US EPA RECORDS CENTER REGION 5
408507

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: **January 9, 1997**

SUBJECT: Preliminary Ecological Assessment, US Drum, Chicago, IL

FROM: Ed Karecki, U.S. Fish and Wildlife Service Biologist
Technical Support Section

TO: Larry Schmitt, Remedial Project Manager
Remedial Response Section #2

The following preliminary ecological assessment (PEA) is based primarily on the information presented in the following document: CERCLA Integrated Site Assessment, US Drum, Cook Co., prepared by the Illinois Environmental Protection Agency, 1995.

1. Preliminary Problem Formulation

1.1 Environmental Setting

The site is an inactive waste disposal facility which is located on approximately 3 acres of land on the southeast side of Chicago. The approximate boundaries of the site are 135th street on the north, South Hoxie avenue on the east, Cal-Harbor Machinery Movers to the south, and a gravel road to the west. Land usage in this area is heavy industrial.

A palustrine forested wetland of approximately 2 acres is located immediately north of the site. The Calumet River is located immediately west of the site, and the Grand Calumet River is located approximately 1/4 mile southeast of the site. It appears that some or all of the site surface drainage flows east toward a wooded area between South Hoxie and Torrence avenues. It is believed that this drainage then flows to the Grand Calumet River. The Calumet River and Grand Calumet River are the primary areas of ecological concern for this site.

1.2 Site History

The site was used as a liquid waste transfer facility beginning in 1976. In 1978 and 1979, Metropolitan Sanitary District Investigations revealed that liquid waste disposal was occurring on the site. In May 1980 an Illinois Environmental Protection Agency (IEPA) investigation revealed 14 drums filled with varying amounts of an oily waste. A United States Environmental Protection Agency (USEPA) inspection revealed drums and tankers on site. In June 1980 a USEPA contractor inspected the site and

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.

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APPENDIX I
ANALYTICAL RESULTS FOR US DRUM INTERGRATED SITE ASSESSMENT/INSPECTION SAMPLES ANALYZED FOR TARGET COMPOUND LIST PARAMETERS

ILD 980679401

SAMPLE SUMMARY US DRUM
TABLE 4.1

	X101	X102	X103	X104	X105	X106	X107	X108	X109	X201
Volatile Organics										ug/kg
Methylene Chloride	12U	17U	16U	13U	12U	27U	13U	16U	12BJ	17U
Acetone	12U	31U	97J	11U	11U	13U	19U	11U	52U	25U
2-Butanone	12U	10J	30	11U	11U	13UJ	9J	11U	15J	18J
Trichloroethane	9J	17U	16U	12	7J	48J	13U	11U	16U	17U
Benzene	4J	17U	16U	5J	11U	13UJ	13U	12	16U	17U
Semivolatiles										ug/kg
Phenanthrene	940	15000U	15000U	17000	9700U	3900J	820J	9900U	250J	640
Anthrecene	96J	15000U	15000U	3500	9700U	11000U	2600U	9900U	520U	540U
Carbazole	400U	15000U	15000U	4400	9700U	11000U	2600U	9900U	520U	540U
Di-n-Butylphthalate	970U	18000U	15000U	9200U	13000U	14000U	2600U	19000U	2100U	2400U
Fluoranthene	2200	4000	3400J	26000	3400J	7000J	1900J	9900U	370J	1500
Pyrene	1800	4200	3500	28000	3400J	59000J	2000J	9900U	350J	1600
Benzo(a)Anthracene	1600	15000U	15000U	15000	2000J	11000U	1600J	9900U	520U	1300
Chrysene	1500	15000U	15000U	20000	2500J	6300J	1900J	9900U	250J	1100
Benzo(b)Fluoranthene	2800	5100J	6300J	32000	9700U	14000	2600U	9900U	570	1200
Benzo(k)Fluoranthene	1900J	15000U	15000U	9200U	9700U	9900J	2600UJ	9900U	520U	800J
Benzo(a)Pyrene	2500	15000U	15000U	18000	9700J	4600J	2900	9900U	280J	1200
Indeno(1,2,3-cd)Pyrene	400U	15000U	15000U	17000	4000J	14000	2600U	9900U	33J	790
Dibenz(a,h)Anthracene	400U	15000U	15000U	4600J	9700U	11000U	2600U	9900U	520U	540U
Benzo(g,h,i)Perylene	400U	15000U	15000U	2000	9700U	17000	2600U	9900U	520U	540U
Pesticide/PCBs										ug/kg
4,4'-DDE	88	5.4U	5.3U	3.6U	3.4U	4.1U	4.3U	50	18	5.5U
Endosulfan II	8.8	26	5.3U	13P	13	4.1U	1.4JP	84P	5.3U	5.5U
Endrin Ketone	3.9U	5.4U	5.3U	43	3.4	4.1U	4.3U	22P	5.3U	5.5U
alpha-Chlordane	2.9	110P	130P	1.8U	7.3P	95	2.2U	11	4.0P	3.2
gamma-Chlordane	2.0U	140P	180	16	5.3P	81	1.3J	4.5P	4.4P	1.8JP
Aroclor-1254	100P	820P	1000	210P	380	41U	14JP	1000	160	74
Aroclor-1260	100	420P	540P	350P	310	280P	43U	1800	62	73

