	41	U
72-43-5	Methoxychlor	210	U
53494-70-5	Endrin ketone	150	D
7421-36-3	Endrin aldehyde	41	U
5103-71-9	alpha-Chlordane	21	U
5103-74-2	gamma-Chlordane	22	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	1600	D
11096-82-5	Aroclor-1260	410	U

p. 25

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348308

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 19 Date Analyzed: 12/20/93

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	UJ
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	UJ
75-09-2	Methylene Chloride	48	~~B~~U
67-64-1	Acetone	124	~~BJ~~U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	UJ
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	UJ
591-78-6	2-Hexanone	12	UJ
127-18-4	Tetrachloroethene	12	UJ
79-34-5	1,1,2,2-Tetrachloroethane	12	UJ
108-88-3	Toluene	12	UJ
108-90-7	Chlorobenzene	12	UJ
100-41-4	Ethylbenzene	12	UJ
100-42-5	Styrene	12	UJ
1330-20-7	Xylene (total)	12	UJ

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348308

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 19 Date Analyzed: 12/20/93

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.

X103

ıl 'ame: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348308

ımple wt/vol: 30.9 (g/mL) G Lab File ID: A1222K04

ɜvel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

ɔncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ıjection Volume: 2.0 (uL) Dilution Factor: 1.0

ɔC Cleanup: (Y/N) Y pH: 5.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-Propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)Methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	400	UJ
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	120	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	960	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	960	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	960	UJ
83-32-9	Acenaphthene	400	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Name: ILLINOIS EPA Contract: 0990000000

.b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

:trix: (soil/water) SOIL Lab Sample ID: D348308

.mple wt/vol: 30.9 (g/mL) G Lab File ID: A1222K04

:vel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ıjection Volume: 2.0(uL) Dilution Factor: 1.0

'C Cleanup: (Y/N) Y pH: 5.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
51-28-5	2,4-Dinitrophenol	960	U	
100-02-7	4-Nitrophenol	960	~~U~~R	
132-64-9	Dibenzofuran	97	J	
121-14-2	2,4-Dinitrotoluene	400	U	
84-66-2	Diethylphthalate	400	U	
7005-72-3	4-Chlorophenyl-phenylether	400	U	
86-73-7	Fluorene	400	U	
100-10-6	4-Nitroaniline	960	~~U~~R	
534-52-1	4,6-Dinitro-2-methylphenol	960	U	
86-30-6	N-Nitrosodiphenylamine (1)	400	U	
101-55-3	4-Bromophenyl-phenylether	400	U	
118-74-1	Hexachlorobenzene	400	U	
87-86-5	Pentachlorophenol	960	U	
85-01-8	Phenanthrene	570		
120-12-7	Anthracene	400	U	
86-74-8	Carbazole	400	U	
84-74-2	Di-n-Butylphthalate	950	~~B~~U	
206-44-0	Fluoranthene	1100		
129-00-0	Pyrene	710		
85-68-7	Butylbenzylphthalate	400	U	
91-94-1	3,3'-Dichlorobenzidine	400	UJ	
56-55-3	Benzo(a)Anthracene	400	U	
218-01-9	Chrysene	540		
117-81-7	bis(2-Ethylhexyl)Phthalate	400	U	
117-84-0	Di-n-Octyl Phthalate	400	U	
205-99-2	Benzo(b)Fluoranthene	730		
207-08-9	Benzo(k)Fluoranthene	400	U	
50-32-8	Benzo(a)Pyrene	400	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	400	U	
53-70-3	Dibenz(a,h)Anthracene	400	UJ	
191-24-2	Benzo(g,h,i)Perylene	400	U	

(1) - Cannot be separated from Diphenylamine

p. 27

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348308

Sample wt/vol: 30.9 (g/mL) G Lab File ID: A1222K04

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.9

Number TICs found: 29

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.77	30000	~~JNBAu~~
	UNKNOWN	13.12	4000	J
3.	UNKNOWN	14.42	1900	~~BJu~~
4.	UNKNOWN	30.27	190	J
5.	UNKNOWN ALIP. HYDROCARBON	30.92	610	J
6.	UNKNOWN	30.96	380	J
7.	UNKNOWN ALIP. HYDROCARBON	31.34	370	J
8.	UNKNOWN ALIP. HYDROCARBON	31.96	610	J
9.	UNKNOWN	32.31	160	J
10.	UNKNOWN	32.34	240	J
11.	UNKNOWN	32.59	180	J
12.	UNKNOWN	32.86	96	J
13.	UNKNOWN ALIP. ACID ESTER	33.02	13000	J
14.	UNKNOWN	33.21	140	J
15.	UNKNOWN ALIP. HYDROCARBON	33.31	490	J
16.	UNKNOWN	33.51	270	J
17.	UNKNOWN	33.57	210	J
18.	UNKNOWN	33.84	200	J
19.	UNKNOWN ALIP. HYDROCARBON	33.94	1400	J
20.	UNKNOWN	34.12	180	J
21.	UNKNOWN ALIP. HYDROCARBON	34.29	460	J
22.	UNKNOWN ALIP. HYDROCARBON	34.54	160	J
23.	UNKNOWN ALIP. HYDROCARBON	35.01	460	J
24.	UNKNOWN	35.09	230	J
25.	UNKNOWN	35.41	570	J
26.	UNKNOWN ALIP. HYDROCARBON	35.74	520	J
27.	UNKNOWN	36.24	550	J
28.	UNKNOWN	36.32	170	J
29.	UNKNOWN	36.69	440	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348308

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

Moisture: 19 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/27/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) Y pH: 5.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.5	J
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	1.6	JP
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	2.3	JP
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	13	P
33213-65-9	Endosulfan II	4.0	U
50-29-3	4,4'-DDD	7.8	
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	29	
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.0	U
7421-36-3	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	1.1	J
5103-74-2	gamma-Chlordane	3.0	
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	55	P
11096-82-5	Aroclor-1260	40	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348309

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC09

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 24 Date Analyzed: 12/20/93

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	UJ
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	UJ
75-09-2	Methylene Chloride	100	~~B~~
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	23	J
71-55-6	1,1,1-Trichloroethane	350	~~B~~R
56-23-5	Carbon Tetrachloride	13	~~U~~R
75-27-4	Bromodichloromethane	13	~~U~~R
78-87-5	1,2-Dichloropropane	13	~~UJ~~R
10061-01-5	cis-1,3-Dichloropropene	13	~~U~~R
79-01-6	Trichloroethene	13	~~U~~R
124-48-1	Dibromochloromethane	13	~~U~~R
79-00-5	1,1,2-Trichloroethane	13	~~U~~R
71-43-2	Benzene	13	~~U~~R
10061-02-6	trans-1,3-Dichloropropene	13	~~U~~R
75-25-2	Bromoform	13	~~U~~R
108-10-1	4-Methyl-2-Pentanone	13	~~U~~R
591-78-6	2-Hexanone	13	~~U~~R
127-18-4	Tetrachloroethene	13	~~U~~R
79-34-5	1,1,2,2-Tetrachloroethane	13	~~U~~R
108-88-3	Toluene	15	R
108-90-7	Chlorobenzene	13	~~U~~R
100-41-4	Ethylbenzene	13	~~U~~R
100-42-5	Styrene	13	~~U~~R
1330-20-7	Xylene (total)	13	~~U~~R

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348309

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC09

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 24 Date Analyzed: 12/20/93

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~~ unknown JK	5.07	21	JN

p. 32

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104DL

.b Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348309DL

Sample wt/vol: 2.0 (g/mL) G Lab File ID: B1221LC05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 24 Date Analyzed: 12/21/93

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	33	U
74-83-9	Bromomethane	33	UJ
75-01-4	Vinyl Chloride	33	U
75-00-3	Chloroethane	33	UJ
75-09-2	Methylene Chloride	91	~~B~~
67-64-1	Acetone	33	U
75-15-0	Carbon Disulfide	33	U
75-35-4	1,1-Dichloroethene	33	U
75-34-3	1,1-Dichloroethane	33	U
540-59-0	1,2-Dichloroethene (total)	33	U
67-66-3	Chloroform	33	U
107-06-2	1,2-Dichloroethane	33	U
78-93-3	2-Butanone	25	J
71-55-6	1,1,1-Trichloroethane	190	J
56-23-5	Carbon Tetrachloride	33	UJ
75-27-4	Bromodichloromethane	33	UJ
78-87-5	1,2-Dichloropropane	33	UJ
10061-01-5	cis-1,3-Dichloropropene	33	UJ
79-01-6	Trichloroethene	33	UJ
124-48-1	Dibromochloromethane	33	UJ
79-00-5	1,1,2-Trichloroethane	33	UJ
71-43-2	Benzene	33	UJ
10061-02-6	trans-1,3-Dichloropropene	33	UJ
75-25-2	Bromoform	33	UJ
108-10-1	4-Methyl-2-Pentanone	33	~~UR~~
591-78-6	2-Hexanone	33	~~UR~~
127-18-4	Tetrachloroethene	33	~~UR~~
79-34-5	1,1,2,2-Tetrachloroethane	33	~~UR~~
108-88-3	Toluene	24	~~JR~~
108-90-7	Chlorobenzene	33	~~UR~~
100-41-4	Ethylbenzene	33	~~UR~~
100-42-5	Styrene	33	~~UR~~
1330-20-7	Xylene (total)	33	~~UR~~

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104DL

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348309DL

Sample wt/vol: 2.0 (g/mL) G Lab File ID: B1221LC05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 24 Date Analyzed: 12/21/93

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~~ unknown	5.28	12	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348309

Sample wt/vol: 30.9 (g/mL) G Lab File ID: A1221K05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 24 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.2

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	UJ
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	~~UR~~
83-32-9	Acenaphthene	420	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

a' Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348309

ample wt/vol: 30.9 (g/mL) G Lab File ID: A1221K05

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 24 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

njection Volume: 2.0(uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 5.2

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	UJ
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	~~UR~~
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	1300	~~BU~~
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	UJ
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	UJ
191-24-2	Benzo(g,h,i)Perylene	420	U

(1) - Cannot be separated from Diphenylamine

p. 31

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348309

ample wt/vol: 30.9 (g/mL) G Lab File ID: A1221K05

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 24 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

njection Volume: 2.0 (uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 5.2

umber TICs found: 14

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.90	2100	~~BJ~~ u
2.	UNKNOWN ALIP. HYDROCARBON	9.45	180	~~BJ~~ u
3. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.79	35000	~~JNBA~~ u
4.	UNKNOWN ALIP. HYDROCARBON	10.00	330	~~BJ~~ u
5.	UNKNOWN	10.07	360	~~BJ~~ u
6.	UNKNOWN ALIP. HYDROCARBON	10.19	170	J
7.	UNKNOWN	11.27	150	~~BJ~~ u
8.	UNKNOWN	11.42	1100	~~BJ~~ u
9.	UNKNOWN ALIP. KETONE	12.12	1600	~~BAJ~~ u
10.	UNKNOWN	13.09	680	J
11.	UNKNOWN	14.37	430	~~BJ~~ u
12.	UNKNOWN ALIP. ACID	23.75	160	~~BJ~~ u
13.	UNKNOWN	28.89	130	~~BJ~~ u
14.	UNKNOWN ALIP. ACID ESTER	33.02	18000	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348309

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

Moisture: 24 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/22/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) Y pH: 5.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.3	U
72-55-9	4,4'-DDE	4.3	U
72-20-8	Endrin	4.3	U
33213-65-9	Endosulfan II	4.3	U
50-29-3	4,4'-DDD	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	4.3	U
72-43-5	Methoxychlor	1.2	JP
53494-70-5	Endrin ketone	4.3	U
7421-36-3	Endrin aldehyde	4.3	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U

p. 57

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

b Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348310

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC08

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 21 Date Analyzed: 12/20/93

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	UJ
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	UJ
75-09-2	Methylene Chloride	17	~~B~~U
67-64-1	Acetone	13 ~~4~~	~~B~~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	4	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	UJ
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)	4	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X105

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348310

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC08

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 21 Date Analyzed: 12/20/93

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.

X105

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348310

mple wt/vol: 30.0 (g/mL) G Lab File ID: A1221K07

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 21 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

jection Volume: 2.0(uL) Dilution Factor: 1.0

C Cleanup: (Y/N) Y pH: 7.7

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	UJ
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	~~UR~~
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348310

ample wt/vol: 30.0 (g/mL) G Lab File ID: A1221K07

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 21 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

ajection Volume: 2.0 (uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 7.7

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	UJ
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	UR
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	1100	BU
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	UJ
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	UJ
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.: X105

r Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348310

mple wt/vol: 30.0 (g/mL) G Lab File ID: A1221K07

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 21 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

jection Volume: 2.0(uL) Dilution Factor: 1.0

C Cleanup: (Y/N) Y pH: 7.7

mber TICs found: 29

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.94	2300	BJ
2.	UNKNOWN ALIP. HYDROCARBON	9.49	160	~~BJ~~ U
123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.85	34000	~~JNB~~ U
4.	UNKNOWN ALIP. HYDROCARBON	10.05	320	~~BJ~~ U
5.	UNKNOWN	10.12	310	~~BJ~~ U
6.	UNKNOWN	11.30	140	~~BJ~~ U
7.	UNKNOWN	11.45	1300	~~BJ~~ U
8.	UNKNOWN	11.69	110	J
9. 3377-86-4	HEXANE, 2-BROMO-	11.79	1100	JN
10.	UNKNOWN ALIP. KETONE	12.15	1000	~~BAJ~~ U
11.	UNKNOWN	12.57	200	J
12.	UNKNOWN	13.15	4300	J
13.	UNKNOWN	14.47	4300	~~BJ~~ U
14.	UNKNOWN ALIP. HYDROCARBON	23.65	120	J
15.	UNKNOWN ALIP. ACID	23.79	170	~~BJ~~ U
16.	UNKNOWN ALIP. HYDROCARBON	25.12	420	J
17.	UNKNOWN ALIP. HYDROCARBON	26.34	150	J
18.	UNKNOWN ALIP. HYDROCARBON	27.57	240	J
19.	UNKNOWN ALIP. ACID	28.26	260	J
20.	UNKNOWN ALIP. HYDROCARBON	28.76	230	J
21.	UNKNOWN ALIP. HYDROCARBON	29.89	250	J
22.	UNKNOWN ALIP. HYDROCARBON	30.97	210	J
23.	UNKNOWN ALIP. HYDROCARBON	31.37	70	J
24.	UNKNOWN	31.99	280	J
25.	UNKNOWN ALIP. ACID ESTER	33.07	15000	J
26.	UNKNOWN	33.36	210	J
27.	UNKNOWN ALIP. HYDROCARBON	33.97	540	J
[illegible]	UNKNOWN ALIP. HYDROCARBON	36.27	230	J
29.	UNKNOWN ALIP. HYDROCARBON	39.41	1000	J

all

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

ıb Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348310

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

Moisture: 21 decanted: (Y/N) N Date Received: 12/16/93

:traction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

ɔncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/28/93

ıjection Volume: 1.00 (uL) Dilution Factor: 1.00

ᵊC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	0.64	J
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	0.51	JP
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	5.0	P
33213-65-9	Endosulfan II	4.1	U
50-29-3	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.0	J
7421-36-3	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	0.68	JP
8001-35-2	Toxaphene	220	
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	25	JP
11096-82-5	Aroclor-1260	41	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348311

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC07

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 19 Date Analyzed: 12/20/93

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	12	U
74-83-9	Bromomethane	12	UJ
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	UJ
75-09-2	Methylene Chloride	25	~~B~~U
67-64-1	Acetone	12 ~~8~~	~~BJ~~U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	J
71-55-6	1,1,1-Trichloroethane	4	J
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	UJ
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)	4	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106

' Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348311

mple wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC07

vel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 19 Date Analyzed: 12/20/93

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

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

umber 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.

X106

r Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348311

mple wt/vol: 30.1 (g/mL) G Lab File ID: A1221K06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

jection Volume: 2.0 (uL) Dilution Factor: 1.0

C Cleanup: (Y/N) Y pH: 8.1

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	UJ
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	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	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	980	UR
83-32-9	Acenaphthene	410	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348311

mple wt/vol: 30.1 (g/mL) G Lab File ID: A1221K06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

jection Volume: 2.0(uL) Dilution Factor: 1.0

C Cleanup: (Y/N) Y pH: 8.1

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	UJ
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	980	~~U~~R
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	4700	E
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	83	J
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-Butylphthalate	1200	~~B~~U
206-44-0	Fluoranthene	96	J
129-00-0	Pyrene	89	J
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	UJ
56-55-3	Benzo(a)Anthracene	410	U
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	410	U
207-08-9	Benzo(k)Fluoranthene	410	U
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1,2,3-cd)Pyrene	410	U
53-70-3	Dibenz(a,h)Anthracene	410	UJ
191-24-2	Benzo(g,h,i)Perylene	410	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106DL

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348311

mple wt/vol: 30.1 (g/mL) G Lab File ID: A1222K03

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

jection Volume: 2.0(uL) Dilution Factor: 3.0

C Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1200	U
111-44-4	bis(2-Chloroethyl)Ether	1200	U
95-57-8	2-Chlorophenol	1200	U
541-73-1	1,3-Dichlorobenzene	1200	U
106-46-7	1,4-Dichlorobenzene	1200	U
95-50-1	1,2-Dichlorobenzene	1200	U
95-48-7	2-Methylphenol	1200	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1200	U
106-44-5	4-Methylphenol	1200	U
621-64-7	N-Nitroso-Di-n-Propylamine	1200	U
67-72-1	Hexachloroethane	1200	U
98-95-3	Nitrobenzene	1200	U
78-59-1	Isophorone	1200	U
88-75-5	2-Nitrophenol	1200	U
105-67-9	2,4-Dimethylphenol	1200	U
111-91-1	bis(2-Chloroethoxy)Methane	1200	U
120-83-2	2,4-Dichlorophenol	1200	U
120-82-1	1,2,4-Trichlorobenzene	1200	U
91-20-3	Naphthalene	1200	U
106-47-8	4-Chloroaniline	1200	UJ
87-68-3	Hexachlorobutadiene	1200	U
59-50-7	4-Chloro-3-Methylphenol	1200	U
91-57-6	2-Methylnaphthalene	1200	U
77-47-4	Hexachlorocyclopentadiene	1200	U
88-06-2	2,4,6-Trichlorophenol	1200	U
95-95-4	2,4,5-Trichlorophenol	3000	U
91-58-7	2-Chloronaphthalene	1200	U
88-74-4	2-Nitroaniline	3000	U
131-11-3	Dimethylphthalate	1200	U
208-96-8	Acenaphthylene	1200	U
606-20-2	2,6-Dinitrotoluene	1200	U
99-09-2	3-Nitroaniline	3000	UJ
83-32-9	Acenaphthene	1200	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106

r Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348311

mple wt/vol: 30.1 (g/mL) G Lab File ID: A1221K06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

jection Volume: 2.0 (uL) Dilution Factor: 1.0

C Cleanup: (Y/N) Y pH: 8.1

mber TICs found: 27

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.94	2000	~~BJ~~U
2.	UNKNOWN ALIP. HYDROCARBON	9.47	140	~~BJ~~U
. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.84	32000	~~JNBA~~U
4.	UNKNOWN ALIP. HYDROCARBON	10.04	300	~~BJ~~U
5.	UNKNOWN	10.10	290	~~BJ~~U
6.	UNKNOWN	11.30	160	~~BJ~~U
7.	UNKNOWN	11.45	1200	~~BJ~~U
8.	UNKNOWN ALIP. KETONE	12.15	980	~~BAJ~~U
9.	UNKNOWN	13.15	4300	J
10.	UNKNOWN	14.47	3900	~~BJ~~U
11.	UNKNOWN ALIP. HYDROCARBON	22.20	130	J
12. 608-93-5	BENZENE, PENTACHLORO-	23.07	350	JN
13.	UNKNOWN ALIP. HYDROCARBON	23.65	120	J
14.	UNKNOWN ALIP. ACID	23.79	160	~~BJ~~U
15.	UNKNOWN ALIP. HYDROCARBON	25.12	340	J
16.	UNKNOWN ALIP. HYDROCARBON	26.32	110	J
17.	UNKNOWN ALIP. HYDROCARBON	27.57	130	J
18.	UNKNOWN	28.26	120	J
19. 29082-74-4	BENZENE, PENTACHLORO(TRICHLO	29.97	120	JN
20.	UNKNOWN ALIP. HYDROCARBON	30.96	140	J
21.	UNKNOWN ALIP. HYDROCARBON	31.99	280	J
22.	UNKNOWN	32.67	82	J
23.	UNKNOWN ALIP. ACID ESTER	33.06	12000	J
24.	UNKNOWN ALIP. HYDROCARBON	33.97	480	J
25.	UNKNOWN ALIP. HYDROCARBON	36.27	220	J
26.	UNKNOWN ALIP. HYDROCARBON	39.41	1900	J
27.	UNKNOWN PCB	40.91	320	J