ILD 980679401 SAMPLE SUMMARY US DRUM

	X101	X102	X103	X104	X105	X106	X107	X108	X109	X201
Inorganics										mg/kg
Aluminum	13900	10900	9050	12300	9750	11300	12100	15200	8470	7420
Antimony	12.2J	35.6J	153J	8.8J	8.2J	16.9J	9.6J	19.7J	12.3J	13.2J
Barium	112	280	412	201	344	261	72.4	269	40.3B	42.5
Beryllium	1.0B	1.6	1.2B	2.1	1.2	1.3	0.83B	2.1	0.52B	0.53B
Cadmium	1.7	7.2	5.8	0.69U	2.3	2.7	0.76U	5.7	0.97U	0.85U
Calcium	20000	51900	51600	67200	61700	57900	26500	56500	64200	47600
Chromium	42.4	831	424	273	643	309	20.3	349	14.3	20.1
Cobalt	9.1J	17.3	19.2	7.3B	9.7	6.4B	10.4	10.6	10.0B	9.3B
Copper	43.7	434	408	107	154	191	24.1	304	11.7	17.9
Iron	30700	65500	86000	142000	137000	98700	16600	165000	14100	20300
Lead	101	1010	879	215	648	440	22.9	567	12.4	78.2
Magnesium	1190	13800	11200	14700	18000	13400	6460	12300	24000	21300
Manganese	611	6000	5840	6730	22700	6500	248	4920	401	620
Mercury	0.08	0.24	0.36	0.04	0.21	0.30	0.04	1.5	0.025U	0.025U
Nickel	27.3	94.2	112	86.6	124	104	24.8	272	16.9	17.6
Potassium	2450	818B	881B	1060	878	935B	2890	1350	2640	1850
Sodium	113U	495B	401B	476B	311B	304B	299B	565B	157B	396B
Vanadium	33.0B	61.7	71.0	69.0	168	82.3	24.2	44.5	19.0	16.6
Zinc	269	950	1100	201	740	891	84.1	554	50.8	81.90
Cyanide	1.1	7.5	11.0	10.8	7.3	7.2	1.1U	8.8	1.1U	1.3U

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Date: 8/12/94

Subject: Review of CLP Data

From: Ron Turpin
Contract Laboratories Administrator
Division of Laboratories

To: Data User Mark Wagner

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

SITE NAME: U.S. Drum CASE/SDG No: 110/458024

Date(s) Received for Review: 27-Jun-94 25-Aug-94 No. of Samples: 10

Laboratory(s): IEPA Hours Used for Review: 21 + 18 = 39

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

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

ıb Name: ILLINOIS EPA CHAMPAIGN LAB Contract; —US DRUM———

Lab Code: ——— Case No.: ——— SAS No.: ——— SDG No.: -110-

SOW No.: ILM03.0

EPA Sample No.	Lab Sample ID
———X101———	——B407191——
———X101S———	——B407191S——
———X101D———	——B407191D——
———X102———	——B407192——
———X103———	——B407193——
———X104———	——B407194——
———X105———	——B407195——
———X106———	——B407196——
———X107———	——B407197——
———X108———	——B407198——
———X109———	——B407199——
———X201———	——B407200——

Were ICP interelement corrections applied? Yes ——

Were ICP background corrections applied? Yes ——

If yes, were raw data generated before application of background corrections? No ——

Comments: ———

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

ıgnature: Roy Frazier Name: ROY FRAZIER

ıte: 6/24/94 Title: LAB MGR

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE N

X101

b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: -110-

Matrix (Soil): Lab Sample ID: B407191-

Level (Low/Med): Date Received: 5/20/

% Solids: 83.5

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13900			P	
7440-36-0	Antimony	12.2	U	N	P	J
7440-38-2	Arsenic	11.8		N	FM	J
7440-39-3	Barium	112			P	
7440-41-7	Beryllium	1.0	B		P	
7440-43-9	Cadmium	1.7			P	
7440-70-2	Calcium	20000			P	
7440-47-3	Chromium	42.4			P	
7440-48-4	Cobalt	9.1	B		P	J
7440-50-8	Copper	43.7			P	
7439-89-6	Iron	30700			P	
7439-92-1	Lead	101			P	
7439-95-4	Magnesium	11900			P	
7439-96-5	Manganese	611			P	
7439-97-6	Mercury	0.08			CV	
7440-02-2	Nickel	27.3			P	
7440-09-7	Potassium	2450			P	
7782-49-2	Selenium	0.46	B	W,N	FM	J
7440-22-4	Silver	0.96	U		P	
7440-23-5	Sodium	113	B		P	
7440-28-0	Thallium	0.60	B		FM	
7440-62-2	Vanadium	33.0			P	
7440-66-6	Zinc	269			P	
	Cyanide	1.1			AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Green Clarity After: Clear Artifacts:

Comments:

FORM I - IN

SOIL

ILM03.0

B000002

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE N

X102

:b Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: -110-

Matrix (Soil): Lab Sample ID: -8407192-

Level (Low/Med): Date Received: 5/20/

% Solids: -63.1-

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10900			P	
7440-36-0	Antimony	35.6		N	P	J
7440-38-2	Arsenic	13.1		N	FM	J
7440-39-3	Barium	280			P	
7440-41-7	Beryllium	1.6			P	
7440-43-9	Cadmium	7.2			P	
7440-70-2	Calcium	51900			P	
7440-47-3	Chromium	831			P	
7440-48-4	Cobalt	17.3			P	
7440-50-8	Copper	434			P	
7439-89-6	Iron	65500			P	
7439-92-1	Lead	1010			P	
7439-95-4	Magnesium	13800			P	
7439-96-5	Manganese	6000			P	
7439-97-6	Mercury	0.24			AV	
7440-02-2	Nickel	94.2			P	
7440-09-7	Potassium	818	B		P	
7782-49-2	Selenium	0.86	B	W,N	FM	J
7440-22-4	Silver	0.90	U		P	
7440-23-5	Sodium	495	B		P	
7440-28-0	Thallium	0.33	U		FM	
7440-62-2	Vanadium	61.7			P	
7440-66-6	Zinc	950			P	
	Cyanide	7.5			AS	
					AS	

Color Before: -Black- Clarity Before: -Opaque- Texture: Medium

Color After: -Green- Clarity After: -Clear- Artifacts:

Comments:

FORM I - IN

SOIL

ILM03.0

B000003

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE N

X103

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: 110

Matrix (Soil): Lab Sample ID: B407193

Level (Low/Med): Date Received: 5/20/

% Solids: 63.0

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	9050			P	
7440-36-0	Antimony	153		N	P	J
7440-38-2	Arsenic	14.0		N	FM	J
7440-39-3	Barium	412			P	
7440-41-7	Beryllium	1.2	B		P	
7440-43-9	Cadmium	5.8			P	
7440-70-2	Calcium	51600			P	
7440-47-3	Chromium	424			P	
7440-48-4	Cobalt	19.2			P	
7440-50-8	Copper	408			P	
7439-89-6	Iron	86000			P	
7439-92-1	Lead	979			P	
7439-95-4	Magnesium	11200			P	
7439-96-5	Manganese	5840			P	
7439-97-6	Mercury	0.36			AV	
7440-02-2	Nickel	112			P	
7440-09-7	Potassium	881	B		P	
7782-49-2	Selenium	0.92	B	W,N	FM	J
7440-22-4	Silver	1.1	U		P	
7440-23-5	Sodium	401	B		P	
7440-28-0	Thallium	0.30	U		FM	
7440-62-2	Vanadium	71.0			P	
7440-66-6	Zinc	1100			P	
	Cyanide	11.0			AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Medium

Color After: Green Clarity After: Clear Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

X104

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: -110-

Matrix (Soil): Lab Sample ID: B407194-

Level (Low/Med): Date Received: 5/20/

% Solids: 93.3

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12300			P	
7440-36-0	Antimony	8.8	U	N	P	J
7440-38-2	Arsenic	16.2		S,N	FM	J
7440-39-3	Barium	201			P	
7440-41-7	Beryllium	2.1			P	
7440-43-9	Cadmium	0.69	U		P	
7440-70-2	Calcium	67200			P	
7440-47-3	Chromium	273			P	
7440-48-4	Cobalt	7.3	B		P	
7440-50-8	Copper	107			P	
7439-89-6	Iron	142000			P	
7439-92-1	Lead	215			P	
7439-95-4	Magnesium	14700			P	
7439-96-5	Manganese	6730			P	
7439-97-6	Mercury	0.04			CV	
7440-02-2	Nickel	86.6			P	
7440-09-7	Potassium	1060			P	
7782-49-2	Selenium	1.0	B	S,N	FM	J
7440-22-4	Silver	0.69	U		P	
7440-23-5	Sodium	476	B		P	
7440-28-0	Thallium	0.22	U		FM	
7440-62-2	Vanadium	69.0			P	
7440-66-6	Zinc	201			P	
	Cyanide	10.8			AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Green Clarity After: Clear Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

X105

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: 110

Matrix (Soil): Lab Sample ID: B407195

Level (Low/Med): Date Received: 5/20/9

% Solids: 95.1

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	9750			P	
7440-36-0	Antimony	8.2	U	N	P	J
7440-38-2	Arsenic	13.0		N	FM	J
7440-39-3	Barium	344			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	2.3			P	
7440-70-2	Calcium	61700			P	
7440-47-3	Chromium	643			P	
7440-48-4	Cobalt	9.7			P	
7440-50-8	Copper	154			P	
7439-89-6	Iron	137000			P	
7439-92-1	Lead	648			P	
7439-95-4	Magnesium	18000			P	
7439-96-5	Manganese	22700			P	
7439-97-6	Mercury	0.21			AV	
7440-02-2	Nickel	124			P	
7440-09-7	Potassium	878			P	
7782-49-2	Selenium	0.46	B	W,N	FM	J
7440-22-4	Silver	0.64	U		P	
7440-23-5	Sodium	311	B		P	
7440-28-0	Thallium	0.23	U		FM	
7440-62-2	Vanadium	168			P	
7440-66-6	Zinc	740			P	
	Cyanide	7.3			AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Green Clarity After: Clear Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: 110