If all

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106DL

Name: ILLINOIS EPA Contract: 0990000000

:b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

:trix: (soil/water) SOIL Lab Sample ID: D348311

:mple wt/vol: 30.1 (g/mL) G Lab File ID: A1222K03

:vel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

:ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

:jection Volume: 2.0(uL) Dilution Factor: 3.0

'C Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	3000	U
100-02-7	4-Nitrophenol	3000	~~U~~R
132-64-9	Dibenzofuran	1200	U
121-14-2	2,4-Dinitrotoluene	1200	U
84-66-2	Diethylphthalate	1200	U
7005-72-3	4-Chlorophenyl-phenylether	1200	U
86-73-7	Fluorene	1200	U
100-10-6	4-Nitroaniline	3000	~~U~~R
534-52-1	4,6-Dinitro-2-methylphenol	3000	U
86-30-6	N-Nitrosodiphenylamine (1)	1200	U
101-55-3	4-Bromophenyl-phenylether	1200	U
118-74-1	Hexachlorobenzene	7300	
87-86-5	Pentachlorophenol	3000	U
85-01-8	Phenanthrene	1200	U
120-12-7	Anthracene	1200	U
86-74-8	Carbazole	1200	U
84-74-2	Di-n-Butylphthalate	1200 ~~1100~~	~~BJ~~U
206-44-0	Fluoranthene	1200	U
129-00-0	Pyrene	1200	U
85-68-7	Butylbenzylphthalate	1200	U
91-94-1	3,3'-Dichlorobenzidine	1200	UJ
56-55-3	Benzo(a)Anthracene	1200	U
218-01-9	Chrysene	1200	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1200	U
117-84-0	Di-n-Octyl Phthalate	1200	U
205-99-2	Benzo(b)Fluoranthene	1200	U
207-08-9	Benzo(k)Fluoranthene	1200	U
50-32-8	Benzo(a)Pyrene	1200	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1200	U
53-70-3	Dibenz(a,h)Anthracene	1200	UJ
191-24-2	Benzo(g,h,i)Perylene	1200	U

(1) - Cannot be separated from Diphenylamine

p. 3 c

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106DL

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348311

ample wt/vol: 30.1 (g/mL) G Lab File ID: A1222K03

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 19 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

njection Volume: 2.0 (uL) Dilution Factor: 3.0

PC Cleanup: (Y/N) Y pH: 8.1

umber TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.85	2000	~~BJU~~
2. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.64	51000	~~JNBAU~~
.	UNKNOWN	11.42	880	~~BJU~~
4.	UNKNOWN ALIP. KETONE	12.12	760	~~BAJU~~
5.	UNKNOWN	13.09	5200	J
6.	UNKNOWN	14.39	3200	~~BJU~~
7.	UNKNOWN ALIP. ACID ESTER	33.01	12000	J
8.	UNKNOWN ALIP. HYDROCARBON	39.36	1700	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348311

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

Moisture: 19 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/22/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) Y pH: 8.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	35	P
319-86-8	delta-BHC	3.1	P
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	20	P
72-55-9	4,4'-DDE	7.0	
72-20-8	Endrin	14	
33213-65-9	Endosulfan II	3.8	J
50-29-3	4,4'-DDD	5.0	P
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	14	
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	35	P
7421-36-3	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	2.1	U
5103-74-2	gamma-Chlordane	3.0	P
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	88	P
11096-82-5	Aroclor-1260	130	P

p. 54.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348312

mple wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 29 Date Analyzed: 12/20/93

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

il 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	UJ
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	UJ
75-09-2	Methylene Chloride	1,412	~~BJ~~U
67-64-1	Acetone	1,410	~~BJ~~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	8	J
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	UJ
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.

X107

lame: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348312

mple wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 29 Date Analyzed: 12/20/93

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

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

umber TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

p.56

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348312

Sample wt/vol: 30.5 (g/mL) G Lab File ID: A1222K12

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 2.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-Di-n-Propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	bis(2-Chloroethoxy)Methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	UJ
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	UJ
83-32-9	Acenaphthene	460	U

p.57

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348312

ample wt/vol: 30.5 (g/mL) G Lab File ID: A1222K12

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 29 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ijection Volume: 2.0(uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 2.6

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~~R	
132-64-9	Dibenzofuran	460	U	
121-14-2	2,4-Dinitrotoluene	460	U	
84-66-2	Diethylphthalate	460	U	
7005-72-3	4-Chlorophenyl-phenylether	460	U	
86-73-7	Fluorene	460	U	
100-10-6	4-Nitroaniline	1100	~~U~~R	
534-52-1	4,6-Dinitro-2-methylphenol	1100	U	
86-30-6	N-Nitrosodiphenylamine (1)	460	U	
101-55-3	4-Bromophenyl-phenylether	460	U	
118-74-1	Hexachlorobenzene	460	U	
87-86-5	Pentachlorophenol	1100	U	
85-01-8	Phenanthrene	170	J	
120-12-7	Anthracene	460	U	
86-74-8	Carbazole	460	U	
84-74-2	Di-n-Butylphthalate	1100	~~B~~U	
206-44-0	Fluoranthene	460	U	
129-00-0	Pyrene	460	U	
85-68-7	Butylbenzylphthalate	460	U	
91-94-1	3,3'-Dichlorobenzidine	460	UJ	
56-55-3	Benzo(a)Anthracene	460	U	
218-01-9	Chrysene	460	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	460	U	
117-84-0	Di-n-Octyl Phthalate	460	U	
205-99-2	Benzo(b)Fluoranthene	460	U	
207-08-9	Benzo(k)Fluoranthene	460	U	
50-32-8	Benzo(a)Pyrene	460	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	460	U	
53-70-3	Dibenz(a,h)Anthracene	460	UJ	
191-24-2	Benzo(g,h,i)Perylene	460	U	

(1) - Cannot be separated from Diphenylamine

p. 58

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348312

ample wt/vol: 30.5 (g/mL) G Lab File ID: A1222K12

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 29 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

njection Volume: 2.0(uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 2.6

umber TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.94	1600	~~BJ~~U
2.	UNKNOWN ALIP. HYDROCARBON	9.47	200	~~BJ~~U
3. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.85	58000	~~JNBA~~U
4.	UNKNOWN	10.10	350	~~BJ~~U
5.	UNKNOWN ALIP. ALCOHOL	10.82	200	J
6.	UNKNOWN	11.30	230	~~BJ~~U
7.	UNKNOWN	11.47	1700	~~BJ~~U
8.	UNKNOWN ALIP. ALCOHOL	11.69	160	J
9.	UNKNOWN ALIP. KETONE	12.20	8800	~~BAJ~~U
10.	UNKNOWN ALIP. KETONE	12.40	930	AJ
11.	UNKNOWN	13.15	3500	J
12.	UNKNOWN	14.47	1300	~~BJ~~U
13.	UNKNOWN	16.80	180	J
14.	UNKNOWN	18.49	380	J
15.	UNKNOWN ALIP. HYDROCARBON	21.65	180	J
16.	UNKNOWN ALIP. HYDROCARBON	22.20	190	J
17.	UNKNOWN ALIP. HYDROCARBON	23.65	240	J
18.	UNKNOWN ALIP. HYDROCARBON	25.02	260	J
19.	UNKNOWN ALIP. HYDROCARBON	25.12	940	J
20.	UNKNOWN ALIP. HYDROCARBON	26.34	210	J
21.	UNKNOWN ALIP. HYDROCARBON	26.47	200	J
22.	UNKNOWN ALIP. HYDROCARBON	27.57	220	J
23.	UNKNOWN ALIP. ACID	28.27	310	J
24.	UNKNOWN ALIP. HYDROCARBON	30.97	260	J
25.	UNKNOWN ALIP. ACID ESTER	33.07	22000	J
26.	UNKNOWN	33.97	830	J
27.	UNKNOWN ALIP. HYDROCARBON	35.04	280	J
28.	UNKNOWN ALIP. HYDROCARBON	36.27	510	J
29.	UNKNOWN ALIP. HYDROCARBON	39.41	820	J
30.	UNKNOWN	51.18	4800	J

J all

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348312

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

% Moisture: 29 decanted: (Y/N) N Date Received: 12/16/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/22/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 2.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	8.9	P
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	0.42	JP
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
50-29-3	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin ketone	4.6	U
7421-36-3	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	1.1	JP
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

p. 60

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

ε Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348313

ample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC05

evel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 28 Date Analyzed: 12/20/93

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

oil 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	UJ
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	UJ
75-09-2	Methylene Chloride	29	~~B~~U
67-64-1	Acetone	27	~~B~~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	32	
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	UJ
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

p.61

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108

ı. Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348313

ımple wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC05

ɜvel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 28 Date Analyzed: 12/20/93

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

ɔil 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~~ unknown	5.10	9	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

a Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348313

ample wt/vol: 30.1 (g/mL) G Lab File ID: A1221K08

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 28 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

njection Volume: 2.0 (uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 2.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-Di-n-Propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	bis(2-Chloroethoxy)Methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	UJ
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	UR
83-32-9	Acenaphthene	460	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348313

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A1221K08

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 28 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 2.6

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	UJ
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-phenylether	460	U
86-73-7	Fluorene	460	U
100-10-6	4-Nitroaniline	1100	~~U~~ R
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-Butylphthalate	1200	~~B~~ U
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	460	U
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	UJ
56-55-3	Benzo(a)Anthracene	460	U
218-01-9	Chrysene	460	U
117-81-7	bis(2-Ethylhexyl)Phthalate	460	U
117-84-0	Di-n-Octyl Phthalate	460	U
205-99-2	Benzo(b)Fluoranthene	460	U
207-08-9	Benzo(k)Fluoranthene	460	U
50-32-8	Benzo(a)Pyrene	460	U
193-39-5	Indeno(1,2,3-cd)Pyrene	460	U
53-70-3	Dibenz(a,h)Anthracene	460	UJ
191-24-2	Benzo(g,h,i)Perylene	460	U

(1) - Cannot be separated from Diphenylamine

p.64

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108

ı Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348313

ımple wt/vol: 30.1 (g/mL) G Lab File ID: A1221K08

ɜvel: (low/med) LOW Date Received: 12/16/93

Moisture: 28 decanted: (Y/N) N Date Extracted: 12/17/93

ɔncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

ıjection Volume: 2.0 (uL) Dilution Factor: 1.0

ɔC Cleanup: (Y/N) Y pH: 2.6

ımber TICs found: 26

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.94	2100	~~BJ~~ U
2.	UNKNOWN ALIP. HYDROCARBON	9.50	180	~~BJ~~ U
3. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.82	36000	~~JNB~~ AU
4.	UNKNOWN ALIP. HYDROCARBON	10.05	320	~~BJ~~ U
5.	UNKNOWN	10.12	300	~~BJ~~ U
6.	UNKNOWN	11.32	170	~~BJ~~ U
7.	UNKNOWN	11.47	1300	~~BJ~~ U
8.	UNKNOWN ALIP. KETONE	12.19	3600	~~BAJ~~ U
9.	UNKNOWN ALIP. KETONE	12.39	780	AJ
10. 620-02-0	~~2FURANCARBOXALDEHYDE, 5METHYL~~ Unknown	12.57	100	JN
11.	UNKNOWN	13.15	2900	J
12.	UNKNOWN	14.44	1200	~~BJ~~ U
13.	UNKNOWN	16.80	120	J
14.	UNKNOWN ALIP. HYDROCARBON	22.22	120	J
15.	UNKNOWN ALIP. ACID	23.80	180	~~BJ~~ U
16.	UNKNOWN ALIP. HYDROCARBON	25.12	170	J
17.	UNKNOWN ALIP. ACID	28.27	260	J
18.	UNKNOWN ALIP. HYDROCARBON	32.01	210	J
19.	UNKNOWN ALIP. ACID ESTER	33.07	16000	J
20.	UNKNOWN ALIP. HYDROCARBON	33.99	510	J
21.	UNKNOWN ALIP. HYDROCARBON	34.01	490	J
22.	UNKNOWN ALIP. HYDROCARBON	36.29	210	J
23.	UNKNOWN ALIP. HYDROCARBON	39.41	690	J
24.	UNKNOWN ALIP. HYDROCARBON	43.91	670	J
25.	UNKNOWN	51.21	4200	J
26.	UNKNOWN	52.26	2300	J

J all

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348313

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

Moisture: 28 decanted: (Y/N) N Date Received: 12/16/93

:traction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

ɔncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/22/93

ıjection Volume: 1.00 (uL) Dilution Factor: 1.00

'C Cleanup: (Y/N) Y pH: 2.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	1.8	JP
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	2.3	U
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	2.3	U
60-57-1	Dieldrin	4.5	U
72-55-9	4,4'-DDE	4.5	U
72-20-8	Endrin	4.5	U
33213-65-9	Endosulfan II	4.5	U
50-29-3	4,4'-DDD	4.5	U
1031-07-8	Endosulfan sulfate	4.5	U
50-29-3	4,4'-DDT	4.5	U
72-43-5	Methoxychlor	23	U
53494-70-5	Endrin ketone	4.5	U
7421-36-3	Endrin aldehyde	4.5	U
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	2.3	U
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	92	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U

p.66

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348314

mple wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC04

vel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 23 Date Analyzed: 12/20/93

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

il 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	UJ
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	UJ
75-09-2	Methylene Chloride	36	~~B~~U
67-64-1	Acetone	16	~~B~~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	19	
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	UJ
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

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348314

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B1220LC04

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 23 Date Analyzed: 12/20/93

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~~ unknown	5.18	8	JN

p.68

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Name: ILLINOIS EPA Contract: 0990000000

b Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

trix: (soil/water) SOIL Lab Sample ID: D348314

mple wt/vol: 30.2 (g/mL) G Lab File ID: A1222K07

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 23 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

jection Volume: 2.0(uL) Dilution Factor: 3.0

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

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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348314

Sample wt/vol: 30.2 (g/mL) G Lab File ID: A1222K07

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 23 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0 (uL) Dilution Factor: 3.0

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	3100	U
100-02-7	4-Nitrophenol	3100	~~U~~R
132-64-9	Dibenzofuran	1300	U
121-14-2	2,4-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	1300	U
7005-72-3	4-Chlorophenyl-phenylether	1300	U
86-73-7	Fluorene	1300	U
100-10-6	4-Nitroaniline	3100	~~U~~R
534-52-1	4,6-Dinitro-2-methylphenol	3100	U
86-30-6	N-Nitrosodiphenylamine (1)	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
87-86-5	Pentachlorophenol	3100	U
85-01-8	Phenanthrene	620	J
120-12-7	Anthracene	1300	U
86-74-8	Carbazole	1300	U
84-74-2	Di-n-Butylphthalate	1300 ~~700~~	~~B~~U
206-44-0	Fluoranthene	770	J
129-00-0	Pyrene	800	J
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3,3'-Dichlorobenzidine	1300	UJ
56-55-3	Benzo(a)Anthracene	1300	U
218-01-9	Chrysene	340	J
117-81-7	bis(2-Ethylhexyl)Phthalate	1300	U
117-84-0	Di-n-Octyl Phthalate	1300	U
205-99-2	Benzo(b)Fluoranthene	1300	U
207-08-9	Benzo(k)Fluoranthene	1300	U
50-32-8	Benzo(a)Pyrene	1300	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1300	U
53-70-3	Dibenz(a,h)Anthracene	1300	UJ
191-24-2	Benzo(g,h,i)Perylene	1300	U

(1) - Cannot be separated from Diphenylamine

p. 70

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X109

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348314

ample wt/vol: 30.2 (g/mL) G Lab File ID: A1222K07

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 23 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

njection Volume: 2.0(uL) Dilution Factor: 3.0

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

umber TICs found: 28

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.87	1700	~~BJ~~ U
2. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.64	43000	~~JNBA~~ U
.	UNKNOWN	11.42	820	~~BJ~~ U
4.	UNKNOWN ALIP. KETONE	12.12	680	~~BAJ~~ U
5.	UNKNOWN	13.10	5000	J
6.	UNKNOWN	14.40	2300	~~BJ~~ U
7.	UNKNOWN ALIP. HYDROCARBON	23.64	310	J
8.	UNKNOWN ALIP. HYDROCARBON	25.11	1100	J
9.	UNKNOWN ALIP. HYDROCARBON	26.31	350	J
10.	UNKNOWN ALIP. HYDROCARBON	26.46	440	J
11.	UNKNOWN ALIP. HYDROCARBON	27.56	520	J
12.	UNKNOWN ALIP. HYDROCARBON	28.74	500	J
13.	UNKNOWN ALIP. HYDROCARBON	29.86	450	J
14.	UNKNOWN ALIP. HYDROCARBON	30.94	630	J
15.	UNKNOWN ALIP. HYDROCARBON	31.36	550	J
16.	UNKNOWN	31.99	660	J
17.	UNKNOWN PNA	32.01	370	J
18.	UNKNOWN ALIP. HYDROCARBON	32.19	510	J
19.	UNKNOWN	32.36	290	J
20.	UNKNOWN ALIP. ACID ESTER	33.04	11000	J
21.	UNKNOWN	33.32	290	J
22.	UNKNOWN ALIP. HYDROCARBON	33.96	1800	J
23.	UNKNOWN	35.77	890	J
24.	UNKNOWN	36.26	660	J
25.	UNKNOWN	36.82	610	J
26.	UNKNOWN	39.27	600	J
27.	UNKNOWN	39.39	1100	J
.	UNKNOWN	45.34	710	J

Jall

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348314

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

Moisture: 23 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/27/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	1.2	JP
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.6	P
72-55-9	4,4'-DDE	4.3	U
72-20-8	Endrin	8.7	P
33213-65-9	Endosulfan II	4.3	U
50-29-3	4,4'-DDD	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	4.3	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.3	U
7421-36-3	Endrin aldehyde	4.3	U
5103-71-9	alpha-Chlordane	1.1	JP
5103-74-2	gamma-Chlordane	1.3	JP
8001-35-2	Toxaphene	810	
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	100	P
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	80	
11096-82-5	Aroclor-1260	37	J

p. 1c

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X201

ıb Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348301

ımple wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK04

ıvel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 34 Date Analyzed: 12/20/93

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

ıil 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 ~~25~~	~~BJ~~ U
67-64-1	Acetone	20	
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	5	J
71-55-6	1,1,1-Trichloroethane	15	UJ
56-23-5	Carbon Tetrachloride	15	UJ
75-27-4	Bromodichloromethane	15	UJ
78-87-5	1,2-Dichloropropane	15	UJ
10061-01-5	cis-1,3-Dichloropropene	15	UJ
79-01-6	Trichloroethene	15	UJ
124-48-1	Dibromochloromethane	15	UJ
79-00-5	1,1,2-Trichloroethane	15	UJ
71-43-2	Benzene	15	UJ
10061-02-6	trans-1,3-Dichloropropene	15	UJ
75-25-2	Bromoform	15	UJ
108-10-1	4-Methyl-2-Pentanone	15	UJ
591-78-6	2-Hexanone	15	UJ
127-18-4	Tetrachloroethene	15	UJ
79-34-5	1,1,2,2-Tetrachloroethane	15	UJ
108-88-3	Toluene	15	UJ
108-90-7	Chlorobenzene	15	UJ
100-41-4	Ethylbenzene	15	UJ
100-42-5	Styrene	15	UJ
1330-20-7	Xylene (total)	15	UJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X201

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348301

ample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK04

evel: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 34 Date Analyzed: 12/20/93

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

oil 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.

X201

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348301

ample wt/vol: 30.8 (g/mL) G Lab File ID: A1223E03

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 34 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/23/93

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

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	UJ
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	UJ
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	U
83-32-9	Acenaphthene	490	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X201

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348301

Sample wt/vol: 30.8 (g/mL) G Lab File ID: A1223E03

Level: (low/med) LOW Date Received: 12/16/93

Moisture: 34 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

Cleanup: (Y/N) Y pH: 7.4

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

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	UJ
132-64-9	Dibenzofuran	490	U
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	100	J
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	490	U
100-10-6	4-Nitroaniline	1200	~~U~~R
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	670	~~B~~U
206-44-0	Fluoranthene	490	U
129-00-0	Pyrene	490	U
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.

X201

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348301

ample wt/vol: 30.8 (g/mL) G Lab File ID: A1223E03

evel: (low/med) LOW Date Received: 12/16/93

Moisture: 34 decanted: (Y/N) N Date Extracted: 12/17/93

oncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/23/93

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

umber TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.92	2700	~~BJ~~U
2. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.80	64000	~~JNBA~~U
3.	UNKNOWN ALIP. HYDROCARBON	10.02	420	~~BJ~~U
4.	UNKNOWN	11.45	1500	~~BJ~~U
5.	UNKNOWN ALIP. KETONE	12.15	1900	~~BAJ~~U
6.	UNKNOWN	12.90	530	J
7.	UNKNOWN	13.15	6900	J
8.	UNKNOWN	14.47	6500	~~BJ~~U
9.	UNKNOWN	21.14	300	J
10.	UNKNOWN ALIP. ACID	23.79	490	~~BJ~~U
11.	UNKNOWN	24.82	1400	J
12.	UNKNOWN	28.09	370	J
13.	UNKNOWN ALIP. ACID	28.26	740	J
14.	UNKNOWN	29.67	3300	J
15.	UNKNOWN	30.14	470	J
16.	UNKNOWN ALIP. HYDROCARBON	31.99	440	J
17.	UNKNOWN ALIP. ACID ESTER	33.04	2100	J
18.	UNKNOWN	33.29	600	J
19.	UNKNOWN ALIP. HYDROCARBON	33.96	1600	J
20.	UNKNOWN	34.01	510	J
21.	UNKNOWN	34.47	420	J
22.	UNKNOWN	35.89	350	J
23.	UNKNOWN ALIP. HYDROCARBON	36.26	1500	J
24.	UNKNOWN	38.41	1600	J
25.	UNKNOWN ALIP. HYDROCARBON	39.37	4800	J
26.	UNKNOWN ALIP. HYDROCARBON	39.52	2400	J
27.	UNKNOWN	42.49	600	J
28.	UNKNOWN ALIP. HYDROCARBON	43.84	2400	J
29.	UNKNOWN	45.86	560	J
30.	UNKNOWN	46.49	710	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X201

ab Name: ILLINOIS EPA Contract: 0990000000

ab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

atrix: (soil/water) SOIL Lab Sample ID: D348301

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

Moisture: 34 decanted: (Y/N) N Date Received: 12/16/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

oncentrated Extract Volume: 5000 (uL) Date Analyzed: 12/21/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.6	U
319-85-7	beta-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
76-44-8	Heptachlor	2.6	U
309-00-2	Aldrin	2.6	U
1024-57-3	Heptachlor epoxide	2.6	U
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	1.5	J
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
50-29-3	4,4'-DDD	5.0	U
1031-07-8	Endosulfan sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	26	U
53494-70-5	Endrin ketone	5.0	U
7421-36-3	Endrin aldehyde	5.0	U
5103-71-9	alpha-Chlordane	0.62	J
5103-74-2	gamma-Chlordane	2.6	U
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X202RE

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348302RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1221BK05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 39 Date Analyzed: 12/21/93

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	16	U
74-83-9	Bromomethane	16	U
75-01-4	Vinyl Chloride	16	U
75-00-3	Chloroethane	16	UJ
75-09-2	Methylene Chloride	16 ~~10~~	~~BJ~~ U
67-64-1	Acetone	13	J
75-15-0	Carbon Disulfide	16	U
75-35-4	1,1-Dichloroethene	16	U
75-34-3	1,1-Dichloroethane	16	U
540-59-0	1,2-Dichloroethene (total)	16	U
67-66-3	Chloroform	16	U
107-06-2	1,2-Dichloroethane	16	U
78-93-3	2-Butanone	4	J
71-55-6	1,1,1-Trichloroethane	16	U
56-23-5	Carbon Tetrachloride	16	U
75-27-4	Bromodichloromethane	16	U
78-87-5	1,2-Dichloropropane	16	U
10061-01-5	cis-1,3-Dichloropropene	16	U
79-01-6	Trichloroethene	16	U
124-48-1	Dibromochloromethane	16	U
79-00-5	1,1,2-Trichloroethane	16	U
71-43-2	Benzene	16	U
10061-02-6	trans-1,3-Dichloropropene	16	U
75-25-2	Bromoform	16	U
108-10-1	4-Methyl-2-Pentanone	16	UJ
591-78-6	2-Hexanone	16	UJ
127-18-4	Tetrachloroethene	16	UJ
79-34-5	1,1,2,2-Tetrachloroethane	16	UJ
108-88-3	Toluene	16	UJ
108-90-7	Chlorobenzene	16	UJ
100-41-4	Ethylbenzene	16	UJ
100-42-5	Styrene	16	UJ
1330-20-7	Xylene (total)	16	UJ

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X202RE

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348302RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1221BK05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 39 Date Analyzed: 12/21/93

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.

X202

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348302

Sample wt/vol: 31.0 (g/mL) G Lab File ID: A1222K05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 39 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	520	U
111-44-4	bis(2-Chloroethyl)Ether	520	U
95-57-8	2-Chlorophenol	520	U
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	520	U
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-oxybis(1-Chloropropane)	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-Di-n-Propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	bis(2-Chloroethoxy)Methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	520	U
91-20-3	Naphthalene	520	U
106-47-8	4-Chloroaniline	520	UJ
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-Methylphenol	520	U
91-57-6	2-Methylnaphthalene	520	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	520	U
208-96-8	Acenaphthylene	520	U
606-20-2	2,6-Dinitrotoluene	520	U
99-09-2	3-Nitroaniline	1300	UJ
83-32-9	Acenaphthene	520	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X202

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348302

Sample wt/vol: 31.0 (g/mL) G Lab File ID: A1222K05

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 39 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	~~U~~R
132-64-9	Dibenzofuran	520	U
121-14-2	2,4-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
7005-72-3	4-Chlorophenyl-phenylether	520	U
86-73-7	Fluorene	520	U
100-10-6	4-Nitroaniline	1300	~~U~~R
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamine (1)	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	520	U
120-12-7	Anthracene	520	U
86-74-8	Carbazole	520	U
84-74-2	Di-n-Butylphthalate	670	~~B~~U
206-44-0	Fluoranthene	520	U
129-00-0	Pyrene	520	U
85-68-7	Butylbenzylphthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	UJ
56-55-3	Benzo(a)Anthracene	520	U
218-01-9	Chrysene	520	U
117-81-7	bis(2-Ethylhexyl)Phthalate	520	U
117-84-0	Di-n-Octyl Phthalate	520	U
205-99-2	Benzo(b)Fluoranthene	520	U
207-08-9	Benzo(k)Fluoranthene	520	U
50-32-8	Benzo(a)Pyrene	520	U
193-39-5	Indeno(1,2,3-cd)Pyrene	520	U
53-70-3	Dibenz(a,h)Anthracene	520	UJ
191-24-2	Benzo(g,h,i)Perylene	520	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X202

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ix: (soil/water) SOIL Lab Sample ID: D348302

le wt/vol: 31.0 (g/mL) G Lab File ID: A1222K05

l: (low/med) LOW Date Received: 12/16/93

isture: 39 decanted: (Y/N) N Date Extracted: 12/17/93

entrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ction Volume: 2.0(uL) Dilution Factor: 1.0

Cleanup: (Y/N) Y pH: 7.3

er TICs found: 29

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

AS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
.	UNKNOWN	8.95	2100	~~BJ~~ u
. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.82	37000	~~JNBA~~ u
.	UNKNOWN ALIP. HYDROCARBON	10.05	350	~~BJ~~ u
.	UNKNOWN	10.12	340	~~BJ~~ u
.	UNKNOWN	11.32	230	~~BJ~~ u
.	UNKNOWN	11.47	1200	~~BJ~~ u
.	UNKNOWN ALIP. KETONE	12.15	1300	~~BAJ~~ u
.	UNKNOWN	12.59	320	J
.	UNKNOWN	13.17	6000	J
.	UNKNOWN	14.47	4000	~~BJ~~
.	UNKNOWN ALIP. ACID	23.82	450	~~BJ~~ u
.	UNKNOWN ALIP. ACID	28.29	1500	J
.	UNKNOWN	29.71	290	J
.	UNKNOWN	30.17	540	J
.	UNKNOWN ALIP. HYDROCARBON	32.01	650	J
.	UNKNOWN ALIP. ACID ESTER	33.07	1500	J
.	UNKNOWN ALIP. HYDROCARBON	33.99	3100	J
.	UNKNOWN	35.06	400	J
.	UNKNOWN	35.56	300	J
.	UNKNOWN ALIP. HYDROCARBON	36.29	3000	J
.	UNKNOWN ALIP. HYDROCARBON	37.71	340	J
.	UNKNOWN	38.46	2600	J
.	UNKNOWN ALIP. HYDROCARBON	39.42	6900	J
.	UNKNOWN	39.57	3100	J
.	UNKNOWN	42.56	1400	J
.	UNKNOWN ALIP. HYDROCARBON	43.91	2700	J
.	UNKNOWN	44.23	950	J
	UNKNOWN	46.59	1100	J
.	UNKNOWN	48.64	490	J

Fall

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X202

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ix: (soil/water) SOIL Lab Sample ID: D348302

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

isture: 39 decanted: (Y/N) N Date Received: 12/16/93

action: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

entrated Extract Volume: 5000 (uL) Date Analyzed: 12/21/93

ction Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.7	U
319-85-7	beta-BHC	2.7	U
319-86-8	delta-BHC	1.2	JP
58-89-9	gamma-BHC (Lindane)	2.7	U
76-44-8	Heptachlor	2.7	U
309-00-2	Aldrin	2.7	U
1024-57-3	Heptachlor epoxide	2.7	U
959-98-8	Endosulfan I	2.7	U
60-57-1	Dieldrin	6.5	P
72-55-9	4,4'-DDE	5.3	U
72-20-8	Endrin	7.8	
33213-65-9	Endosulfan II	5.3	U
50-29-3	4,4'-DDD	2.7	JP
1031-07-8	Endosulfan sulfate	5.3	U
50-29-3	4,4'-DDT	1.6	JP
72-43-5	Methoxychlor	27	U
53494-70-5	Endrin ketone	5.3	U
7421-36-3	Endrin aldehyde	5.3	U
5103-71-9	alpha-Chlordane	3.5	
5103-74-2	gamma-Chlordane	1.4	JP
8001-35-2	Toxaphene	270	U
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	96	
11096-82-5	Aroclor-1260	33	JP

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. p.87

X203

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ix: (soil/water) SOIL Lab Sample ID: D348303

le wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK06

l: (low/med) LOW Date Received: 12/16/93

isture: not dec. 24 Date Analyzed: 12/20/93

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

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	~~BJ~~ U
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	UJ
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	UJ
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	13	UJ
108-90-7	Chlorobenzene	13	UJ
100-41-4	Ethylbenzene	13	UJ
100-42-5	Styrene	13	UJ
1330-20-7	Xylene (total)	13	UJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X203

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348303

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK06

Level: (low/med) LOW Date Received: 12/16/93

Moisture: not dec. 24 Date Analyzed: 12/20/93

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

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.

X203

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348303

Sample wt/vol: 30.7 (g/mL) G Lab File ID: A1221K09

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 24 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	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	UJ
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	UR
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X203

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ix: (soil/water) SOIL Lab Sample ID: D348303

le wt/vol: 30.7 (g/mL) G Lab File ID: A1221K09

l: (low/med) LOW Date Received: 12/16/93

isture: 24 decanted: (Y/N) N Date Extracted: 12/17/93

entrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ction Volume: 2.0(uL) Dilution Factor: 1.0

Cleanup: (Y/N) Y pH: 7.3

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	UJ
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	UR
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	610	BU
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	UJ
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	UJ
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.

X203

ıh Name: ILLINOIS EPA Contract: 0990000000

ıb Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

ıtrix: (soil/water) SOIL Lab Sample ID: D348303

ımple wt/vol: 30.7 (g/mL) G Lab File ID: A1221K09

ɜvel: (low/med) LOW Date Received: 12/16/93

Moisture: 24 decanted: (Y/N) N Date Extracted: 12/17/93

ɔncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

ıjection Volume: 2.0(uL) Dilution Factor: 1.0

ɟC Cleanup: (Y/N) Y pH: 7.3

ımber TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.92	1100	~~BJ~~ u
2.	UNKNOWN ALIP. HYDROCARBON	9.47	140	~~BJ~~ u
3. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.84	29000	~~JNBA~~ u
4.	UNKNOWN ALIP. HYDROCARBON	10.02	340	~~BJ~~ u
5.	UNKNOWN	10.09	270	~~BJ~~ u
6.	UNKNOWN	11.29	150	~~BJ~~ u
7.	UNKNOWN	11.44	1100	~~BJ~~ u
8. 3377-86-4	HEXANE, 2-BROMO-	11.77	780	JN
9.	UNKNOWN ALIP. KETONE	12.12	850	~~BAJ~~ u
10.	UNKNOWN	13.15	4000	J
11.	UNKNOWN	14.45	3700	~~BJ~~
12.	UNKNOWN ALIP. ACID	23.77	290	~~BJ~~ u
13.	UNKNOWN ALIP. HYDROCARBON	25.00	160	J
14.	UNKNOWN ALIP. HYDROCARBON	25.09	170	J
15.	UNKNOWN ALIP. ACID	28.26	650	J
16.	UNKNOWN	29.54	130	J
17.	UNKNOWN	29.67	180	J
18.	UNKNOWN	30.12	150	J
19.	UNKNOWN ALIP. HYDROCARBON	31.97	320	J
20.	UNKNOWN ALIP. ACID ESTER	33.04	3800	J
21.	UNKNOWN ALIP. HYDROCARBON	33.96	1000	J
22.	UNKNOWN	35.52	120	J
23.	UNKNOWN ALIP. HYDROCARBON	36.26	1400	J
24.	UNKNOWN ALIP. HYDROCARBON	36.34	320	J
25.	UNKNOWN	38.42	870	J
26.	UNKNOWN ALIP. HYDROCARBON	39.39	4400	J
27.	UNKNOWN	39.56	1400	J
28.	UNKNOWN	42.54	680	J
29.	UNKNOWN ALIP. HYDROCARBON	43.89	2200	J
30.	UNKNOWN	48.59	500	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X203

Name: ILLINOIS EPA Contract: 0990000000

Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

rix: (soil/water) SOIL Lab Sample ID: D348303

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

oisture: 24 decanted: (Y/N) N Date Received: 12/16/93

raction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

centrated Extract Volume: 5000 (uL) Date Analyzed: 12/21/93

ection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	1.0	JP
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	5.2	P
72-55-9	4,4'-DDE	4.3	U
72-20-8	Endrin	6.6	
33213-65-9	Endosulfan II	4.3	U
50-29-3	4,4'-DDD	1.6	JP
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	1.7	JP
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	1.4	J
7421-36-3	Endrin aldehyde	4.3	U
5103-71-9	alpha-Chlordane	2.8	
5103-74-2	gamma-Chlordane	0.97	JP
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	75	P
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	82	
11096-82-5	Aroclor-1260	23	JP

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X204

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK07

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 29 Date Analyzed: 12/20/93

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	~~13~~ 14	~~BJ~~ U
67-64-1	Acetone	15	
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	3	J
71-55-6	1,1,1-Trichloroethane	14	UJ
56-23-5	Carbon Tetrachloride	14	UJ
75-27-4	Bromodichloromethane	14	UJ
78-87-5	1,2-Dichloropropane	14	UJ
10061-01-5	cis-1,3-Dichloropropene	14	UJ
79-01-6	Trichloroethene	14	UJ
124-48-1	Dibromochloromethane	14	UJ
79-00-5	1,1,2-Trichloroethane	14	UJ
71-43-2	Benzene	14	UJ
10061-02-6	trans-1,3-Dichloropropene	14	UJ
75-25-2	Bromoform	14	UJ
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	UJ
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.

X204

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK07

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 29 Date Analyzed: 12/20/93

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.

X204

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A1221K10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-Di-n-Propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	bis(2-Chloroethoxy)Methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	UJ
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1100	~~U~~R
83-32-9	Acenaphthene	460	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X204

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A1221K10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

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	UJ
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-phenylether	460	U
86-73-7	Fluorene	460	U
100-10-6	4-Nitroaniline	1100	~~UR~~
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-Butylphthalate	930	~~B~~ U
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	460	U
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	UJ
56-55-3	Benzo(a)Anthracene	460	U
218-01-9	Chrysene	460	U
117-81-7	bis(2-Ethylhexyl)Phthalate	460	U
117-84-0	Di-n-Octyl Phthalate	460	U
205-99-2	Benzo(b)Fluoranthene	460	U
207-08-9	Benzo(k)Fluoranthene	460	U
50-32-8	Benzo(a)Pyrene	460	U
193-39-5	Indeno(1,2,3-cd)Pyrene	460	U
53-70-3	Dibenz(a,h)Anthracene	460	UJ
191-24-2	Benzo(g,h,i)Perylene	460	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

p.94

EPA SAMPLE NO.

X204

Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A1221K10

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 22

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.94	1300	~~BJ~~ U
2.	UNKNOWN ALIP. HYDROCARBON	9.47	200	~~BJ~~ U
3. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.87	37000	~~JNB~~ AU
4.	UNKNOWN ALIP. HYDROCARBON	10.04	380	~~BJ~~ U
5.	UNKNOWN	10.10	400	~~BJ~~ U
6.	UNKNOWN	11.30	210	~~BJ~~ U
7.	UNKNOWN	11.45	1500	~~BJ~~ U
8.	UNKNOWN	11.67	150	J
9.	UNKNOWN ALIP. KETONE	12.14	910	~~BAJ~~ U
10.	UNKNOWN	12.90	830	J
11.	UNKNOWN	13.15	5500	J
12.	UNKNOWN	14.47	4400	~~BJ~~
13.	UNKNOWN ALIP. ACID	23.79	290	~~BJ~~ U
14.	UNKNOWN ALIP. HYDROCARBON	25.11	140	J
15.	UNKNOWN ALIP. ACID	28.26	280	J
16.	UNKNOWN ALIP. ACID ESTER	33.04	9400	J
17.	UNKNOWN	33.96	720	J
18.	UNKNOWN ALIP. HYDROCARBON	36.27	650	J
19.	UNKNOWN	38.44	980	J
20.	UNKNOWN ALIP. HYDROCARBON	39.41	1600	J
21.	UNKNOWN	39.57	1200	J
22.	UNKNOWN ALIP. HYDROCARBON	43.89	1100	J

Jall

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X204

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304

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

% Moisture: 29 decanted: (Y/N) N Date Received: 12/16/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/21/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	1.0	JP
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	17	P
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	67	
33213-65-9	Endosulfan II	4.6	U
50-29-3	4,4'-DDD	9.7	P
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	9.2	P
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin ketone	4.6	U
7421-36-3	Endrin aldehyde	9.8	
5103-71-9	alpha-Chlordane	17	P
5103-74-2	gamma-Chlordane	5.1	P
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	810	
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	820	
11096-82-5	Aroclor-1260	180	P

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X204DL

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348304D

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

% Moisture: 29 decanted: (Y/N) N Date Received: 12/16/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/22/93

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	24	U
319-85-7	beta-BHC	24	U
319-86-8	delta-BHC	24	U
58-89-9	gamma-BHC (Lindane)	24	U
76-44-8	Heptachlor	24	U
309-00-2	Aldrin	24	U
1024-57-3	Heptachlor epoxide	24	U
959-98-8	Endosulfan I	24	U
60-57-1	Dieldrin	20	JPD
72-55-9	4,4'-DDE	46	U
72-20-8	Endrin	78	D
33213-65-9	Endosulfan II	46	U
50-29-3	4,4'-DDD	9.8	JPD
1031-07-8	Endosulfan sulfate	46	U
50-29-3	4,4'-DDT	10	JPD
72-43-5	Methoxychlor	240	U
53494-70-5	Endrin ketone	46	U
7421-36-3	Endrin aldehyde	11	DJ
5103-71-9	alpha-Chlordane	21	DJ
5103-74-2	gamma-Chlordane	5.6	JPD
8001-35-2	Toxaphene	2400	U
12674-11-2	Aroclor-1016	460	U
11104-28-2	Aroclor-1221	930	U
11141-16-5	Aroclor-1232	460	U
53469-21-9	Aroclor-1242	1100	D
12672-29-6	Aroclor-1248	460	U
11097-69-1	Aroclor-1254	920	D
11096-82-5	Aroclor-1260	210	JPD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X205

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348305

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK08

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 32 Date Analyzed: 12/20/93

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	~~22~~ 15	~~BJU~~
67-64-1	Acetone	15	U
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	UJ
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	UJ
108-10-1	4-Methyl-2-Pentanone	15	UJ
591-78-6	2-Hexanone	15	UJ
127-18-4	Tetrachloroethene	15	UJ
79-34-5	1,1,2,2-Tetrachloroethane	15	UJ
108-88-3	Toluene	15	UJ
108-90-7	Chlorobenzene	15	UJ
100-41-4	Ethylbenzene	15	UJ
100-42-5	Styrene	15	UJ
1330-20-7	Xylene (total)	15	UJ

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X205

Job Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348305

Sample wt/vol: 5.0 (g/mL) G Lab File ID: C1220BK08

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: not dec. 32 Date Analyzed: 12/20/93

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.