Matrix (Soil): Lab Sample ID: B407196

Level (Low/Med): Date Received: 5/20/94

% Solids: 80.9

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11300			P	
7440-36-0	Antimony	16.9		N	P	J
7440-38-2	Arsenic	10.0		N	FM	J
7440-39-3	Barium	261			P	
7440-41-7	Beryllium	1.3			P	
7440-43-9	Cadmium	2.7			P	
7440-70-2	Calcium	57900			P	
7440-47-3	Chromium	309			P	
7440-48-4	Cobalt	6.4	B		P	
7440-50-8	Copper	191			P	
7439-89-6	Iron	98700			P	
7439-92-1	Lead	440			P	
7439-95-4	Magnesium	13400			P	
7439-96-5	Manganese	6500			P	
7439-97-6	Mercury	0.30			AV	
7440-02-2	Nickel	104			P	
7440-09-7	Potassium	935	B		P	
7782-49-2	Selenium	0.55	B	W,N	FM	J
7440-22-4	Silver	0.92	U		P	
7440-23-5	Sodium	304	B		P	
7440-28-0	Thallium	0.26	U		FM	J
7440-62-2	Vanadium	82.3			P	
7440-66-6	Zinc	891			P	
	Cyanide	7.2			AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Green Clarity After: Clear Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

X107

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: 110

Matrix (Soil): Lab Sample ID: B407197

Level (Low/Med): Date Received: 5/20/9

% Solids: 76.9

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12100			P	
7440-36-0	Antimony	9.6	U	N	P	J
7440-38-2	Arsenic	3.0		S,N	FM	J
7440-39-3	Barium	72.4			P	
7440-41-7	Beryllium	0.83	B		P	
7440-43-9	Cadmium	0.76	U		P	
7440-70-2	Calcium	26500			P	
7440-47-3	Chromium	20.3			P	
7440-48-4	Cobalt	10.4			P	
7440-50-8	Copper	24.1			P	
7439-89-6	Iron	16600			P	
7439-92-1	Lead	22.9		S	FM	
7439-95-4	Magnesium	6460			P	
7439-96-5	Manganese	248			P	
7439-97-6	Mercury	0.04			AV	
7440-02-2	Nickel	24.8			P	
7440-09-7	Potassium	2890			P	
7782-49-2	Selenium	0.27	U	W,N	FM	J
7440-22-4	Silver	0.76	U		P	
7440-23-5	Sodium	299	B		P	
7440-28-0	Thallium	0.27	U		FM	J
7440-62-2	Vanadium	24.2			P	
7440-66-6	Zinc	84.1			P	
	Cyanide	1.1	U		AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: -110

Matrix (Soil): Lab Sample ID: B407198

Level (Low/Med): Date Received: 5/20/94

% Solids: 91.3

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15200			P	
7440-36-0	Antimony	19.7		N	P	J
7440-38-2	Arsenic	19.9		S,N	FM	J
7440-39-3	Barium	269			P	
7440-41-7	Beryllium	2.1			P	
7440-43-9	Cadmium	5.7			P	
7440-70-2	Calcium	56500			P	
7440-47-3	Chromium	349			P	
7440-48-4	Cobalt	10.6			P	
7440-50-8	Copper	304			P	
7439-89-6	Iron	165000			P	
7439-92-1	Lead	567			P	
7439-95-4	Magnesium	12300			P	
7439-96-5	Manganese	4920			P	
7439-97-6	Mercury	1.5			AV	
7440-02-2	Nickel	272			P	
7440-09-7	Potassium	1330			P	
7782-49-2	Selenium	1.2		S,N	FM	J
7440-22-4	Silver	0.64	U		P	
7440-23-5	Sodium	565	B		P	
7440-28-0	Thallium	0.29	B		FM	J
7440-62-2	Vanadium	44.5			P	
7440-66-6	Zinc	554			P	
	Cyanide	8.8			AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Green Clarity After: Clear Artifacts:

Comments:

FORM I - IN

SOIL

ILM03.0

6000009

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

X109

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: 110

Matrix (Soil): Lab Sample ID: B407199

Level (Low/Med): Date Received: 5/20/94

% Solids: 72.6

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8470			P	
7440-36-0	Antimony	12.3	U	N	P	J
7440-38-2	Arsenic	3.1		N	FM	J
7440-39-3	Barium	40.3	B		P	
7440-41-7	Beryllium	0.52	B		P	
7440-43-9	Cadmium	0.97	U		P	
7440-70-2	Calcium	64200			P	
7440-47-3	Chromium	14.3			P	
7440-48-4	Cobalt	10.0	B		P	
7440-50-8	Copper	11.7			P	
7439-89-6	Iron	14100			P	
7439-92-1	Lead	12.4			FM	
7439-95-4	Magnesium	24000			P	
7439-96-5	Manganese	401			P	
7439-97-6	Mercury	0.025	U		AV	
7440-02-2	Nickel	16.9			P	
7440-09-7	Potassium	2640			P	
7782-49-2	Selenium	0.26	U	W,N	FM	J
7440-22-4	Silver	0.97	U		P	
7440-23-5	Sodium	157	B		P	
7440-28-0	Thallium	0.26	U		FM	J
7440-62-2	Vanadium	19.0			P	
7440-66-6	Zinc	50.8			P	
	Cyanide	1.1	U		AS	
					AS	

Color Before: Gray Clarity Before: Opaque Texture: Fine

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

X201

Lab Name: ILLINOIS EPA CHAMPAIGN LAB Contract: US DRUM

Lab Code: Case No.: SAS No.: SDG No.: 110

Matrix (Soil): Lab Sample ID: B407200

Level (Low/Med): Date Received: 5/20/9

% Solids: 65.5

Concentration Units (mg/kg dry weight):

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7420			P	
7440-36-0	Antimony	13.2		N	P	J
7440-38-2	Arsenic	8.5		N	FM	J
7440-39-3	Barium	42.5			P	
7440-41-7	Beryllium	0.53	B		P	
7440-43-9	Cadmium	0.85	U		P	
7440-70-2	Calcium	47600			P	
7440-47-3	Chromium	20.1			P	
7440-48-4	Cobalt	9.3	B		P	
7440-50-8	Copper	17.9			P	
7439-89-6	Iron	20300			P	
7439-92-1	Lead	78.2		S	FM	
7439-95-4	Magnesium	21300			P	
7439-96-5	Manganese	620			P	
7439-97-6	Mercury	0.025	U		AV	
7440-02-2	Nickel	17.6			P	
7440-09-7	Potassium	1850			P	
7782-49-2	Selenium	0.29	U	W,N	FM	J
7440-22-4	Silver	0.85	U		P	
7440-23-5	Sodium	396	B		P	
7440-28-0	Thallium	0.29	U		FM	J
7440-62-2	Vanadium	16.6			P	
7440-66-6	Zinc	81.90			P	
	Cyanide	1.3	U		AS	
					AS	

Color Before: Black Clarity Before: Opaque Texture: Fine

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

FORM I - IN

SOIL

ILM03.0

B000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101

:b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458024

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC04

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 17 Date Analyzed: 05/20/94

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	12 ~~8~~	~~BJ~~ U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	9	J
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	4	J
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-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

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458024

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC04

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 17 Date Analyzed: 05/20/94

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

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458024

Sample wt/vol: 30.0 (g/mL) G Lab File ID: C0524E05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	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	81	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	97	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.

X101

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458024

Sample wt/vol: 30.0 (g/mL) G Lab File ID: C0524E05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	960	UJ
100-02-7	4-Nitrophenol	960	UJ
132-64-9	Dibenzofuran	400	U
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	UJ
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	940	
120-12-7	Anthracene	96	J
86-74-8	Carbazole	400	U
84-74-2	Di-n-Butylphthalate	970	BU
206-44-0	Fluoranthene	2200	
129-00-0	Pyrene	1800	
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	UJ
56-55-3	Benzo(a)Anthracene	1600	
218-01-9	Chrysene	1500	
117-81-7	bis(2-Ethylhexyl)Phthalate	400	U
117-84-0	Di-n-Octyl Phthalate	400	UJ
205-99-2	Benzo(b)Fluoranthene	2800	
207-08-9	Benzo(k)Fluoranthene	1900	J
50-32-8	Benzo(a)Pyrene	2500	
193-39-5	Indeno(1,2,3-cd)Pyrene	400	U
53-70-3	Dibenz(a,h)Anthracene	400	U
191-24-2	Benzo(g,h,i)Perylene	400	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X101