X205

I Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348305

Sample wt/vol: 30.2 (g/mL) G Lab File ID: A1222K06

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 32 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0(uL) Dilution Factor: 3.0

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	1400	U
111-44-4	bis(2-Chloroethyl)Ether	1400	U
95-57-8	2-Chlorophenol	1400	U
541-73-1	1,3-Dichlorobenzene	1400	U
106-46-7	1,4-Dichlorobenzene	1400	U
95-50-1	1,2-Dichlorobenzene	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1400	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-Di-n-Propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	bis(2-Chloroethoxy)Methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
120-82-1	1,2,4-Trichlorobenzene	1400	U
91-20-3	Naphthalene	1400	U
106-47-8	4-Chloroaniline	1400	UJ
87-68-3	Hexachlorobutadiene	1400	U
59-50-7	4-Chloro-3-Methylphenol	1400	U
91-57-6	2-Methylnaphthalene	1400	U
77-47-4	Hexachlorocyclopentadiene	1400	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	3500	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	3500	U
131-11-3	Dimethylphthalate	1400	U
208-96-8	Acenaphthylene	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U
99-09-2	3-Nitroaniline	3500	UJ
83-32-9	Acenaphthene	1400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X205

ɔ Name: ILLINOIS EPA Contract: 0990000000

ɔ Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

:rix: (soil/water) SOIL Lab Sample ID: D348305

nple wt/vol: 30.2 (g/mL) G Lab File ID: A1222K06

vel: (low/med) LOW Date Received: 12/16/93

Moisture: 32 decanted: (Y/N) N Date Extracted: 12/17/93

ncentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

jection Volume: 2.0 (uL) Dilution Factor: 3.0

: 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	3500	U
100-02-7	4-Nitrophenol	3500	~~U~~ R
132-64-9	Dibenzofuran	1400	U
121-14-2	2,4-Dinitrotoluene	1400	U
84-66-2	Diethylphthalate	1400	U
7005-72-3	4-Chlorophenyl-phenylether	1400	U
86-73-7	Fluorene	1400	U
100-10-6	4-Nitroaniline	3500	~~U~~ R
534-52-1	4,6-Dinitro-2-methylphenol	3500	U
86-30-6	N-Nitrosodiphenylamine (1)	1400	U
101-55-3	4-Bromophenyl-phenylether	1400	U
118-74-1	Hexachlorobenzene	1400	U
87-86-5	Pentachlorophenol	3500	U
85-01-8	Phenanthrene	1400	U
120-12-7	Anthracene	1400	U
86-74-8	Carbazole	1400	U
84-74-2	Di-n-Butylphthalate	970	~~BJ~~ U
206-44-0	Fluoranthene	1400	U
129-00-0	Pyrene	1400	U
85-68-7	Butylbenzylphthalate	1400	U
91-94-1	3,3'-Dichlorobenzidine	1400	UJ
56-55-3	Benzo(a)Anthracene	1400	U
218-01-9	Chrysene	1400	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1400	U
117-84-0	Di-n-Octyl Phthalate	1400	U
205-99-2	Benzo(b)Fluoranthene	1400	U
207-08-9	Benzo(k)Fluoranthene	1400	U
50-32-8	Benzo(a)Pyrene	1400	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1400	U
53-70-3	Dibenz(a,h)Anthracene	1400	UJ
191-24-2	Benzo(g,h,i)Perylene	1400	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X205

b Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348305

Sample wt/vol: 30.2 (g/mL) G Lab File ID: A1222K06

Level: (low/med) LOW Date Received: 12/16/93

% Moisture: 32 decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/22/93

Injection Volume: 2.0 (uL) Dilution Factor: 3.0

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

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2PENTANONE, 4HYDROXY-4METHYL	9.65	60000	~~JNBA~~ U
2.	UNKNOWN	11.45	1100	~~BJ~~ U
3.	UNKNOWN	13.12	7100	J
4.	UNKNOWN	14.40	3600	~~BJ~~
5.	UNKNOWN ALIP. ACID	28.26	450	J
6.	UNKNOWN	30.14	1000	J
7.	UNKNOWN ALIP. ACID ESTER	33.04	13000	J
8.	UNKNOWN ALIP. HYDROCARBON	33.97	800	J
9.	UNKNOWN ALIP. HYDROCARBON	36.26	700	J
10.	UNKNOWN	38.42	1600	J
11.	UNKNOWN ALIP. HYDROCARBON	39.37	3400	J
12.	UNKNOWN	39.57	2100	J

p.10a

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X205

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348305

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

% Moisture: 32 decanted: (Y/N) N Date Received: 12/16/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/16/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/21/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	3.0	
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	2.4	JP
72-55-9	4,4'-DDE	1.4	JP
72-20-8	Endrin	2.6	J
33213-65-9	Endosulfan II	4.8	U
50-29-3	4,4'-DDD	0.79	JP
1031-07-8	Endosulfan sulfate	4.8	U
50-29-3	4,4'-DDT	1.3	JP
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.8	U
7421-36-3	Endrin aldehyde	4.8	U
5103-71-9	alpha-Chlordane	1.1	J
5103-74-2	gamma-Chlordane	0.56	JP
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	97	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	38	JP
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	32	J
11096-82-5	Aroclor-1260	12	JP

p. 103

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

EPA SAMPLE NO.

X101

ıb Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ıb Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
ıtrix (Soil): ——— Lab Sample ID: -B319629-
ɜvel (Low/Med): ——— Date Received: 12/16/93
Solids: -82.5-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	4860			P	
7440-36-0	Antimony	10.9	U	N	P	J
7440-38-2	Arsenic	5.5			FM	
7440-39-3	Barium	36.8	B		P	
7440-41-7	Beryllium	0.39	B		P	
7440-43-9	Cadmium	0.87	B		P	
7440-70-2	Calcium	11800			P	
7440-47-3	Chromium	8.0			P	
7440-48-4	Cobalt	7.2	B		P	
7440-50-8	Copper	9.9			P	
7439-89-6	Iron	14600			P	
7439-92-1	Lead	13.3		N	FM	J
7439-95-4	Magnesium	6040			P	
7439-96-5	Manganese	376		N	P	J
7439-97-6	Mercury	0.06	U		AV	
7440-02-2	Nickel	14.1			P	
7440-09-7	Potassium	850	~~B~~ U		P	J
7782-49-2	Selenium	0.41	B	W,N	FM	J
7440-22-4	Silver	1.2	U		P	
7440-23-5	Sodium	82.6	~~B~~ U		P	
7440-28-0	Thallium	0.24	U		FM	
7440-62-2	Vanadium	15.0			P	
7440-66-6	Zinc	85.3			P	
———	Cyanide	1.0	U		AS	
———	———				AS	
———	———					

olor Before: -Black- Clarity Before: -Opaque- Texture: -Fine-
olor After: -Green- Clarity After: -Clear- Artifacts: ———
omments: ———

FORM I - IN
SOIL

ILM03.0

p.104

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

EPA SAMPLE NO.

X102

.b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
.b Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
.trix (Soil): ——— Lab Sample ID: —B319635—
·vel (Low/Med): ——— Date Received: 12/16/93
Solids: -79.6-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	4580			P	
7440-36-0	Antimony	25.7	U	N	P	J
7440-38-2	Arsenic	43.1		& M S	FM	J
7440-39-3	Barium	118			P	
7440-41-7	Beryllium	1.4			P	
7440-43-9	Cadmium	67.7			P	
7440-70-2	Calcium	4430			P	
7440-47-3	Chromium	15.6			P	
7440-48-4	Cobalt	12.6			P	
7440-50-8	Copper	407			P	
7439-89-6	Iron	43600			P	
7439-92-1	Lead	1310			P	
7439-95-4	Magnesium	887	B		P	
7439-96-5	Manganese	759		N	P	J
7439-97-6	Mercury	0.68			AV	
7440-02-2	Nickel	23.2			P	
7440-09-7	Potassium	553	B		P	J
7782-49-2	Selenium	1.8		& M S, N	FM	J
7440-22-4	Silver	4.6			P	
7440-23-5	Sodium	207	U B		P	
7440-28-0	Thallium	0.81	B	W	FM	J
7440-62-2	Vanadium	18.8			P	
7440-66-6	Zinc	16600			P	
———	Cyanide	1.0	U		AS	
———	———				AS	
———	———					

olor Before: -Black——— Clarity Before: —Opaque——— Texture: Medium
olor After: -Orange——— Clarity After: ——Clear——— Artifacts: ———
omments: ———

6000003

FORM I - IN
SOIL

ILM03.0

p.105

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

EPA SAMPLE NO.

X103

b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
b Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
trix (Soil): ——— Lab Sample ID: —B319636—
vel (Low/Med): ——— Date Received: 12/16/93
Solids: -83.0-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	2350			P	
7440-36-0	Antimony	8.8	U	N	P	J
7440-38-2	Arsenic	16.2		S	FM	
7440-39-3	Barium	37.1	B		P	
7440-41-7	Beryllium	0.24	B		P	
7440-43-9	Cadmium	11.4			P	
7440-70-2	Calcium	725	B		P	
7440-47-3	Chromium	5.7			P	
7440-48-4	Cobalt	3.3	B		P	
7440-50-8	Copper	60.6			P	
7439-89-6	Iron	13000			P	
7439-92-1	Lead	474			P	
7439-95-4	Magnesium	251	B		P	
7439-96-5	Manganese	125		N	P	J
7439-97-6	Mercury	0.92			AV	
7440-02-2	Nickel	8.3			P	
7440-09-7	Potassium	434	B		P	J
7782-49-2	Selenium	11.0		S,N	FM	J
7440-22-4	Silver	0.98	U		P	
7440-23-5	Sodium	97.4	U B		P	
7440-28-0	Thallium	0.41	B		FM	
7440-62-2	Vanadium	6.9	B		P	
7440-66-6	Zinc	1650			P	
———	Cyanide	1.0	U		AS	
———	———				AS	
———	———					

olor Before: -Black——— Clarity Before: —Opaque——— Texture: Medium
olor After: -Brown——— Clarity After: ——Opaque—— Artifacts: ———
omments: ———

6000009

FORM I - IN
SOIL

ILM03.0

p.106

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

EPA SAMPLE NO.

X104

b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
b Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
trix (Soil): ——— Lab Sample ID: —B319630—
vel (Low/Med): ——— Date Received: 12/16/93
Solids: -75.5-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	35300			P	
7440-36-0	Antimony	13.5	U	N	P	J
7440-38-2	Arsenic	21.5		+	FM	J
7440-39-3	Barium	168			P	
7440-41-7	Beryllium	1.6			P	
7440-43-9	Cadmium	36.1			P	
7440-70-2	Calcium	24500			P	
7440-47-3	Chromium	43.3			P	
7440-48-4	Cobalt	CB ~~466~~ 4.66	B		P	
7440-50-8	Copper	806			P	
7439-89-6	Iron	42800			P	
7439-92-1	Lead	905			P	
7439-95-4	Magnesium	2000			P	
7439-96-5	Manganese	101		N	P	J
7439-97-6	Mercury	0.06	U		AV	
7440-02-2	Nickel	21.7			P	
7440-09-7	Potassium	8100			P	
7782-49-2	Selenium	17.7		S,N	FM	J
7440-22-4	Silver	1.2	U		P	
7440-23-5	Sodium	1440			P	
7440-28-0	Thallium	0.72	B	W	FM	J
7440-62-2	Vanadium	43.6			P	
7440-66-6	Zinc	10200			P	
———	Cyanide	1.1	U		AS	
———	———				AS	
———	———					

olor Before: -Black——— Clarity Before: —Opaque——— Texture: Course
olor After: -Green——— Clarity After: ——Clear—— Artifacts: ———
omments: ———

FORM I - IN
SOIL

ILM03.0
B000003

p.107

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

EPA SAMPLE NO.

X105

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
atrix (Soil): ——— Lab Sample ID: -B319637-
evel (Low/Med): ——— Date Received: 12/16/93
Solids: -81.7-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	22700			P	
7440-36-0	Antimony	21.9	U	N	P	J
7440-38-2	Arsenic	65.0		S	FM	
7440-39-3	Barium	410			P	
7440-41-7	Beryllium	12.7			P	
7440-43-9	Cadmium	59.8			P	
7440-70-2	Calcium	35400			P	
7440-47-3	Chromium	31.9			P	
7440-48-4	Cobalt	46.4			P	
7440-50-8	Copper	428			P	
7439-89-6	Iron	85900			P	
7439-92-1	Lead	342			P	
7439-95-4	Magnesium	1210			P	
7439-96-5	Manganese	5450		N	P	J
7439-97-6	Mercury	1.4			AV	
7440-02-2	Nickel	105			P	
7440-09-7	Potassium	1700			P	J
7782-49-2	Selenium	0.62		S,N	FM	J
7440-22-4	Silver	1.2	U		P	
7440-23-5	Sodium	1190			P	
7440-28-0	Thallium	0.25	U	W	FM	J
7440-62-2	Vanadium	110			P	
7440-66-6	Zinc	42000			P	
———	Cyanide	1.0	U		AS	
———	———				AS	
———	———					

olor Before: -Black- Clarity Before: -Opaque- Texture: Medium
olor After: -Yellow- Clarity After: -Clear- Artifacts: ———
omments: ———

B000010

FORM I - IN
SOIL

ILM03.0

p. 108

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

EPA SAMPLE NO.

X106

b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
b Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
trix (Soil): ——— Lab Sample ID: —B319638—
vel (Low/Med): ——— Date Received: 12/16/93
Solids: -80.8-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	14100			P	
7440-36-0	Antimony	12.3	U	N	P	J
7440-38-2	Arsenic	110			FM	
7440-39-3	Barium	191			P	
7440-41-7	Beryllium	1.7			P	
7440-43-9	Cadmium	181			P	
7440-70-2	Calcium	50700			P	
7440-47-3	Chromium	38.1			P	
7440-48-4	Cobalt	21.2			P	
7440-50-8	Copper	4340			P	
7439-89-6	Iron	36100			P	
7439-92-1	Lead	1370			P	
7439-95-4	Magnesium	2510			P	
7439-96-5	Manganese	1290		N	P	J
7439-97-6	Mercury	2.1			AV	
7440-02-2	Nickel	118			P	
7440-09-7	Potassium	1680			P	J
7782-49-2	Selenium	27.7		S,N	FM	J
7440-22-4	Silver	19.0			P	
7440-23-5	Sodium	780	B		P	
7440-28-0	Thallium	0.96	B	W	FM	J
7440-62-2	Vanadium	29.7			P	
7440-66-6	Zinc	37500			P	
———	Cyanide	1.0	U		AS	
———	———				AS	
———	———					

olor Before: -Black— Clarity Before: —Opaque— Texture: Course
olor After: -Yellow— Clarity After: —Clear— Artifacts: ———
omments: ———

B000011

FORM I - IN
SOIL

ILM03.0

p.109

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

EPA SAMPLE NO.

X107

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
atrix (Soil): ——— Lab Sample ID: —B319631—
evel (Low/Med): ——— Date Received: 12/16/93
Solids: -72.3-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7740			P	
7440-36-0	Antimony	19.3	U	N	P	J
7440-38-2	Arsenic	45.3		S	FM	
7440-39-3	Barium	310			P	
7440-41-7	Beryllium	0.25	U		P	
7440-43-9	Cadmium	1.2	B		P	
7440-70-2	Calcium	4980			P	
7440-47-3	Chromium	10.1			P	
7440-48-4	Cobalt	2.0	U		P	
7440-50-8	Copper	38.4			P	
7439-89-6	Iron	25300			P	
7439-92-1	Lead	646			P	
7439-95-4	Magnesium	947	B		P	
7439-96-5	Manganese	25.8		N	P	J
7439-97-6	Mercury	8.2			AV	
7440-02-2	Nickel	2.5	U		P	
7440-09-7	Potassium	1800			P	J
7782-49-2	Selenium	19.3		S,N	FM	J
7440-22-4	Silver	1.2	U		P	
7440-23-5	Sodium	422	B		P	
7440-28-0	Thallium	0.62	B		FM	
7440-62-2	Vanadium	19.6			P	
7440-66-6	Zinc	445			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: -Black——— Clarity Before: —Opaque——— Texture: -Fine—
olor After: -Green——— Clarity After: ——Clear——— Artifacts: ———
omments: ———

FORM I - IN
SOIL

ILM03.0
600004

p.110

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

EPA SAMPLE NO.

X108

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
atrix (Soil): ——— Lab Sample ID: -B319632-
evel (Low/Med): ——— Date Received: 12/16/93
Solids: -75.0-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13300			P	
7440-36-0	Antimony	9.0	U	N	P	J
7440-38-2	Arsenic	63.5		S	FM	
7440-39-3	Barium	347			P	
7440-41-7	Beryllium	0.20	U		P	
7440-43-9	Cadmium	2.7			P	
7440-70-2	Calcium	5490			P	
7440-47-3	Chromium	20.0			P	
7440-48-4	Cobalt	1.6	B		P	
7440-50-8	Copper	49.9			P	
7439-89-6	Iron	42400			P	
7439-92-1	Lead	4310			P	
7439-95-4	Magnesium	2210			P	
7439-96-5	Manganese	95.4		N	P	J
7439-97-6	Mercury	86.0			AV	
7440-02-2	Nickel	7.8	B		P	
7440-09-7	Potassium	1060			P	J
7782-49-2	Selenium	43.8		S,N	FM	J
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	463	B		P	
7440-28-0	Thallium	0.40	B	W	FM	J
7440-62-2	Vanadium	49.1			P	
7440-66-6	Zinc	826			P	
———	Cyanide	1.1	U		AS	
———	———				AS	
———	———					

olor Before: -Black- Clarity Before: -Opaque- Texture: -Fine-
olor After: -Green- Clarity After: -Clear- Artifacts: ———
omments: ———

6000005

FORM I - IN
SOIL

ILM03.0

p.111

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

EPA SAMPLE NO.

X109

ıb Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ıb Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
ıtrix (Soil): ——— Lab Sample ID: —B319633—
ɔvel (Low/Med): ——— Date Received: 12/16/93
Solids: -76.5-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10600			P	
7440-36-0	Antimony	77.6		N	P	J
7440-38-2	Arsenic	94.9		S	FM	
7440-39-3	Barium	145			P	
7440-41-7	Beryllium	0.69	B		P	
7440-43-9	Cadmium	1320			P	
7440-70-2	Calcium	6940			P	
7440-47-3	Chromium	68.8			P	
7440-48-4	Cobalt	94.9			P	
7440-50-8	Copper	3650			P	
7439-89-6	Iron	103000			P	
7439-92-1	Lead	2340			P	
7439-95-4	Magnesium	2900			P	
7439-96-5	Manganese	1890		N	P	J
7439-97-6	Mercury	9.5			AV	
7440-02-2	Nickel	2470			P	
7440-09-7	Potassium	1170			P	J
7782-49-2	Selenium	5.9		S,N	FM	J
7440-22-4	Silver	28.4			P	
7440-23-5	Sodium	726	B		P	
7440-28-0	Thallium	1.2	U	W	FM	J
7440-62-2	Vanadium	24.9			P	
7440-66-6	Zinc	71200			P	
———	Cyanide	4.4			AS	
———	———				AS	
———	———					

ɔlor Before: -Black——— Clarity Before: —Opaque——— Texture: Medium
ɔlor After: -Green——— Clarity After: —Clear——— Artifacts: ———
ɔments: ———

B000006

FORM I - IN
SOIL

ILM03.0

p.112

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

EPA SAMPLE NO.

X201

ıb Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ıb Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
ıtrix (Soil): ——— Lab Sample ID: —B319634—
ıvel (Low/Med): ——— Date Received: 12/16/93
Solids: -65.9-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	4170			P	
7440-36-0	Antimony	11.6	UB	N	P	J
7440-38-2	Arsenic	3.2		S	FM	
7440-39-3	Barium	47.0	B		P	
7440-41-7	Beryllium	0.24	U		P	
7440-43-9	Cadmium	0.72	U		P	
7440-70-2	Calcium	32900			P	
7440-47-3	Chromium	5.3			P	
7440-48-4	Cobalt	3.7	B		P	
7440-50-8	Copper	5.5	B		P	
7439-89-6	Iron	8780			P	
7439-92-1	Lead	6.9		N	FM	J
7439-95-4	Magnesium	8920			P	
7439-96-5	Manganese	310		N	P	J
7439-97-6	Mercury	0.07	U		AV	
7440-02-2	Nickel	5.6	B		P	
7440-09-7	Potassium	409	B		P	J
7782-49-2	Selenium	0.54	UB	W,N	FM	J
7440-22-4	Silver	1.2	U		P	
7440-23-5	Sodium	97.4	UB		P	
7440-28-0	Thallium	0.32	U		FM	
7440-62-2	Vanadium	10.6	B		P	
7440-66-6	Zinc	48.2			P	
———	Cyanide	1.3	U		AS	
———	———				AS	
———	———					

ɔlor Before: -Black——— Clarity Before: —Opaque——— Texture: -Fine—
ɔlor After: -Colorless— Clarity After: ——Clear——— Artifacts: ———
ɔmments: ———

6000007

FORM I - IN
SOIL

ILM03.0

p.113

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

EPA SAMPLE NO.

X202

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: Case No.: SAS No.: SDG No.: -102-
atrix (Soil): Lab Sample ID: B319639
evel (Low/Med): Date Received: 12/16/93
Solids: -64.5-

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5910			P	
7440-36-0	Antimony	9.9	U	N	P	J
7440-38-2	Arsenic	3.6			FM	
7440-39-3	Barium	36.7	B		P	
7440-41-7	Beryllium	0.48	B		P	
7440-43-9	Cadmium	28.4			P	
7440-70-2	Calcium	18200			P	
7440-47-3	Chromium	8.5			P	
7440-48-4	Cobalt	4.4	B		P	
7440-50-8	Copper	109			P	
7439-89-6	Iron	11100			P	
7439-92-1	Lead	164			P	
7439-95-4	Magnesium	6160			P	
7439-96-5	Manganese	221		N	P	J
7439-97-6	Mercury	0.40			AV	
7440-02-2	Nickel	12.9			P	J
7440-09-7	Potassium	976	B		P	J
7782-49-2	Selenium	0.31	U	S,N	FM	J
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	124	~~B~~ U		P	
7440-28-0	Thallium	0.31	U		FM	
7440-62-2	Vanadium	15.3			P	
7440-66-6	Zinc	4670			P	
	Cyanide	1.3	U		AS	
					AS	

olor Before: -Brown- Clarity Before: -Opaque- Texture: -Fine-
olor After: -Colorless- Clarity After: -Clear- Artifacts:
omments:

p.114

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

EPA SAMPLE NO.
X203

ıb Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ıb Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
ıtrix (Soil): ——— Lab Sample ID: —B319640—
ɜvel (Low/Med): ——— Date Received: 12/16/93
Solids: -64.6-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10000			P	
7440-36-0	Antimony	12.3	~~B~~ U	N	P	J
7440-38-2	Arsenic	7.0			FM	
7440-39-3	Barium	67.6			P	
7440-41-7	Beryllium	0.82	B		P	
7440-43-9	Cadmium	CB 46.5 ~~64.5~~			P	
7440-70-2	Calcium	29100			P	
7440-47-3	Chromium	14.3			P	
7440-48-4	Cobalt	9.1	B		P	
7440-50-8	Copper	259			P	
7439-89-6	Iron	17900			P	
7439-92-1	Lead	325			P	
7439-95-4	Magnesium	9550			P	
7439-96-5	Manganese	444		N	P	J
7439-97-6	Mercury	0.51			AV	
7440-02-2	Nickel	22.0			P	
7440-09-7	Potassium	1650			P	J
7782-49-2	Selenium	0.41	B	S,N	FM	J
7440-22-4	Silver	1.3	U		P	
7440-23-5	Sodium	166	~~B~~ U		P	
7440-28-0	Thallium	0.29 ~~2.9~~	B		FM	
7440-62-2	Vanadium	24.0			P	
7440-66-6	Zinc	12100			P	
———	Cyanide	1.3	U		AS	
———	———				AS	
———	———					

olor Before: -Gray——— Clarity Before: —Opaque——— Texture: -Fine—
olor After: -Colorless— Clarity After: ——Clear—— Artifacts: ———
omments: ———

6000013

FORM I - IN
SOIL

ILM03.0

p.115

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

EPA SAMPLE NO.

X204

b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
b Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
trix (Soil): ——— Lab Sample ID: —B319641—
vel (Low/Med): ——— Date Received: 12/16/93
Solids: -72.5-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11500			P	
7440-36-0	Antimony	10.4	U	N	P	J
7440-38-2	Arsenic	7.9		+	FM	J
7440-39-3	Barium	109			P	
7440-41-7	Beryllium	0.61	B		P	
7440-43-9	Cadmium	2.7			P	
7440-70-2	Calcium	19600			P	
7440-47-3	Chromium	18.7			P	
7440-48-4	Cobalt	8.7	B		P	
7440-50-8	Copper	16.2			P	
7439-89-6	Iron	19100			P	
7439-92-1	Lead	28.8		N	FM	J
7439-95-4	Magnesium	8290			P	
7439-96-5	Manganese	617		N	P	J
7439-97-6	Mercury	0.06	B		AV	
7440-02-2	Nickel	17.7			P	
7440-09-7	Potassium	1480			P	J
7782-49-2	Selenium	0.69	B	S,N	FM	J
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	149	~~B~~ U		P	
7440-28-0	Thallium	0.38	B		FM	
7440-62-2	Vanadium	27.9			P	
7440-66-6	Zinc	282			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

lor Before: -Gray——— Clarity Before: —Opaque——— Texture: -Fine—
lor After: -Colorless— Clarity After: ——Clear——— Artifacts: ———
ments: ———

p.116

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

EPA SAMPLE NO.

X205

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -102-
atrix (Soil): ——— Lab Sample ID: -B319642-
evel (Low/Med): ——— Date Received: 12/16/93
Solids: -72.4-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6410			P	
7440-36-0	Antimony	9.4	U	N	P	J
7440-38-2	Arsenic	15.8			FM	
7440-39-3	Barium	66.7			P	
7440-41-7	Beryllium	0.55	B		P	
7440-43-9	Cadmium	2.6			P	
7440-70-2	Calcium	53700			P	
7440-47-3	Chromium	20.1			P	
7440-48-4	Cobalt	7.9	B		P	
7440-50-8	Copper	16.4			P	
7439-89-6	Iron	22000			P	
7439-92-1	Lead	15.4		N	FM	J
7439-95-4	Magnesium	7600			P	
7439-96-5	Manganese	596		N	P	J
7439-97-6	Mercury	0.07	U		AV	
7440-02-2	Nickel	25.3			P	
7440-09-7	Potassium	1040	B		P	J
7782-49-2	Selenium	0.63	U B	W,N	FM	J
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	111	U B		P	
7440-28-0	Thallium	0.30	U		FM	
7440-62-2	Vanadium	60.0			P	
7440-66-6	Zinc	150			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: -Brown- Clarity Before: -Opaque- Texture: -Fine-
olor After: -Colorless- Clarity After: -Clear- Artifacts: ———
omments: ———

B000015

FORM I - IN
SOIL

ILM03.0

p.117

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

EPA SAMPLE NO.

X111

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -101-
atrix (Soil): ——— Lab Sample ID: —B319616—
evel (Low/Med): ——— Date Received: 12/16/93
Solids: -70.6-

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16500			P	
7440-36-0	Antimony	12.7	U	N	P	J
7440-38-2	Arsenic	9.0			FM	
7440-39-3	Barium	233			P	
7440-41-7	Beryllium	0.86	B		P	
7440-43-9	Cadmium	7.8			P	
7440-70-2	Calcium	10600			P	
7440-47-3	Chromium	27.0			P	
7440-48-4	Cobalt	6.7	B		P	
7440-50-8	Copper	29.2			P	
7439-89-6	Iron	19100			P	
7439-92-1	Lead	100			P	
7439-95-4	Magnesium	4310			P	
7439-96-5	Manganese	992			P	
7439-97-6	Mercury	0.09	B		AV	
7440-02-2	Nickel	15.9			P	
7440-09-7	Potassium	2270			P	
7782-49-2	Selenium	0.51	B	W,N	FM	J
7440-22-4	Silver	1.4	U		P	
7440-23-5	Sodium	145	U B		P	
7440-28-0	Thallium	0.31	B		FM	J
7440-62-2	Vanadium	37.0			P	
7440-66-6	Zinc	1030			P	
———	Cyanide	1.3			AS	
———	———				AS	
———	———					

olor Before: -Black— Clarity Before: —Opaque— Texture: -Fine—
olor After: -Green— Clarity After: —Clear— Artifacts: ———
nents: ———

p.118

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

EPA SAMPLE NO

X113

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319617
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 66.8

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13900			P	
7440-36-0	Antimony	9.5	U	N	P	J
7440-38-2	Arsenic	10.8			FM	
7440-39-3	Barium	188			P	
7440-41-7	Beryllium	1.0	B		P	
7440-43-9	Cadmium	40.1			P	
7440-70-2	Calcium	38300			P	
7440-47-3	Chromium	22.6			P	
7440-48-4	Cobalt	6.5	B		P	J
7440-50-8	Copper	75.5			P	
7439-89-6	Iron	19600			P	
7439-92-1	Lead	456			P	
7439-95-4	Magnesium	10900			P	
7439-96-5	Manganese	843			P	
7439-97-6	Mercury	0.20			AV	
7440-02-2	Nickel	25.2			P	
7440-09-7	Potassium	3270			P	
7782-49-2	Selenium	0.28	U	+,N	FM	J
7440-22-4	Silver	1.4			P	
7440-23-5	Sodium	274	U B		P	
7440-28-0	Thallium	0.39	B		FM	J
7440-62-2	Vanadium	29.7			P	
7440-66-6	Zinc	4940			P	
———	Cyanide	2.5			AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Colorless Clarity After: Clear Artifacts: ———
omments: ———

p.119

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

EPA SAMPLE NO.

X114

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319618
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 63.2

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13800			P	
7440-36-0	Antimony	11.6	U	N	P	J
7440-38-2	Arsenic	12.8			FM	
7440-39-3	Barium	204			P	
7440-41-7	Beryllium	1.2	B		P	
7440-43-9	Cadmium	39.2			P	
7440-70-2	Calcium	13600			P	
7440-47-3	Chromium	20.3			P	
7440-48-4	Cobalt	11.2	B		P	
7440-50-8	Copper	64.8			P	
7439-89-6	Iron	20400			P	
7439-92-1	Lead	315			P	
7439-95-4	Magnesium	5250			P	
7439-96-5	Manganese	1030			P	
7439-97-6	Mercury	0.22			AV	
7440-02-2	Nickel	24.7			P	
7440-09-7	Potassium	2250			P	
7782-49-2	Selenium	0.82	U B	W,N	FM	J
7440-22-4	Silver	1.4			P	
7440-23-5	Sodium	195 ~~159~~	U B		P	
7440-28-0	Thallium	0.34	B		FM	J
7440-62-2	Vanadium	32.9			P	
7440-66-6	Zinc	4300			P	
———	Cyanide	1.3			AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Green Clarity After: Clear Artifacts: ———
ments: ———

p.120

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

EPA SAMPLE NO.
X116

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319619
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 68.1

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15800			P	
7440-36-0	Antimony	12.1	U	N	P	J
7440-38-2	Arsenic	15.1			FM	
7440-39-3	Barium	251			P	
7440-41-7	Beryllium	0.99	B		P	
7440-43-9	Cadmium	32.7			P	
7440-70-2	Calcium	9800			P	
7440-47-3	Chromium	21.4			P	
7440-48-4	Cobalt	7.0	B		P	J
7440-50-8	Copper	62.9			P	
7439-89-6	Iron	19500			P	
7439-92-1	Lead	346			P	
7439-95-4	Magnesium	3420			P	
7439-96-5	Manganese	784			P	
7439-97-6	Mercury	0.17			AV	
7440-02-2	Nickel	20.9			P	
7440-09-7	Potassium	2290			P	
7782-49-2	Selenium	0.31	U	S,N	FM	J
7440-22-4	Silver	1.7	B		P	
7440-23-5	Sodium	143	U B		P	
7440-28-0	Thallium	0.31	B		FM	J
7440-62-2	Vanadium	35.2			P	
7440-66-6	Zinc	4050			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Colorless Clarity After: Clear Artifacts: ———
omments: ———

p.121

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

EPA SAMPLE NO.
X117

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319620
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 58.4

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15800			P	
7440-36-0	Antimony	14.1	U	N	P	J
7440-38-2	Arsenic	24.1			FM	
7440-39-3	Barium	195			P	
7440-41-7	Beryllium	1.8			P	
7440-43-9	Cadmium	110			P	
7440-70-2	Calcium	14900			P	
7440-47-3	Chromium	24.7			P	
7440-48-4	Cobalt	8.8	B		P	J
7440-50-8	Copper	153			P	
7439-89-6	Iron	23400			P	
7439-92-1	Lead	1030			P	
7439-95-4	Magnesium	4140			P	
7439-96-5	Manganese	1020			P	
7439-97-6	Mercury	0.45			AV	
7440-02-2	Nickel	33.6			P	
7440-09-7	Potassium	2520			P	
7782-49-2	Selenium	2.2		S,N	FM	J
7440-22-4	Silver	3.4			P	
7440-23-5	Sodium	250	U		P	
7440-28-0	Thallium	0.58	B		FM	J
7440-62-2	Vanadium	37.9			P	
7440-66-6	Zinc	13600			P	
———	Cyanide	1.4			AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Green Clarity After: Clear Artifacts: ———
ments: ———

FORM I - IN
SOIL

B00000 ILM03.0

p.122

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

EPA SAMPLE NO.

X119

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319621
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 67.9

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	18300			P	
7440-36-0	Antimony	10.5	U	N	P	J
7440-38-2	Arsenic	16.8			FM	
7440-39-3	Barium	190			P	
7440-41-7	Beryllium	1.4			P	
7440-43-9	Cadmium	92.5			P	
7440-70-2	Calcium	16800			P	
7440-47-3	Chromium	32.9			P	
7440-48-4	Cobalt	12.0			P	
7440-50-8	Copper	85.8			P	
7439-89-6	Iron	26300			P	
7439-92-1	Lead	416			P	
7439-95-4	Magnesium	5260			P	
7439-96-5	Manganese	1170			P	
7439-97-6	Mercury	0.38			AV	
7440-02-2	Nickel	31.2			P	
7440-09-7	Potassium	2800			P	
7782-49-2	Selenium	2.0		S,N	FM	J
7440-22-4	Silver	1.6	B		P	
7440-23-5	Sodium	220	U B		P	
7440-28-0	Thallium	0.28	U		FM	J
7440-62-2	Vanadium	43.1			P	
7440-66-6	Zinc	7970			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Colorless Clarity After: Clear Artifacts: ———
omments: ———

p.123

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

EPA SAMPLE NO.

X120

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319622
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 58.2

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	19900			P	
7440-36-0	Antimony	13.3	U	N	P	J
7440-38-2	Arsenic	~~23.3~~ 26.1			FM	
7440-39-3	Barium	228			P	
7440-41-7	Beryllium	1.3	B		P	
7440-43-9	Cadmium	71.1			P	
7440-70-2	Calcium	26400			P	
7440-47-3	Chromium	33.0			P	
7440-48-4	Cobalt	13.3	B		P	
7440-50-8	Copper	111			P	
7439-89-6	Iron	26800			P	
7439-92-1	Lead	428			P	
7439-95-4	Magnesium	7710			P	
7439-96-5	Manganese	3470			P	
7439-97-6	Mercury	0.34			AV	
7440-02-2	Nickel	35.0			P	
7440-09-7	Potassium	3210			P	
7782-49-2	Selenium	2.2		S,N	FM	J
7440-22-4	Silver	2.4	B		P	
7440-23-5	Sodium	254	~~B~~ U		P	
7440-28-0	Thallium	0.36	U		FM	J
7440-62-2	Vanadium	45.8			P	
7440-66-6	Zinc	7770			P	
———	Cyanide	1.4	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Yellow Clarity After: Clear Artifacts: ———
omments: ———

FORM I - IN
SOIL

ILM03.0
R000000

p.124

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

EPA SAMPLE NO.

X121

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319623
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 68.3

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16300			P	
7440-36-0	Antimony	10.0	U	N	P	J
7440-38-2	Arsenic	17.1			FM	
7440-39-3	Barium	297			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	60.6			P	
7440-70-2	Calcium	31300			P	
7440-47-3	Chromium	25.1			P	
7440-48-4	Cobalt	15.2			P	
7440-50-8	Copper	81.7			P	
7439-89-6	Iron	23300			P	
7439-92-1	Lead	316			P	
7439-95-4	Magnesium	5930			P	
7439-96-5	Manganese	4340			P	
7439-97-6	Mercury	0.29			AV	
7440-02-2	Nickel	30.5			P	
7440-09-7	Potassium	3230			P	
7782-49-2	Selenium	0.28	U	S,N	FM	J
7440-22-4	Silver	1.6	B		P	
7440-23-5	Sodium	237	U B		P	
7440-28-0	Thallium	0.28	B		FM	J
7440-62-2	Vanadium	36.0			P	
7440-66-6	Zinc	6010			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Yellow Clarity After: Clear Artifacts: ———
omments: ———

FORM I - IN
SOIL

ILM03.0

p.125

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

EPA SAMPLE NO.

X112

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319624
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 75.8

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11300			P	
7440-36-0	Antimony	10.2	U	N	P	J
7440-38-2	Arsenic	12.0			FM	
7440-39-3	Barium	196			P	
7440-41-7	Beryllium	0.86	B		P	
7440-43-9	Cadmium	74.8			P	
7440-70-2	Calcium	11900			P	
7440-47-3	Chromium	20.7			P	
7440-48-4	Cobalt	8.1	B		P	
7440-50-8	Copper	113			P	
7439-89-6	Iron	20800			P	
7439-92-1	Lead	748			P	
7439-95-4	Magnesium	2790			P	
7439-96-5	Manganese	835			P	
7439-97-6	Mercury	0.09	B		AV	
7440-02-2	Nickel	28.2			P	
7440-09-7	Potassium	1770			P	
7782-49-2	Selenium	0.42	U B	W,N	FM	J
7440-22-4	Silver	2.5			P	
7440-23-5	Sodium	165	U B		P	
7440-28-0	Thallium	0.26	U		FM	J
7440-62-2	Vanadium	26.0			P	
7440-66-6	Zinc	10700			P	
———	Cyanide	1.1	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Colorless Clarity After: Clear Artifacts: ———
ments: ———

B000010

FORM I - IN
SOIL

ILM03.0

p.126

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

EPA SAMPLE NO.

X115

ıb Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ıb Code: Case No.: SAS No.: SDG No.: 101
ıtrix (Soil): Lab Sample ID: B319625
ɜvel (Low/Med): Date Received: 12/16/93
Solids: 58.9

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13400			P	
7440-36-0	Antimony	11.1	U	N	P	J
7440-38-2	Arsenic	24.8			FM	
7440-39-3	Barium	283			P	
7440-41-7	Beryllium	1.1	B		P	
7440-43-9	Cadmium	94.4			P	
7440-70-2	Calcium	14600			P	
7440-47-3	Chromium	26.5			P	
7440-48-4	Cobalt	11.5	B		P	
7440-50-8	Copper	149			P	
7439-89-6	Iron	25300			P	
7439-92-1	Lead	996			P	
7439-95-4	Magnesium	3270			P	
7439-96-5	Manganese	1080			P	
7439-97-6	Mercury	0.54			AV	
7440-02-2	Nickel	35.2			P	
7440-09-7	Potassium	2170			P	
7782-49-2	Selenium	1.9		S,N	FM	J
7440-22-4	Silver	3.0			P	
7440-23-5	Sodium	182	U B		P	
7440-28-0	Thallium	0.35	U		FM	J
7440-62-2	Vanadium	31.1			P	
7440-66-6	Zinc	13700			P	
	Cyanide	1.4			AS	
					AS	

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Yellow Clarity After: Clear Artifacts:
omments:

B000011

FORM I - IN
SOIL

ILM03.0

p.127

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

EPA SAMPLE NO.