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458024

Sample wt/vol: 30.0 (g/mL) G Lab File ID: C0524E05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 17 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.32	860	J
2.	UNKNOWN ALIP. ALCOHOL	7.37	700	~~BAJ~~ U
3.	UNKNOWN	7.77	880	~~BJ~~ U
4.	UNKNOWN	8.40	2400	J
5. 123-42-2	PENTANONE,HYDROXYMETHYL	8.59	55000	~~JNBA~~ U
6.	UNKNOWN	10.02	590	~~BJ~~ U
7.	UNKNOWN ALIP. ACID	24.95	550	J
8. 832-71-3	PHENANTHRENE,METHYL	24.99	310	JN
9.	UNKNOWN ALIP. ACID	25.02	640	~~BJ~~ U
10. 832-71-3	PHENANTHRENE,METHYL	25.06	230	JN
11.	UNKNOWN ALIP. HYDROCARBON	27.42	370	J
12.	UNKNOWN	27.79	260	J
13.	UNKNOWN	28.36	740	J
14.	UNKNOWN ALIP. ACID ESTER	29.27	34000	J
15.	UNKNOWN ALIP. ACID ESTER	29.36	27000	~~BJ~~ U
16.	UNKNOWN	29.57	350	J
17.	UNKNOWN	29.74	360	J
18.	UNKNOWN ALIP. HYDROCARBON	30.12	1800	J
19.	UNKNOWN	30.29	270	J
20.	UNKNOWN ALIP. HYDROCARBON	31.07	490	J
21.	UNKNOWN	31.11	300	J
22.	UNKNOWN	31.46	180	J
23.	UNKNOWN	31.49	390	J
24.	UNKNOWN ALIP. HYDROCARBON	32.16	2600	J
25.	UNKNOWN ALIP. HYDROCARBON	33.42	620	J
26.	UNKNOWN	34.09	3500	J
27.	UNKNOWN ALIP. HYDROCARBON	34.96	6400	J
28.	UNKNOWN	35.07	5100	J
29.	UNKNOWN BENZOPYRENE	36.06	1700	J
30.	UNKNOWN	36.72	530	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X101

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458024

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

% Moisture: 17 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

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	2.0	U
319-85-7	beta-BHC	0.39	JP
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	96	BP
72-55-9	4,4'-DDE	88	
72-20-8	Endrin	16	BP
33213-65-9	Endosulfan II	8.8	
50-29-3	4,4'-DDD	6.8	P
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	77	
72-43-5	Methoxychlor	20	U
53494-70-5	Endrin ketone	3.9	U
7421-36-3	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.9	
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	100	P
11096-82-5	Aroclor-1260	100	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X101DLRE

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: 58024DRE

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

% Moisture: 17 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/29/94

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	20	U
319-86-8	delta-BHC	20	U
58-89-9	gamma-BHC (Lindane)	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	20	U
1024-57-3	Heptachlor epoxide	20	U
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	99	BD
72-55-9	4,4'-DDE	64	PD
72-20-8	Endrin	15	BJPD
33213-65-9	Endosulfan II	6.1	JPD
50-29-3	4,4'-DDD	9.2	JPD
1031-07-8	Endosulfan sulfate	5.0	JPD
50-29-3	4,4'-DDT	73	D
72-43-5	Methoxychlor	200	UJ
53494-70-5	Endrin ketone	39	U
7421-36-3	Endrin aldehyde	39	U
5103-71-9	alpha-Chlordane	4.5	JP
5103-74-2	gamma-Chlordane	20	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	800	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	390	U
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	98	JPD
11096-82-5	Aroclor-1260	160	DJ

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458025

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 40 Date Analyzed: 05/20/94

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	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17 5	~~BJ~~ U
67-64-1	Acetone	31	~~B~~ U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	10	J
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (total)	17	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458025

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 40 Date Analyzed: 05/20/94

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.

X102

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458025

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K10

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	15000	U
111-44-4	bis(2-Chloroethyl)Ether	15000	U
95-57-8	2-Chlorophenol	15000	U
541-73-1	1,3-Dichlorobenzene	15000	U
106-46-7	1,4-Dichlorobenzene	15000	U
95-50-1	1,2-Dichlorobenzene	15000	U
95-48-7	2-Methylphenol	15000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	15000	U
106-44-5	4-Methylphenol	15000	U
621-64-7	N-Nitroso-Di-n-Propylamine	15000	U
67-72-1	Hexachloroethane	15000	U
98-95-3	Nitrobenzene	15000	U
78-59-1	Isophorone	15000	U
88-75-5	2-Nitrophenol	15000	U
105-67-9	2,4-Dimethylphenol	15000	U
111-91-1	bis(2-Chloroethoxy)Methane	15000	U
120-83-2	2,4-Dichlorophenol	15000	U
120-82-1	1,2,4-Trichlorobenzene	15000	U
91-20-3	Naphthalene	15000	U
106-47-8	4-Chloroaniline	15000	U
87-68-3	Hexachlorobutadiene	15000	UJ
59-50-7	4-Chloro-3-Methylphenol	15000	U
91-57-6	2-Methylnaphthalene	15000	U
77-47-4	Hexachlorocyclopentadiene	15000	U
88-06-2	2,4,6-Trichlorophenol	15000	U
95-95-4	2,4,5-Trichlorophenol	38000	U
91-58-7	2-Chloronaphthalene	15000	U
88-74-4	2-Nitroaniline	38000	U
131-11-3	Dimethylphthalate	15000	U
208-96-8	Acenaphthylene	15000	U
606-20-2	2,6-Dinitrotoluene	15000	U
99-09-2	3-Nitroaniline	38000	UJ
83-32-9	Acenaphthene	15000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X102