X122

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
atrix (Soil): ——— Lab Sample ID: B319626
evel (Low/Med): ——— Date Received: 12/16/93
Solids: 71.7

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	17500			P	
7440-36-0	Antimony	9.2	U	N	P	J
7440-38-2	Arsenic	21.5			FM	
7440-39-3	Barium	159			P	
7440-41-7	Beryllium	1.1			P	
7440-43-9	Cadmium	12.4			P	
7440-70-2	Calcium	20100			P	
7440-47-3	Chromium	25.8			P	
7440-48-4	Cobalt	10.6			P	
7440-50-8	Copper	40.2			P	
7439-89-6	Iron	22900			P	
7439-92-1	Lead	212			P	
7439-95-4	Magnesium	4770			P	
7439-96-5	Manganese	1730			P	
7439-97-6	Mercury	0.29			AV	
7440-02-2	Nickel	28.4			P	
7440-09-7	Potassium	2560			P	
7782-49-2	Selenium	0.52	UR	W,N	FM	J
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	134	UR		P	
7440-28-0	Thallium	0.26	U		FM	J
7440-62-2	Vanadium	36.1			P	
7440-66-6	Zinc	1760			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Green Clarity After: Clear Artifacts: ———
nents: ———

B000012

FORM I - IN
SOIL

ILM03.0

p.128

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

EPA SAMPLE NO.

X123

.b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
.b Code: ——— Case No.: ——— SAS No.: ——— SDG No.: 101
:trix (Soil): ——— Lab Sample ID: B319627
:vel (Low/Med): ——— Date Received: 12/16/93
Solids: 72.2

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16500			P	
7440-36-0	Antimony	11.4	U	N	P	J
7440-38-2	Arsenic	21.4		S	FM	
7440-39-3	Barium	215			P	
7440-41-7	Beryllium	1.7			P	
7440-43-9	Cadmium	16.9			P	
7440-70-2	Calcium	22800			P	
7440-47-3	Chromium	25.9			P	
7440-48-4	Cobalt	10.4	B		P	
7440-50-8	Copper	54.4			P	
7439-89-6	Iron	29000			P	
7439-92-1	Lead	229			P	
7439-95-4	Magnesium	4020			P	
7439-96-5	Manganese	1180			P	
7439-97-6	Mercury	1.00			AV	
7440-02-2	Nickel	28.8			P	
7440-09-7	Potassium	2900			P	
7782-49-2	Selenium	0.54	B	S,N	FM	J
7440-22-4	Silver	1.3	U		P	
7440-23-5	Sodium	230	U B		P	
7440-28-0	Thallium	0.28	U		FM	J
7440-62-2	Vanadium	34.6			P	
7440-66-6	Zinc	2330			P	
———	Cyanide	1.2	U		AS	
———	———				AS	
———	———					

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Green Clarity After: Clear Artifacts: ———
omments: ———

B000013

FORM I - IN
SOIL

ILM03.0

p.129

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

EPA SAMPLE NO.

X124

ab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: MATTHIESSEN & HAGLER ZINC
ab Code: Case No.: SAS No.: SDG No.: 101
atrix (Soil): Lab Sample ID: B319628
evel (Low/Med): Date Received: 12/16/93
Solids: 70.0

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	17400			P	
7440-36-0	Antimony	9.6	U	N	P	J
7440-38-2	Arsenic	17.7			FM	
7440-39-3	Barium	179			P	
7440-41-7	Beryllium	1.5			P	
7440-43-9	Cadmium	23.5			P	
7440-70-2	Calcium	34100			P	
7440-47-3	Chromium	25.0			P	
7440-48-4	Cobalt	11.8			P	
7440-50-8	Copper	60.1			P	
7439-89-6	Iron	24700			P	
7439-92-1	Lead	240			P	
7439-95-4	Magnesium	3910			P	
7439-96-5	Manganese	1370			P	
7439-97-6	Mercury	0.24			AV	
7440-02-2	Nickel	25.9			P	
7440-09-7	Potassium	2500			P	
7782-49-2	Selenium	2.2		S,N	FM	J
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	236	U		P	
7440-28-0	Thallium	0.29	U		FM	J
7440-62-2	Vanadium	37.4			P	
7440-66-6	Zinc	3220			P	
	Cyanide	1.2	U		AS	
					AS	

olor Before: Black Clarity Before: Opaque Texture: Fine
olor After: Green Clarity After: Clear Artifacts:
ments:

B000014

FORM I - IN
SOIL

ILM03.0

III. 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		
Correlation Coefficient > 0.995?		X		
	Cyanide?	X		
Correlation Coefficient > 0.995?		X		
Mid-Range standard distilled?		X		
Are acceptable 4 point calibrations present for:	Mercury?	X		
Correlation Coefficient > 0.995?		X		
Are acceptable calibrations present for other parameters?				X

ACTIONS: NONE

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		
Are results reported in the correct units (ug/l)?	X		
All calibration verification % Recoveries meet criteria?	X		

ACTIONS: (Analyte, % Recovery, Sample(s) affected and Qualifications)

NONE

IV. BLANKS

	YES	NO	N/A
All necessary Form 3s present and complete?	X		
A. Initial and Continuing Calibration Blanks			
Analyzed at correct frequency?	X		
Are results reported in the correct units (ug/l)?	X		
Were transcription errors corrected?			X
All ICBs and CCBs meet no contamination criteria?		X	

ACTIONS: (ICB or CCB/IDL) Sample(s) affected, qualifications

Co (-7.5/3.0) X113, X116, X117 are qualified as estimated (J)

Tl (-1.6, -1.4, -1.4, -1.5/1.0) X111, X113, X114, X116, X117, X119, X120, X121, X112, X115, X122 X123, X124 are qualified as estimated (J)

Se (1.2, 1.0, 1.1/1.0) X114, X112, X122 are qualified (U)

Contamination noted in arsenic however no data was affected.

B. Preparation Blanks

	YES	NO	N/A
Was one preparation blank prepared for:			
each 20 samples?	X		
each batch?	X		
each matrix type?	X		
Were prep blanks analyzed at the correct frequency?	X		
Were prep blanks reported in the correct concentration units?	X		
Were all transcription errors corrected?			X
All prep blanks meet no contamination criteria?		X	

ACTIONS: (Analyte, (PB/IDL), Sample(s) affected, Qualifications)

Na (292/142) X111, X113, X114, X116, X117, X119, X120, X121, X112, X115, X122, X123, X124 are qualified as estimated (U)

Contamination noted in iron however no data was affected.

V. ICP INTERFERENCE CHECK SAMPLE:

	YES	NO	N/A
Form 4 present and complete?	X		
Were ICS ran at the correct frequency?	X		
Were all transcription errors corrected?			X
All % Recoveries of ICSAB Solution +/- 20 % of True Value?	X		
For 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)

The result for Sb and Cu were greater than their IDLs however no data was affected

VI. SPIKE SAMPLE RECOVERY:

		YES	NO	N/A
Form 5 present and complete for:	each 20 samples?	X		
	each matrix type?	X		
Were all transcription errors corrected?				X
Were field blanks used for spike sample analysis?			X	
Were all Matrix Spike % Recoveries within criteria?			X	

ACTIONS: (Analyte, % Recovery, Sample(s) affected, Qualifications)

Sb (43.0) X111, X113, X114, X116, X117, X119, X120, X121, X112, X115, X122, X123, X124 are qualified as estimated (UJ)

Se (37.1) X111, X114, X112, X122, X117, X119, X120, X123, X115, X124, are qualified as estimated (J)
X113, X116, X121 are qualified as estimated (UJ)

VII. DUPLICATE SAMPLE ANALYSIS:

		YES	NO	N/A
Form 6 present and complete for:	each 20 samples?	X		
	each matrix type?	X		
Were all transcription errors corrected?				X
Were field blanks used for duplicate analysis?			X	
For both AA and ICP when both are used for the same analyte?				X
Were all duplicate analyses differences within criteria?		X		

ACTIONS: (Element, Differences, Sample(s) affected, Qualifications)

NONE

VIII. LABORATORY CONTROL SAMPLE:

(Note: LCS not required for aqueous Hg.)

	YES	NO	N/A
Form 7 Present and Complete?	X		
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 transcription errors corrected?			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

IX. FURNACE ATOMIC ABSORPTION (AA) QC:

	YES	NO	N/A
Did the laboratory utilize duplicate injections for all non-MSAanalyses?	X		
Does the GFAA fow 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)

Any result flagged 'w' or '+' by the laboratory is qualified as estimated (J)

X. ICP SERIAL DILUTION:

Form 9 present and complete?	X		
Was Serial Dilution analysis performed for:			
each 20 or fewer samples	X		
each matrix type?			X
Were all transcription errors corrected?			X
Were all serial dilution results within criteria?	X		
Were field blanks used for serial dilution analysis?		X	

ACTIONS: (Analyte, Sample(s) affected, Qualifications)

NONE

XI. RAW DATA:

	YES	NO	N/A
Digestion Log for flame AA/ICP present?	X		
Digestion Log for furnace AA present?	X		
Digestion Log for mercury present?	X		
Digestion Log for cyanide present?	X		
Inventory Sheet present?	X		
Weights, dilutions, and volumes used to obtain values present?	X		
Percent solids calculation present for soils (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 results with the ICP linear ranges?	X		
Are all Mercury results within the calibrated range?	X		
Are all Cyanide results within the calibrated range?	X		
Are all other inorganics within the calibrated range?			X
Sulfate, Sulfide, _____			
Are all raw data to support all sample analyses an QC operations present?	X		
Legible?	X		
Properly labeled?	X		
Are the Instrument Detection Limits (IDLs) less than 3 months old?	X		
Are the ICP Linear Ranges less than three months old?	X		
Are the ICP Interelement correction factors less than one year old?	X		

ACTIONS: NONE

p.138

Data Validation Checklist
Site Name: MATTHIESSEN & Negler
SDG
No.: 348301
Laboratory: IEPA
Page 1 of 50

PRELIMINARY REVIEW

1. *Chain-of-Custody*

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

Comments:
none

2. *Case Narrative*

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

Comments:
none

Data Validation Checklist
Site Name: Matthiessen + Hegler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 2 of 50

I. Holding Times

YES NO
[✓] [ ] 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.
ok	X101	D348306	12/15/93	12/16/93	5 12/20/93	2 12/17/93	12/22/93	1 12/16/93	12/21/93
	~~X102~~	~~-307~~							
ok	X101RE	"	"	"	6 12/21				
ok	X102	-307	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/23
ok	X102RE	"	"	"	6 12/21				
ok	X102DL	"	"	"		"	12/23	"	12/27
ok	X103	-308	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/27
ok	X103RE	"	"	"	5 12/20				
ok	X104	-309	12/15	12/16	5 12/20	2 12/17	12/21	1 12/16	12/22
ok	X104RE	"	"	"	5 12/20				
ok	X104DL	"	"	"	6 12/21				
ok	X105	-310	12/15	12/16	5 12/20	2 12/17	12/21	1 12/16	12/28
ok	X106	-311	12/15	12/16	5 12/20	2 12/17	12/21	1 12/16	12/22
ok	X106DL	"	"	"		"	12/22		
ok	X107	-312	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/22
ok	X108	-313	12/15	12/16	5 12/20	2 12/17	12/21	1 12/16	12/22
ok	X109	-314	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/27
ok	X201	-301	12/15	12/16	5 12/20	2 12/17	12/23	1 12/16	12/21
ok	X201RE	"	"	"	6 12/21				
ok	X202	-302	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/21
ok	X202RE	"	"	"	6 12/21				

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

none

Data Validation Checklist
Site Name: Matthiessen + Hegeler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 3 of 50

I. Holding Times

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

Cont'd

	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.
OK	X203	D348303	12/15/93	12/16/93	5 12/20/93	2 12/17/93	12/22/93	1 12/16/93	12/21/93
OK	X203Re	"	"	"	6 12/21				
OK	X204	-304	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/21
OK	X204Re	"	"	"	6 12/21				
OK	X204DL	"	"	"				"	12/22
OK	X205	-305	12/15	12/16	5 12/20	2 12/17	12/22	1 12/16	12/21
OK	X205Re	"	"	"	6 12/21				

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

none

p.141

Data Validation Checklist
Site Name: Matthiessen + Hegeler Z.
SDG
No.: 348301
Laboratory: IEPA
Page 4 of 50

II. GC/MS Instrument Performance Check

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Evaluate Forms V and Raw Data***

	YES	NO	
a.	[✓]	[ ]	Check that Forms V are present and completed for each 12 hour time period.
b.	[✓]	[ ]	Check for transcription errors between raw data and Forms V.
c.	[✓]	[ ]	Check that the appropriate number of significant figures has been reported and that rounding errors have not occurred.
d.	[✓]	[ ]	Check for calculation errors.

2. ***Verify Raw Data Format***

YES	NO	
[✓]	[ ]	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	
[✓]	[ ]	Check that all ion abundance criteria has been met.

4. ***Verify Background Correction***

YES	NO	
[✓]	[ ]	Check that tuning compound spectra were generated using appropriate background correction.

Comments:
none

Data Validation Checklist
Site Name: Mattheissen + Hegler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 5 of 50

III. Initial Calibration

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify that the Correct Standard Concentrations Were Used.***

YES	NO	
[✓]	[ ]	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	
[ ]	[ ]	[✓]	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	
[ ]	[ ]	[✓]	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.	[✓]	[ ]	Check and recalculate the RRFs and $\overline{\text{RRF}}$s for several target compounds (at least one associated with each internal standard).
b.	[✓]	[ ]	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.	[✓]	[ ]	Check and recalculate the *%RSD* for several target compounds.
b.	[✓]	[ ]	Check that the applicable *%RSD* criteria have been met. Note any "outliers" on the Calibration Outliers Form.

Comments:
none

p.143

Data Validation Checklist
Site Name: Matthiessen + Hegeler Z.
SDG No.: 348301
Laboratory: IEPA
Page 6 of 50

IV. Continuing Calibration

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify Continuing Calibration Frequency.***

YES	NO	
[✓]	[ ]	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.	[✓]	[ ]	Check and recalculate the continuing calibration *RRFs* for several compounds.
b.	[✓]	[ ]	Check that all target compound and surrogate *RRFs* meet the criteria.

3. ***Evaluate Continuing Calibration %Ds.***

	YES	NO	
a.	[✓]	[ ]	Check and recalculate the continuing calibration *%Ds* for several compounds.
b.	[✓]	[ ]	Check that all target compound and surrogate *%Ds* meet the applicable criteria.

Comments: See VOA Cal. Outlier Form

VOLATILE CALIBRATION OUTLIERS

3/90 SOW

Lab Name: IEPA

Case: Matthiessen & Hegeler Zinc

Instrument # 5100B DATE/TIME:	Minimum RRF	Initial Cal. 11/04/93			Contin. Cal. 12/20/93			Contin. Cal. 12/21/93			Contin. Cal.			Contin. Cal.		
		~~RRF~~	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Chloromethane	0.010															
Bromomethane	0.100				~~32.0~~	32.0			32.7							
Vinyl Chloride	0.100															
Chloroethane	0.010					32.1			38.3							
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					25.4										
cis-1,3-Dichloropropene	0.200															
chloroethene	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															

all ok

all ok

all ok

all ok

AFFECTED SAMPLES:

VBLKSL1	VBLKSL2	
X109	X104DL	
X108		
X107		
X106		
X105		
X104		
X103		
X104RE		
X103RE		

none

Reviewer's Initials/Date

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: Matthiessen + Hegler Zinc

Instrument # XL2 DATE/TIME:	Minimum RRF	Initial Cal. 12/17/93			Contin. Cal. 12/20/93			Contin. Cal. 12/21/93			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								25.9							
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					-34.1										
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					-28.5										
4-Methyl-2-Pentanone	0.010															
2-Hexanone	0.010					-32.3										
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															

all ok

all ok

all ok

all ok

AFFECTED SAMPLES:	
	VBLKSL3
	X201
	X202
	X203
	X204
	X205
	X101
	X102
	X201MS
	X20MSD

	VBLKSL4
	X201RE
	X202RE
	X203RE
	X204RE
	X205RE
	X101RE
	X102RE

none

Reviewer's Initials/Date

3/92

1 - This column of flags should be applied to the analytes on the sample data sheets.

Data Validation Checklist
Site Name: Mattheisen + Hegler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 9 of 50

V. Blanks

Fraction: (VOA) SemiVOA Pest. *(circle one)*

1. ***Review Blank Results.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that blank analyses have been performed at the required frequency.

Blank Summary

Blank Sample No.	VBLKSL1	VBLKSL2	VBLKSL3	VBLKSL4
Date Anal. or Extr.	12/20/93	12/21/93	12/20/93	10/21/93
Instrument	5100B	5100B	XL2	

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
$MeCl_2$	6	$MeCl_2$	5	$MeCl_2$	3	$MeCl_2$	4
Acetone	5	Acetone	6				

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
		methane, Thiobis 2m	5.9 6				

Data Validation Checklist
Site Name: Mattheisen + Hegler Zc -
SDG No.: 348301
Laboratory: IEPA
Page 10 of 50

VI. Surrogate Spikes

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Review Raw Data.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that the surrogate spike recoveries were calculated correctly and are free from transcription errors.

3 ***Evaluate Surrogate Recoveries.***

YES NO
a. [✓] [ ] Check that reanalyses were performed as required.

b. OK [✓] [ ] Check that surrogate recoveries in blanks met criteria.

4. ***Evaluate Reanalyses.***

YES NO
[✓] [ ] 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:
X103: ~~SAICH~~ TOL-146-High; ~~BFB~~
X103RE: TOL-154-High
X104: TOL-244-High; BFB-58-Low
X104DL: TOL-258-High; BFB-43-Low
X104RE: TOL-234-High; BFB-43-Low
X102: DCE-69-Just Low
~~X103: TOL-146-High~~
~~X103RE: TOL-154-High~~
~~tr~~

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 748301
Laboratory: IEPA
Page 14 of 50

VII. Matrix Spikes/Matrix Spike Duplicates

Fraction: (VOA) SemiVOA Pesticide *(circle one)*

1. ***Verify Frequency***

YES NO
[✓] [ ] Check that MS and MSD samples were analyzed at the correct frequency.

2. ***Evaluate MS/MSD Criteria.***

YES NO
all of [✓] [ ] Check MS/MSD results for *%R* and *RPD* are within the advisory limits.

3. ***Verify MS/MSD Calculations.***

YES NO
a. [✓] [ ] Check raw data and verify that results are calculated correctly and are free from transcription errors.

b. [✓] [ ] Check that *%Rs* and *RPDs* were calculated correctly.

4. ***Evaluate Sample Precision.***

YES NO
[ ] [ ] Compare *%RSD* results of non-spiked compounds between the original result, MS and MSD.

Compound	Orig. Result	MS Result	MSD Result	%RSD
Methylene Chloride	13	8	8	30
Acetone	~~12~~ 20	12	10	38
2-Butanone	5	—	—	—

Comments:
none

Data Validation Checklist
Site Name: Mattheissen & Hegler 3
SDG No.: 348301
Laboratory: IEPA
Page 12 of 50

X. Internal Standards

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Evaluate Raw Data.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that retention times and internal standard area meet the appropriate criteria.

3. ***Evaluate Reanalyses.***

YES NO
[✓] [ ] 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:

X101 : DFB-low; CBZ-low (½ of acceptable lower limit)
X102 : BCM-low; ~~CBZ~~ DFB-low (< ½ LCL); ~~CBZ~~ - CBZ-low (< ½ LCL)
X103 : CBZ - low
X103Re : BCM-low; DFB - low; CBZ-low
X104 : DFB - very low; CBZ - very low
X104Re : DFB - very low; CBZ - very low
X104DL : DFB - very low; CBZ - very low
X201 : DFB - low; CBZ - low
X202 : DFB - low; CBZ - low
X203 : CBZ - low
X204 : DFB - low
X205 : CBZ - low
X201MS : DFB - low; CBZ - low
X201MSD : CBZ - low
X101Re : DFB - low; CBZ - low
X102Re : DFB - low; CBZ - low (< ½ LCL)
X201Re : DFB - low; CBZ - low
X204Re : DFB - low, CBZ - low
X205Re : CBZ - low

p.150

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 348301
Laboratory: IEA
Page 13 of 50

XI. Target Compound Identification

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify Relative Retention Time (RRT) Criteria.***

   YES NO
   [✓] [ ] Check that the RRT of reported compounds is within the criteria.

2. ***Evaluate Target Compound Spectra.***

   YES NO
   [✓] [ ] Check the sample target compound spectra against the laboratory standard spectra; verify that the specified criteria are met.

3. ***Evaluate Possible Carryover.***

   YES NO
   [✓] [ ] 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
   [✓] [ ] Check the sample chromatograms to verify that peaks are accounted for.