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458025

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K10

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC 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	38000	U
100-02-7	4-Nitrophenol	38000	U
132-64-9	Dibenzofuran	15000	U
121-14-2	2,4-Dinitrotoluene	15000	U
84-66-2	Diethylphthalate	15000	U
7005-72-3	4-Chlorophenyl-phenylether	15000	U
86-73-7	Fluorene	15000	U
100-10-6	4-Nitroaniline	38000	U
534-52-1	4,6-Dinitro-2-methylphenol	38000	U
86-30-6	N-Nitrosodiphenylamine (1)	15000	UJ
101-55-3	4-Bromophenyl-phenylether	15000	U
118-74-1	Hexachlorobenzene	15000	U
87-86-5	Pentachlorophenol	38000	U
85-01-8	Phenanthrene	15000	U
120-12-7	Anthracene	15000	U
86-74-8	Carbazole	15000	U
84-74-2	Di-n-Butylphthalate	18000	RU
206-44-0	Fluoranthene	4000	J
129-00-0	Pyrene	4200	J
85-68-7	Butylbenzylphthalate	15000	U
91-94-1	3,3'-Dichlorobenzidine	15000	U
56-55-3	Benzo(a)Anthracene	15000	U
218-01-9	Chrysene	15000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	15000	U
117-84-0	Di-n-Octyl Phthalate	15000	U
205-99-2	Benzo(b)Fluoranthene	5100	J
207-08-9	Benzo(k)Fluoranthene	15000	U
50-32-8	Benzo(a)Pyrene	15000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	15000	U
53-70-3	Dibenz(a,h)Anthracene	15000	U
191-24-2	Benzo(g,h,i)Perylene	15000	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X102

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458025

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K10

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	PENTANONE,HYDROXYMETHYL	8.44	25000	~~JNBA~~ u
2.	UNKNOWN	8.87	6700	~~BJ~~ u
3. 930-68-7	CYCLOHEXENONE	10.50	5200	JNA
4. 17851-53-5	BENZENEDICARBOXYLIC ACID, ES	24.30	92000	~~JNB~~ u
5.	UNKNOWN	36.21	6300	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X102

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458025

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

% Moisture: 40 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/17/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC 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	2.8	U
319-85-7	beta-BHC	2.8	U
319-86-8	delta-BHC	130	P
58-89-9	gamma-BHC (Lindane)	11	P
76-44-8	Heptachlor	2.8	U
309-00-2	Aldrin	2.8	U
1024-57-3	Heptachlor epoxide	2.8	U
959-98-8	Endosulfan I	2.8	U
60-57-1	Dieldrin	13	BP
72-55-9	4,4'-DDE	5.4	U
72-20-8	Endrin	46	BP
33213-65-9	Endosulfan II	26	
50-29-3	4,4'-DDD	45	P
1031-07-8	Endosulfan sulfate	5.4	U
50-29-3	4,4'-DDT	30	P
72-43-5	Methoxychlor	28	U
53494-70-5	Endrin ketone	5.4	U
7421-36-3	Endrin aldehyde	5.4	U
5103-71-9	alpha-Chlordane	110	P
5103-74-2	gamma-Chlordane	140	P
8001-35-2	Toxaphene	280	U
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	820	P
11096-82-5	Aroclor-1260	420	P

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X102DLRE

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: 58025DRE

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

% Moisture: 40 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/29/94

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

GPC 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	28	U
319-85-7	beta-BHC	28	U
319-86-8	delta-BHC	28	U
58-89-9	gamma-BHC (Lindane)	28	U
76-44-8	Heptachlor	28	U
309-00-2	Aldrin	28	U
1024-57-3	Heptachlor epoxide	28	U
959-98-8	Endosulfan I	28	U
60-57-1	Dieldrin	11	BJPD
72-55-9	4,4'-DDE	54	U
72-20-8	Endrin	59	BPD
33213-65-9	Endosulfan II	21	JPD
50-29-3	4,4'-DDD	45	JPD
1031-07-8	Endosulfan sulfate	54	U
50-29-3	4,4'-DDT	54	U
72-43-5	Methoxychlor	280	UJ
53494-70-5	Endrin ketone	54	U
7421-36-3	Endrin aldehyde	54	U
5103-71-9	alpha-Chlordane	90	PD
5103-74-2	gamma-Chlordane	130	D
8001-35-2	Toxaphene	2800	U
12674-11-2	Aroclor-1016	540	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	540	U
53469-21-9	Aroclor-1242	540	U
12672-29-6	Aroclor-1248	540	U
11097-69-1	Aroclor-1254	1200	D
11096-82-5	Aroclor-1260	540	JPD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X103

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458026

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC06

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 39 Date Analyzed: 05/20/94

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	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	U
75-09-2	Methylene Chloride	16	~~B~~U
67-64-1	Acetone	97	~~B~~
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	30	
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	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
108-88-3	Toluene	16	U
108-90-7	Chlorobenzene	16	U
100-41-4	Ethylbenzene	16	U
100-42-5	Styrene	16	U
1330-20-7	Xylene (total)	16	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