Comments:
~~not Acetone spectrum~~ OK none

p.151

Data Validation Checklist
Site Name: Mattiessen + Hegeler Inc
SDG
No.: 348301
Laboratory: IEPA
Page 16 of 50

XII. Compound Quantitation and Reported CRQLs

Fraction: (VOA) SemiVOA Pesticide (*circle one*)

1. ***Evaluate Quantitation of Sample Results.***

YES	NO	
[✓]	[ ]	Check raw data to verify calculation of sample results.

2. ***Evaluate Quantitation Parameters.***

YES	NO	N/A	
[✓]	[ ]	[ ]	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	
[✓]	[ ]	Check that the CRQLs have been adjusted to reflect all sample dilutions, concentrations, splits, cleanup activities, and dry weight factors.

Comments:
none

Case : Mattheissen + Hegler Zinc (VOA) SV PEST

Water sample TCL

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

N/A

Comment : _____

Soil sample TCL

$$\frac{(914)(250)}{(5934)(1.424)(5.0)(.71)} = 7.6$$

Sample # (and column # for PEST) : X107
Compound : 2-Butanone
Calculated concentration (ug/Kg) : 7.6
Reported concentration : 8

Comment : OK

Multicomponent analyte (PEST only)

Sample and column # : _____
Compound : _____
Calculated concentration : _____
Reported concentration : _____

Comment : _____

TICs

Water sample # : _____
TIC # : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

N/A

Comment : _____

Soil sample # : X108
TIC # : Ethyl Ether Rt 5.10
Calculated concentration (ug/Kg) : 8.5
Reported concentration : 9

$$\frac{(5029)(250)}{(41054)(1.0)(5.0)(.72)} = 8.5$$

Comment : OK

Case : Matthiessen v Heyler Bros (VOA) SV PEST

Water sample surrogate %R

Sample # (and column # for PEST) : _____
Surrogate : _____
Concentration added (ug/L) : _____
Calculated %R : _____
Reported %R : _____

N/A

Comment : _____

Soil sample surrogate %R

$$\frac{(39003)(250)}{(30882)(1.181)(5.0)(.81)} = 66.01$$

Sample # (and column # for PEST) : X106
Surrogate : Toluene d8
Concentration added (ug/Kg) : 66.01
Calculated %R : 107%
Reported %R : 107

$$\frac{66.01}{50 \div .81} = \frac{66.07}{61.73} \times 100 = 107\%$$

Comment : OK

Water sample MS/MSD

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____
%R calculated correctly? _____

Not App.

Comment : _____

Soil sample MS/MSD CCV - 12/20, XL2

$$\frac{(37961)(250)}{(54032)(1.163)(5.0)(.66)} = \cancel{92.68}$$

Sample # (and column # for PEST) : X201
Compound : Benzene
Calculated concentration (ug/Kg) : ~~92.6~~ 94
Reported concentration : 93.94
%R calculated correctly? Yes

$$\frac{93.99 - 0}{75.80} \times 100 \quad 124\%$$

Comment : OK

Data Validation Checklist
Site Name: Mattlewson v Heyler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 17 of 50

XIII. Tentatively Identified Compounds

GC/MS Only

Fraction: VOA SemiVOA (*circle one*)

1. ***Evaluate Tentative Identifications.***

   YES NO
   [✓] [ ] Check that all TICs reported meet the identification guidelines.

2. ***Evaluate Raw Data.***

   YES NO
   [✓] [ ] 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
   [✓] [ ] Check blank sample chromatograms to verify that TIC peaks present in samples are not found in blanks.

4. ***Examine Mass Spectra.***

   YES NO
   [✓] [ ] Check all mass spectra for every sample.

5. ***Evaluate TIC Identifications.***

   YES NO
   [✓] [ ] Since TIC library searches often yield several candidate compounds, all reasonable choices must be considered.

6. ***Evaluate Laboratory Artifacts and Contaminants.***

   YES NO
   [✓] [ ] Check sample results and raw data to verify that common laboratory artifacts and contaminants are not reported as sample contaminants.

p.155

Data Validation Checklist
Site Name: Mattlesson + Hegler
SDG No.: 348301
Laboratory: IEPA
Page 18 of 50

XIII. TICs continued

7. *Evaluate Possibility of False Negatives.*

	YES	NO	N/A	
a.	[✓]	[ ]	[ ]	Check to determine if target compounds have been identified and quantitated as TICs.
b.	[ ]	[ ]	[✓]	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	
[✓]	[ ]	[ ]	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	
[✓]	[ ]	Check that library searches were not performed on internal standards or surrogates.

10. *Verify Estimated Quantitation of TICs.*

YES	NO	
[✓]	[ ]	Check that the estimated concentration of the TICs was made using an assumed *RRF* of one.

Comments:
X102: Changed TIC to "unknown"
X102Re: TIC reported a "Ethanol, 1,2-Diethoxy- does not appear on library search
X104Re + X104: Change TIC to "unknown"
Check X108 TIC w/ R.T. - Per R.T. Change to "unknown" - flat-bottomed TIC = ethyl ether
X109: Change TIC to "unknown"

Data Validation Checklist
Site Name: Mattheisen & Hegler Zinc
SDG
No.: 348301
Laboratory: IEPA
Page 19 of 50

XIV. GC/MS System Performance

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Evaluate Overall System Performance.***

	YES	NO	
a.	[✓]	[ ]	Check for high RIC background levels or shifts in absolute retention times of internal standards.
b.	[✓]	[ ]	Check for excessive baseline rise at elevated temperature.
c.	[✓]	[ ]	Check for extraneous peaks.
d.	[✓]	[ ]	Check for loss of resolution.
e.	[✓]	[ ]	Check for peak tailing or peak splitting that may result in inaccurate quantitation.

Comments:
none

Data Validation Checklist
Site Name: Mattiessen Heyler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 20 of 50

II. GC/MS Instrument Performance Check

Fraction: VOA SemiVOA (*circle one*)

1. ***Evaluate Forms V and Raw Data***

	YES	NO	
a.	[✓]	[ ]	Check that Forms V are present and completed for each 12 hour time period.
b.	[✓]	[ ]	Check for transcription errors between raw data and Forms V.
c.	[✓]	[ ]	Check that the appropriate number of significant figures has been reported and that rounding errors have not occurred.
d.	[✓]	[ ]	Check for calculation errors.

2. ***Verify Raw Data Format***

YES	NO	
[✓]	[ ]	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	
[✓]	[ ]	Check that all ion abundance criteria has been met.

4. ***Verify Background Correction***

YES	NO	
[✓]	[ ]	Check that tuning compound spectra were generated using appropriate background correction.

Comments:
none

p.158

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 21 of 50

III. Initial Calibration

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Verify that the Correct Standard Concentrations Were Used.***

YES	NO	
[✓]	[ ]	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	
[ ]	[ ]	[✓]	low only 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	
[✓]	[ ]	[✓]	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.	[✓]	[ ]	Check and recalculate the RRFs and $\overline{\text{RRF}}$s for several target compounds (at least one associated with each internal standard).
b.	[✓]	[ ]	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.	[✓]	[ ]	Check and recalculate the *%RSD* for several target compounds.
b.	[✓]	[ ]	Check that the applicable *%RSD* criteria have been met. Note any "outliers" on the Calibration Outliers Form.

Comments:
none

p.159

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 22 of 50

IV. Continuing Calibration

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. Verify Continuing Calibration Frequency.

YES NO
[✓] [ ] 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. [✓] [ ] Check and recalculate the continuing calibration *RRFs* for several compounds.

b. [✓] [ ] Check that all target compound and surrogate *RRFs* meet the criteria.

3. Evaluate Continuing Calibration %Ds.

YES NO
a. [✓] [ ] Check and recalculate the continuing calibration *%Ds* for several compounds.

b. [✓] [ ] Check that all target compound and surrogate *%Ds* meet the applicable criteria.

Comments:
none

SEMIVOLATILE CALIBRATION OUTLIERS

Page 1

Lab Name: IEPA

Case: Matthiessen & Hegler Zinc

Instrument # FINN	Minimum RRF	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:		11/23/93			12/21/93			12/22/93			12/23/93					
		RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Phenol	0.800															
bis(2-Chloroethyl)ether	0.700															
2-Chlorophenol	0.800															
1,3-Dichlorobenzene	0.600															
1,4-Dichlorobenzene	0.500															
1,2-Dichlorobenzene	0.400															
2-Methylphenol	0.700															
2,2' oxybis(1-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		35.4			80.3			53.0			45.7				
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											27.1				
Dimethylphthalate	0.010															
Acenaphthylene	1.300															
2,6-Dinitrotoluene	0.200															
3-Nitroaniline	0.010		54.1		.029	71.0			31.0							
Acenaphthene	0.800															
2,4-Dinitrophenol	0.010															
4-Nitrophenol	0.010					45.4		0.035	74.2			47.4				
Dibenzofuran	0.800															
2,4-Dinitrotoluene	0.200															

AFFECTED SAMPLES:

SBLK5L	X102	X102DL	
X101	X103	X201	
X104	X106DL	X109MS	
X105	X107	X109MSD	
X106	X109		
X108	X202		
X203	X205		
X204			

None

Reviewer's Initials/Date

SEMIVOLATILE CALIBRATION OUTLIERS

Page 2

Lab Name: IEPA

Case: Matthiessen & Hegler

Instrument #	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	11/23/93			12/21/93			12/22/93			12/23/93					
		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		30.9		.025	71.9		.016	82.0		0.010	88.8				
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															
Di-n-butylphthalate	0.010															
Fluoranthene	0.600															
Pyrene	0.600															
Butylbenzylphthalate	0.010															
3,3'-Dichlorobenzidine	0.010		38.0			52.4			35.9							
Benzo(a)anthracene	0.800															
Chrysene	0.700															
bis(2-Ethylhexyl)phthalate	0.010															
Di-n-octylphthalate	0.010															
Benzo(b)fluoranthene	0.700															
Benzo(k)fluoranthene	0.700															
Benzo(a)pyrene	0.700															
Indeno(1,2,3-cd)pyrene	0.500															
Dibenz(a,h)anthracene	0.400					33.7			28.9							
Benzo(g,h,i)perylene	0.500															
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

p.162

Data Validation Checklist
Site Name: Mattheissen + Hegler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 25 of 50

V. Blanks

Fraction: VOA (SemiVOA) Pest. *(circle one)*

1. ***Review Blank Results.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that blank analyses have been performed at the required frequency.

Blank Summary

Blank Sample No.	SBLKSL			GPCBLK			
Date Anal. or Extr.	12/17(Ext.) (Anal.) 12/21/93			12/17(Ext.) 12/21/93 (Anal.)			
Instrument							

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
~~Dimethyl~~				None			
Di-n-butyl phthalate	690						

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
				Unknown RT=10.09	2		
See							
attached							
sheet							

26 of 50

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKSL

Lab Name: ILLINOIS EPA Contract: 0990000000

Lab Code: SPFLD Case No.: HEGLER SAS No.: _____ SDG No.: 348301

Matrix: (soil/water) SOIL Lab Sample ID: D348350

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A1221K03

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

% Moisture: _____ decanted: (Y/N) N Date Extracted: 12/17/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 12/21/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALIP. KETONE	8.42	410	AJ
2.	UNKNOWN	8.94	1500	J
3.	UNKNOWN ALIP. HYDROCARBON	9.49	130	J
4. 123-42-2	2PENTANONE,4HYDROXY-4METHYL	9.80	23000	JNA
5.	UNKNOWN ALIP. HYDROCARBON	10.04	230	J
6.	UNKNOWN	10.10	220	J
7.	UNKNOWN	11.30	94	J
8.	UNKNOWN	11.45	750	J
9.	UNKNOWN ALIP. KETONE	12.15	880	AJ
10.	UNKNOWN	14.42	290	J
11.	UNKNOWN ALIP. ACID	23.80	230	J
12.	UNKNOWN	28.92	79	J

p.164

Data Validation Checklist
Site Name: Mattlemann v Hegler Zn
SDG
No.: 348301
Laboratory: IEPA
Page 27 of 50

VI. Surrogate Spikes

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Review Raw Data.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that the surrogate spike recoveries were calculated correctly and are free from transcription errors.

3 ***Evaluate Surrogate Recoveries.***

YES NO
a. [ ] [✓] Check that reanalyses were performed as required. X104

b. [✓] [ ] Check that surrogate recoveries in blanks met criteria.

4. ***Evaluate Reanalyses.***

YES NO
[✓] [ ] 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:

X104: TPH 2% $\frac{(5442)(40)(500)(1.0)(2.0)}{(134576)(.908)(2.0)(30.9)(.76)}$

$= 37.93$

added $\frac{50}{30.9} = \frac{1.618\,mg}{g} \times 10^3 = 1618\,\mu g/kg = \frac{1618}{.76} = 2129.1$

$\frac{37.93}{2129.1} \times 100 = 1.8\%$ Calc. ok

S0018: DSV 8.5.3 <10%

p.165

Data Validation Checklist
Site Name: Mattlesson + Hegler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 28 of 50

VII. Matrix Spikes/Matrix Spike Duplicates

Fraction: VOA (SemiVOA) Pesticide *(circle one)*

1. ***Verify Frequency***

YES NO
[✓] [ ] Check that MS and MSD samples were analyzed at the correct frequency.

2. ***Evaluate MS/MSD Criteria.***

YES NO
[✓] [ ] Check MS/MSD results for *%R* and *RPD* are within the advisory limits.

3. ***Verify MS/MSD Calculations.***

YES NO
a. [✓] [ ] Check raw data and verify that results are calculated correctly and are free from transcription errors.

b. [✓] [ ] Check that *%Rs* and *RPDs* were calculated correctly.

4. ***Evaluate Sample Precision.***

YES NO
[✓] [ ] Compare *%RSD* results of non-spiked compounds between the original result, MS and MSD.

Compound	Orig. Result	MS Result	MSD Result	%RSD
Phenanthrene	620	570	460	15
Di-n-butylphthalate	700	760	1100	25
Fluoranthrene	770	640	580	15
Pyrene	800	—	—	—
Chrysene	340	320	290	8

Comments:

X109MS: Phenol - %R Low - 6
4-Chloro-3-methylphenol - %R Low - 6
4-Nitrophenol - %R Low - 7

X109MSD: Phenol - %RPD High - 172
4-Chloro-3-methylphenol - %RPD High - 133
4-Nitrophenol - %RPD High - 122
PCP - %RPD Slightly High - 48
Pyrene - %RPD High - 80
2,4-Dinitrotoluene - %R Slightly High - 93

limits advisory
no further action
be required
SOW 1.8 D-59 8.6.3

p.166

Data Validation Checklist
Site Name: Matthiessen & Hegler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 29 of 50

X. Internal Standards

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Evaluate Raw Data.***

   YES NO
   [✓] [ ] 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
   [✓] [ ] Check that retention times and internal standard area meet the appropriate criteria.

3. ***Evaluate Reanalyses.***

   YES NO N/A
   [ ] [ ] ✓ 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:
none

Data Validation Checklist
Site Name: Motorola & Hegler Lane
SDG No.: 348301
Laboratory: IEPA

XI. Target Compound Identification

GC/MS

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Verify Relative Retention Time (RRT) Criteria.***

   YES NO
   [✓] [ ] Check that the RRT of reported compounds is within the criteria.

2. ***Evaluate Target Compound Spectra.***

   YES NO
   [✓] [ ] Check the sample target compound spectra against the laboratory standard spectra; verify that the specified criteria are met.

3. ***Evaluate Possible Carryover.***

   YES NO
   [✓] [ ] 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
   [✓] [ ] Check the sample chromatograms to verify that peaks are accounted for.

Comments:
none

p.168

Data Validation Checklist
Site Name: Matthews Hegler Bem
SDG
No.: 348301
Laboratory: IEAA
Page 31 of 50

XII. Compound Quantitation and Reported CRQLs

Fraction: VOA (SemiVOA) Pesticide *(circle one)*

1. ***Evaluate Quantitation of Sample Results.***

YES NO
[✓] [ ] Check raw data to verify calculation of sample results.

2. ***Evaluate Quantitation Parameters.***

YES NO N/A
[✓] [ ] [ ] 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
[✓] [ ] Check that the CRQLs have been adjusted to reflect all sample dilutions, concentrations, splits, cleanup activities, and dry weight factors.

Comments:
None

p.169

Data Validation Checklist
Site Name: Matthiessen & Hegeler
SDG No.: 348301
Laboratory: IEPA
Page 32 of 50

XIII. Tentatively Identified Compounds

GC/MS Only

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Evaluate Tentative Identifications.***

   YES NO
   [✓] [ ] Check that all TICs reported meet the identification guidelines.

2. ***Evaluate Raw Data.***

   YES NO
   [✓] [ ] 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
   [✓] [ ] Check blank sample chromatograms to verify that TIC peaks present in samples are not found in blanks.

4. ***Examine Mass Spectra.***

   YES NO
   [✓] [ ] Check all mass spectra for every sample.

5. ***Evaluate TIC Identifications.***

   YES NO
   [✓] [ ] Since TIC library searches often yield several candidate compounds, all reasonable choices must be considered.

   See comments

6. ***Evaluate Laboratory Artifacts and Contaminants.***

   YES NO
   [✓] [ ] Check sample results and raw data to verify that common laboratory artifacts and contaminants are not reported as sample contaminants.

Data Validation Checklist
Site Name: Matthiessen & Hegeler
SDG No.: 348-301
Laboratory: IEPA

XIII. TICs continued

7. *Evaluate Possibility of False Negatives.*

	YES	NO	N/A	
a.	[✓]	[ ]	[ ]	Check to determine if target compounds have been identified and quantitated as TICs.
b.	[ ]	[ ]	[✓]	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	
[ ]	[ ]	[✓]	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	
[✓]	[ ]	Check that library searches were not performed on internal standards or surrogates.

10. *Verify Estimated Quantitation of TICs.*

YES	NO	
[✓]	[ ]	Check that the estimated concentration of the TICs was made using an assumed *RRF* of one.

Comments:

X101 : TIC RT 12.04 change to unk.
~~Check X1020 TIC mg 1080 equals on Form I Soc~~
X108 TIC RT 12.57 change to unk.

p.171

Data Validation Checklist
Site Name: Matthiessen & Hegeler
SDG No.: 348301
Laboratory: IEPA
Page 34 of 50

XIV. GC/MS System Performance

Fraction: VOA (SemiVOA) *(circle one)*

1. Evaluate Overall System Performance.

	YES	NO	
a.	[✓]	[ ]	Check for high RIC background levels or shifts in absolute retention times of internal standards.
b.	[✓]	[ ]	Check for excessive baseline rise at elevated temperature.
c.	[✓]	[ ]	Check for extraneous peaks.
d.	[✓]	[ ]	Check for loss of resolution.
e.	[✓]	[ ]	Check for peak tailing or peak splitting that may result in inaccurate quantitation.

Comments:
none

Case : Mattheissen + Hegler Zinc VOA (SV) PEST

Water sample TCL

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

N/A

Comment : _____

Soil sample TCL

Sample # (and column # for PEST) : X102
Compound : Fluoranthene
Calculated concentration (ug/Kg) : 3882
Reported concentration : 3900

$$\frac{(163914)(40)(500)(8.0)(2.0)}{(371344)(1.034)(2.0)(30.1)(.80)} = 3882$$

Comment : OK

Multicomponent analyte (PEST only)

Sample and column # : _____
Compound : _____
Calculated concentration : _____
Reported concentration : _____

N/A

Comment : _____

TICs

Water sample # : _____
TIC # : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

N/A

Comment : _____

Soil sample # : X109
TIC # : 2 Pentanone, 4 Hydroxy-4 methyl
Calculated concentration (ug/Kg) : 43,004
Reported concentration : 43,000

$$\frac{(6367320)(40)(500)(2.0)(3.0)}{(382037)(1.0)(30.2)(2.0)(.77)} = 43,004$$

Comment : OK

Case : Matthiessen + Hegler Bros VOA (SV) PEST

Water sample surrogate %R

Sample # (and column # for PEST) : _____
Surrogate : _____
Concentration added (ug/L) : _____
Calculated %R : _____
Reported %R : _____

N/A

Comment : _____

Soil sample surrogate %R

$$\frac{(155474)(40)(500)(1.0)(2.0)}{(318650)(.356)(2.0)(30.9)(.76)} = \frac{1167.2}{2129.1} \times 100 = 54.8\%$$

Sample # (and column # for PEST) : X104
Surrogate : Nitrobenzene d5
Concentration added (ug/Kg) : 2129.1 µg/kg
Calculated %R : 54.8
Reported %R : 55

Comment : OK

$$\frac{50\,\mu g}{30.9\,g} = \frac{1.618\,\mu g}{g} = 1618\,\mu g/kg = \frac{1618}{.76} = 2129.1\,\mu$$

Water sample MS/MSD

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____
%R calculated correctly? _____

N/A

Comment : _____

Soil sample MS/MSD

$$\frac{(42874)(40)(500)(1.0)(2.0)}{(217688)(.109)(30.3)(2.0)(.77)} = 1548.9$$

Sample # (and column # for PEST) : X109MS
Compound : ~~Anthracene~~ Pentachlorophenol
Calculated concentration (ug/Kg) : 1548.9
Reported concentration : 1551
%R calculated correctly? Yes

Comment : OK

p.174

Data Validation Checklist
Site Name: Matthiessen & Hegeler
SDG No.: 348301
Laboratory: IEPA
Page 37 of 50

II. Pesticide Instrument Performance Check

1. Resolution Check Mixture

	YES	NO	
a.	[✓]	[ ]	Check the Form VIII PEST. to determine that the resolution check mixture(s) was analyzed in the proper sequence.
b.	[✓]	[ ]	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	
ok a.	[✓]	[ ]	Check the Form VII PEST. to determine that the PEM(s) was analyzed at the proper frequency and position in the initial calibration sequence.
all ok b.	[✓]	[ ]	Check the PEM data from the initial and continuing calibrations to verify that the resolution criterion was met.
all ok c.	[✓]	[ ]	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.
all ok d.	[✓]	[ ]	Check that the *RPDs* meet the criterion.
all ok e.	[✓]	[ ]	Check that the breakdowns for 4,4'-DDT and Endrin meet the criteria.

Comments:
~~Check PEM03+04 of~~

p.175

Data Validation Checklist
Site Name: Matthiessen + Hegeler Z
SDG No.: 348301
Laboratory: IEPA
Page 38 of 50

III. Initial Calibration

PESTICIDES

1. ***Individual Standard Mixtures.***

	YES	NO	
a.	[✓]	[ ]	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.	[✓]	[ ]	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.	[✓]	[ ]	Check the Individual Standard Mixture data and Form VI PEST.-1 and review the calculated retention time windows for calculation and transcription errors.
d.	[✓]	[ ]	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.	[✓]	[ ]	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.	[✓]	[ ]	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:
none

p.176

Data Validation Checklist
Site Name: Mattheissen & Hegler Zinc
SDG
No.: 348301
Laboratory: IEPA
Page 39 of 50

IV. Continuing Calibration

PESTICIDES

1. ***Evaluate Continuing Calibration Standards.***

YES NO
[✓] [ ] 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
[✓] [ ] 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
[✓] [ ] 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
[✓] [ ] 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:
none

p.177

Data Validation Checklist
Site Name: Matthiessen + Hegeler
SDG No.: 348301
Laboratory: IEPA
Page 40 of 50

V. Blanks

Fraction: VOA SemiVOA (Pest.) *(circle one)*

1. ***Review Blank Results.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that blank analyses have been performed at the required frequency.

Blank Summary

Blank Sample No.	PBLK51	PIBLK01	PIBLK06	PIBLK07
Date Anal. or Extr.	12/16/93	Anal. 12/08/93	Anal. 12/15/93	Anal. 12/15/93
Instrument	NP1 + NP2	NP1 + NP2	NP1 + NP2	NP1 + N2

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
None		None		None		None	

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
None							

p.170

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 34801
Laboratory: IEPA
Page 41 of 50

Blank Summary Continued

Blank Sample No.	PIBLK08	PIBLK09	PIBLK10	PIBLK11
Date Anal. or Extr.	12/21/93	12/21/93	12/22/93	12/22/93
Instrument	NP1+NP2	NP1+HP2	NP1+HP2	NP1+NP2

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
none		none		none		none	

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount

Blank Sample No.	PIBLK12	PIBLK13	PIBLK14	PIBLK15
Date Anal. or Extr.	12/23/93	12/23/93	12/27/93	12/27/93
Instrument	NP1+HP2	HP1+HP2	HP1+HP2	HP1+HP2

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
none		none		none		none	

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount

p.179

Data Validation Checklist
Site Name: Mathiesen + Hegler Ry.
SDG No.: 348301
Laboratory: IEPA
Page 42 of 50

Blank Summary Continued

Blank Sample No.	PIBLK15	PIBLK16	PIBLK17	GPCBLK02
Date Anal. or Extr.	12/27/93	12/28/93	12/28/93	Ext. 12/14 Anal. 12/15/93
Instrument	HP1+HP2	HP1+HP2	HP1+HP2	HP1+HP2

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
None		None		None		None	

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount

Blank Sample No.				
Date Anal. or Extr.				
Instrument				

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

p.180

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 348301
Laboratory: IEPA
Page 43 of 50

VI. Surrogate Spikes

Pesticides

1. ***Review Raw Data.***

YES NO
[✓] [ ] 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
[✓] [ ] Check that the surrogate spike recoveries were calculated correctly and are free from transcription errors.

3 ***Evaluate Possible Interferences.***

YES NO N/A
[✓] [ ] [ ] 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
[ ] [ ] [✓] 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
[✓] [ ] [✓] If low surrogate recoveries are observed, check whether low recoveries are due to sample dilution.

6. ***Evaluate Surrogate Analyses in Blanks.***

YES NO
[✓] [ ] Check that all surrogate analysis criteria (retention time and advisory recovery criteria) were met in all blank samples.

Comments:
X102: TCX 1-0%, TCX 2-270%, DCB1-670%, DCB2-170%
X102DL: TCX1-0D, TCX2-332%, DCB1-680%,
X104: TCX1-34%, TCX2-39%,
X106: DCB1-1338%, DCB2-998%
X107: DCB1-730%
X108: TCX1-45%, TCX2-52%

See Narrative

p.181

Data Validation Checklist
Site Name: Matthiessen Hegler
SDG No.: 348301
Laboratory: IEPA
Page 44 of 50

VII. Matrix Spikes/Matrix Spike Duplicates

Fraction: VOA SemiVOA (Pesticide) *(circle one)*

1. ***Verify Frequency***

YES NO
[✓] [ ] Check that MS and MSD samples were analyzed at the correct frequency.

2. ***Evaluate MS/MSD Criteria.***

YES NO
[✓] [ ] Check MS/MSD results for *%R* and *RPD* are within the advisory limits.

3. ***Verify MS/MSD Calculations.***

YES NO
a. [✓] [ ] Check raw data and verify that results are calculated correctly and are free from transcription errors.

b. [✓] [ ] Check that *%Rs* and *RPDs* were calculated correctly.

4. ***Evaluate Sample Precision.***

YES NO
[✓] [ ] Compare *%RSD* results of non-spiked compounds between the original result, MS and MSD.

Compound	Orig. Result	MS Result	MSD Result	%RSD
Aldrin	0.64	17	18	82
~~Endosulfan I~~				
Endrin Ketone	4.0	5.7	—	—
gamma Chlordane	0.68	0.48	0.55	18
Aroclor 1254	25	—	—	—

Comments:

p.182

Data Validation Checklist
Site Name: Matthiessen + Hegeler Zinc
SDG
No.: 348301
Laboratory: IEPA
Page 45 of 50

X. Pesticide Cleanup Checks

1. ***Florisil Cartridge Check.***

	YES	NO	
a.	[✓]	[ ]	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.	[✓]	[ ]	Check all criteria have been met.

2. ***Gel Permeation Chromatography.***

	YES	NO	
a.	[✓]	[ ]	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.	[✓]	[ ]	Check all criteria have been met and that Arochlor patterns are similar to those of previous standards.

Comments:
Concentrated extract volume for GPC = 10,000µl versus samples - 5,000µl - ok?

p. 185

Data Validation Checklist
Site Name: Matthiessen + Hegeler Sy
SDG
No.: 348301
Laboratory: IEPA
Page 46 of 50

VIII. Laboratory Control Samples

N/A

IX. Project Specific QA/QC

Evaluation Procedures must follow the project QAPjP.

Data Validation Checklist
Site Name: Matthiessen & Hegeler Gen
SDG No.: 348301
Laboratory: IEPA

XI. Target Compound Identification

Pesticides

1. ***Evaluate Reported Results.***

	YES	NO	
a.	[✓]	[ ]	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.	[✓]	[ ]	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.	[✓]	[ ]	Check the associated blank data for potential interferences to evaluate sample data for false positives.
d.	[ ]	[ ]	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	
[✓]	[ ]	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	
[ ]	[ ]	[✓]	Check that GC/MS confirmation was performed for pesticide concentrations in the final sample extract which exceeded 10 ng/ul.

Comments:

~~X103 alt RT gamma BHC, HP2 RT = 9.379, HP1 RT = 11.324~~ alt

~~X105~~	~~" alpha BHC,~~	~~7.882,~~	~~9.797~~
~~X107~~	~~heptachlor~~		~~13.344~~
~~X108~~	~~" " delta BHC~~	~~12.565~~	~~13.159~~
~~X201~~	~~" " "~~	~~12.848~~	~~13.191~~
	~~gamma Chlordane~~	~~14.605~~	~~16.260~~
	~~" Endosulfan~~	~~16.389~~	~~20.010~~
	~~" 4,4-DDE~~	~~17.631~~	~~20.554~~
	~~" 4,4-DDT~~	~~17.351~~	~~21.603~~
~~X202~~	~~Endrin Ketone~~	~~21.723~~	~~23.164~~

p.185

Data Validation Checklist
Site Name: Matthiessen + Hegeler
SDG No.: 348301
Laboratory: IEPA
Page 48 of 52

XII. Compound Quantitation and Reported CRQLs

Fraction: VOA SemiVOA (Pesticide) (*circle one*)

1. ***Evaluate Quantitation of Sample Results.***

YES NO
[✓] [ ] Check raw data to verify calculation of sample results.

2. ***Evaluate Quantitation Parameters.***

YES NO N/A
[ ] [ ] [✓] 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
[✓] [ ] Check that the CRQLs have been adjusted to reflect all sample dilutions, concentrations, splits, cleanup activities, and dry weight factors.

Comments:
none

Case : Matthiessen & Hegeler Zinc VOA SV (PEST)

Water sample TCL

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

N/A

Comment : _____

Soil sample TCL

$$\frac{(2347)(5000)(1.0)(2.0)}{(1260000)(1.0)(30.2)(.82)} = 0.752$$

Sample # (and column # for PEST) : X101 Col. HP2
Compound : Dieldrin
Calculated concentration (ug/Kg) : ~~.075~~ .752
Reported concentration : .75

Comment : OK

Multicomponent analyte (PEST only)

$\bar{x}$ of peak 1,4,5

$$\frac{(\cancel{45}\,425287)(5000)(1.0)(2.0)}{(116000)(30.3)(1.0)(.80)}$$

$\bar{x}$ of peak 1,4,5

$= 1512$

Sample and column # : X102 Col. HP1
Compound : Aroclor 1254
Calculated concentration : 1512
Reported concentration : 1500

Comment : OK

TICs

Water sample # : _____
TIC # : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

Comment : _____

Soil sample # : _____
TIC # : _____
Calculated concentration (ug/Kg) : _____
Reported concentration : _____

Comment : _____

Case : Matthiessen + Hegeler Zinc VOA SV PEST

Water sample surrogate %R

Sample # (and column # for PEST) : _____
Surrogate : _____
Concentration added (ug/L) : _____
Calculated %R : _____
Reported %R : _____

N/A

Comment : _____

Soil sample surrogate %R

$$\frac{(58160)(5000)(1.0)(2.0)}{(680000)(30.2)(1.0)(.79)}$$

Sample # (and column # for PEST) : X105-HP1
Surrogate : TCX
Concentration added (ug/Kg) : 14.5
Calculated %R : 86.5
Reported %R : 86

$$= \frac{14.5}{16.76} \times 100 = 86.5\%$$

$$\frac{.4\,\mu g}{(30.2\,g)(.79)} \times 1000\ g/kg = 16.76\ \mu g/kg$$

Comment : _____

Water sample MS/MSD

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____
%R calculated correctly? _____

N/A

Comment : _____

Soil sample MS/MSD

$$\frac{(138177)(5000)(1.0)(2.0)}{(1200000)(1.0)(30.2)(.79)}$$

Sample # (and column # for PEST) : X105-HP1
Compound : Endrin
Calculated concentration (ug/Kg) : 48.3
Reported concentration : 48.2
%R calculated correctly? yes

$$= \frac{48.3}{\cancel{45.6}\ g} - 54.99\ (\text{sample})$$

$$= \frac{43.3}{41.7\ \cancel{45.6}\ g} \times 100$$

$$= \cancel{95}\ \%\ 103\%$$

Comment : OK

Data Validation Checklist
Site Name: Matthiessen & Hegeler Zinc
SDG No.: 348301
Laboratory: IEPA
Page ____ of ____

XV. Overall Assessment of Data

Evaluate the Overall Quality of the Data.

YES	NO	
[✓]	[ ]	Evaluate any technical problems which have not been previously addressed.
[✓]	[ ]	Review all available materials to assess the overall quality of the dada, keeping in mind the additive nature of analytical problems.
[✓]	[ ]	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.

VOA: Based on IS areas + surrogate recoveries, some samples X101, X103Re, X103, X104, X205, X201, X203Re, X203, X204 were used.

0 1 1 8 7

IEPA DIVISION OF LABORATORIES
QUALITY ASSURANCE SECTION
INORGANIC DATA VALIDATION
CHECKLIST

Site:	Matthiessen & Hagler
Laboratory:	IEPA Champaign
SDG:	102
Analytical Protocol:	ILM03.0
Date:	January 28, 1994
Reviewer:	Chris Bridges
Reviewer Signature:	Chris Bridges

I. PRELIMINARY REVIEW

Number Aqueous Samples: N/A Analytes:
Number Solid/Soil Samples: 14 Analytes Trace Metals,Hg, CN

	YES	NO	N/A
A. Chain - of - Custody(ies) Present?	X		
Signed ?	X		
Dated?	X		
B. Cover Page- Present?	X		
Do sample numbers agree with sample numbers on:			
a. Chain - of - Custody Forms?	X		
b. Form 1s?	X		
C. Form 1- Final Data			
Are all Form 1s present and complete?	X		
Are correct units indicated on Form 1s (ug/l-waters & mg/kg-soils)	X		
Are soil sample results corrected for percent solids (dry weight)?	X		
Are sample results < IDL reported as the IDL (U)?	X		

ACTIONS:

NONE

II. HOLDING TIMES & PRESERVATION

Mercury (28 Days)	pH < 2	exceeded?		X	
Cyanide (14 Days)	pH > 12	exceeded?		X	
other Metals (6months)	pH < 2	exceeded?		X	

ACTIONS:

NONE

III. 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		
Correlation Coefficient > 0.995?		X		
	Cyanide?	X		
Correlation Coefficient > 0.995?		X		
Mid-Range standard distilled?		X		
Are acceptable 4 point calibrations present for:	Mercury?	X		
Correlation Coefficient > 0.995?		X		
Are acceptable calibrations present for other parameters?				X

ACTIONS:

NONE

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		
Are results reported in the correct units (ug/l)?	X		
All calibration verification % Recoveries meet criteria?	X		

ACTIONS: (Analyte, % Recovery, Sample(s) affected and Qualifications)

During the Hg analysis the first CCV was not used because of excessive carryover from the previous sample. Immediately after the baseline returned to normal a CCV was analyzed to verify the calibration. Since this CCV was acceptable the analyst continued the analysis. After reviewing at the data we determined that sample results were not affected.

IV. BLANKS

	YES	NO	N/A
All necessary Form 3s present and complete?	X		
A. Initial and Continuing Calibration Blanks			
Analyzed at correct frequency?	X		
Are results reported in the correct units (ug/l)?	X		
Were transcription errors corrected?			X
All ICBs and CCBs meet no contamination criteria?		X	

ACTIONS: (ICB or CCB/IDL) Sample(s) affected, qualifications

Se (1.4,1.3,1.1/1.0) X201, X205 are qualified (U)

Sb (51.0/45) X104, X107, X108, X201, X102, X103, X105, X106, X202, X203, X204, X205 are qualified (U)

Ni (5.4, 6.1/4.0) X202 is qualified as estimated (J)
Contamination noted in Cr, Fe, and Zn however no data was affected.

B. Preparation Blanks

	YES	NO	N/A
Was one preparation blank prepared for:			
each 20 samples?	X		
each batch?	X		
each matrix type?			X
Were prep blanks analyzed at the correct frequency?	X		
Were prep blanks reported in the correct concentration units?	X		
Were all transcription errors corrected?			X
All prep blanks meet no contamination criteria?		X	

ACTIONS: (Analyte, (PB/IDL), Sample(s) affected, Qualifications)

K (-1495/945) X101, X107, X108, X109, X201, X102, X103, X105, X106, X202, X203, X204, X205 are qualified as estimated (J)

Na (281/142) X101, X201, X102, X103, X202, X203, X204, X205 are qualified (U)

Tl (-1.6.1,0) X109 is qualified as estimated (J)

Contamination noted in Ba, Cu, Fe, V however no data was affected.

V. ICP INTERFERENCE CHECK SAMPLE:

	YES	NO	N/A
Form 4 present and complete?	X		
Were ICS ran at the correct frequency?	X		
Were all transcription errors corrected?			X
All % Recoveries of ICSAB Solution +/- 20 % of True Value?	X		
For 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, Pb, Ni all had results that exceeded their IDLs however no data was affected

VI. SPIKE SAMPLE RECOVERY:

		YES	NO	N/A
Form 5 present and complete for:	each 20 samples?	X		
	each matrix type?			X
Were all transcription errors corrected?				X
Were field blanks used for spike sample analysis?			X	
Were all Matrix Spike % Recoveries within criteria?			X	

ACTIONS: (Analyte, % Recovery, Sample(s) affected, Qualifications)

Sb (44.0) X101, X108, X103, X202, X205 are qualified as estimated (UJ); X104, X107, X109, X201 X102, X105, X106, X203, X204 are estimated (J)

Mn (64.5) X101, X104, X107, X108, X109, X201, X102, X103, X105, X106, X202, X203, X204, X205 are qualified as estimated (J)

Pb by GFAA (178.1) X101, X204, X201, X205 are qualified as estimated (J)

Se (42.1) X202 is qualified as estiamted (UJ): X101, X201, X205, X108, X104, X109, X103, X106, X102 X105, X107, X203, X204 are qualified as estiamted (J)

VII. DUPLICATE SAMPLE ANALYSIS:

		YES	NO	N/A
Form 6 present and complete for:	each 20 samples?	X		
	each matrix type?			X
Were all transcription errors corrected?				X
Were field blanks used for duplicate analysis?			X	
For both AA and ICP when both are used for the same analyte?		X		
Were all duplicate analyses differences within criteria?		X		

ACTIONS: (Element, Differences, Sample(s) affected, Qualifications)

NONE

VIII. LABORATORY CONTROL SAMPLE:

(Note: LCS not required for aqueous Hg.)

		YES	NO	N/A
Form 7 Present and Complete?		X		
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 transcription errors corrected?				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

IX. FURNACE ATOMIC ABSORPTION (AA) QC:

	YES	NO	N/A
Did the laboratory utilize duplicate injections for all non-MSAanalyses?	X		
Does the GFAA fow 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)

Any result flagged 'W' ,'+', or 'M' is qualified as estimated (J)

X. ICP SERIAL DILUTION:

Form 9 present and complete?	X		
Was Serial Dilution analysis performed for:			
each 20 or fewer samples	X		
each matrix type?			X
Were all transcription errors corrected?	X		
Were all serial dilution results within criteria?	X		
Were field blanks used for serial dilution analysis?		X	

ACTIONS: (Analyte, Sample(s) affected, Qualifications)

NONE

XI. RAW DATA:

	YES	NO	N/A
Digestion Log for flame AA/ICP present?	X		
Digestion Log for furnace AA present?	X		
Digestion Log for mercury present?	X		
Digestion Log for cyanide present?	X		
Inventory Sheet present?	X		
Weights, dilutions, and volumes used to obtain values present?	X		
Percent solids calculation present for soils (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 results with the ICP linear ranges?	X		
Are all Mercury results within the calibrated range?	X		
Are all Cyanide results within the calibrated range?	X		
Are all other inorganics within the calibrated range?			X
Sulfate, Sulfide, _____			
Are all raw data to support all sample analyses an QC operations present?	X		
Legible?	X		
Properly labeled?	X		
Are the Instrument Detection Limits (IDLs) less than 3 months old?	X		
Are the ICP Linear Ranges less than three months old?	X		
Are the ICP Interelement correction factors less than one year old?	X		

ACTIONS:

NONE