ıb Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458026

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC06

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 39 Date Analyzed: 05/20/94

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

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458026

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K11

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 39 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	15000	U
111-44-4	bis(2-Chloroethyl)Ether	15000	U
95-57-8	2-Chlorophenol	15000	U
541-73-1	1,3-Dichlorobenzene	15000	U
106-46-7	1,4-Dichlorobenzene	15000	U
95-50-1	1,2-Dichlorobenzene	15000	U
95-48-7	2-Methylphenol	15000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	15000	U
106-44-5	4-Methylphenol	15000	U
621-64-7	N-Nitroso-Di-n-Propylamine	15000	U
67-72-1	Hexachloroethane	15000	U
98-95-3	Nitrobenzene	15000	U
78-59-1	Isophorone	15000	U
88-75-5	2-Nitrophenol	15000	U
105-67-9	2,4-Dimethylphenol	15000	U
111-91-1	bis(2-Chloroethoxy)Methane	15000	U
120-83-2	2,4-Dichlorophenol	15000	U
120-82-1	1,2,4-Trichlorobenzene	15000	U
91-20-3	Naphthalene	15000	U
106-47-8	4-Chloroaniline	15000	U
87-68-3	Hexachlorobutadiene	15000	UJ
59-50-7	4-Chloro-3-Methylphenol	15000	U
91-57-6	2-Methylnaphthalene	15000	U
77-47-4	Hexachlorocyclopentadiene	15000	U
88-06-2	2,4,6-Trichlorophenol	15000	U
95-95-4	2,4,5-Trichlorophenol	37000	U
91-58-7	2-Chloronaphthalene	15000	U
88-74-4	2-Nitroaniline	37000	U
131-11-3	Dimethylphthalate	15000	U
208-96-8	Acenaphthylene	15000	U
606-20-2	2,6-Dinitrotoluene	15000	U
99-09-2	3-Nitroaniline	37000	UJ
83-32-9	Acenaphthene	15000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X103

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458026

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K11

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 39 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	37000	U
100-02-7	4-Nitrophenol	37000	U
132-64-9	Dibenzofuran	15000	U
121-14-2	2,4-Dinitrotoluene	15000	U
84-66-2	Diethylphthalate	15000	U
7005-72-3	4-Chlorophenyl-phenylether	15000	U
86-73-7	Fluorene	15000	U
100-10-6	4-Nitroaniline	37000	U
534-52-1	4,6-Dinitro-2-methylphenol	37000	U
86-30-6	N-Nitrosodiphenylamine (1)	15000	UJ
101-55-3	4-Bromophenyl-phenylether	15000	U
118-74-1	Hexachlorobenzene	15000	U
87-86-5	Pentachlorophenol	37000	U
85-01-8	Phenanthrene	15000	U
120-12-7	Anthracene	15000	U
86-74-8	Carbazole	15000	U
84-74-2	Di-n-Butylphthalate	15000	RU
206-44-0	Fluoranthene	3400	J
129-00-0	Pyrene	3500	J
85-68-7	Butylbenzylphthalate	15000	U
91-94-1	3,3'-Dichlorobenzidine	15000	U
56-55-3	Benzo(a)Anthracene	15000	U
218-01-9	Chrysene	15000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	15000	U
117-84-0	Di-n-Octyl Phthalate	15000	U
205-99-2	Benzo(b)Fluoranthene	6300	J
207-08-9	Benzo(k)Fluoranthene	15000	U
50-32-8	Benzo(a)Pyrene	15000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	15000	U
53-70-3	Dibenz(a,h)Anthracene	15000	U
191-24-2	Benzo(g,h,i)Perylene	15000	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X103

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458026

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K11

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 39 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	PENTANONE,HYDROXYMETHYL	8.44	22000	~~JNBA~~ u J
2.	UNKNOWN	8.87	6600	~~BJ~~ u J
3. 930-68-7	CYCLOHEXENONE	10.49	5200	JNA
4.	UNKNOWN ALIP. ACID	21.09	4500	J
5. 17851-53-5	BENZENEDICARBOXYLIC ACID, ES	24.29	70000	~~JNB~~ u J
6.	UNKNOWN	29.81	270000	J
7.	UNKNOWN	36.24	7100	J
8.	UNKNOWN	40.34	5600	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X103

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458026

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

% Moisture: 39 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/17/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.8	U
319-85-7	beta-BHC	2.8	U
319-86-8	delta-BHC	190	P
58-89-9	gamma-BHC (Lindane)	2.8	U
76-44-8	Heptachlor	2.8	U
309-00-2	Aldrin	2.8	U
1024-57-3	Heptachlor epoxide	2.8	U
959-98-8	Endosulfan I	2.8	U
60-57-1	Dieldrin	15	BP
72-55-9	4,4'-DDE	5.3	U
72-20-8	Endrin	64	BP
33213-65-9	Endosulfan II	5.3	U
50-29-3	4,4'-DDD	53	P
1031-07-8	Endosulfan sulfate	5.3	U
50-29-3	4,4'-DDT	24	P
72-43-5	Methoxychlor	100	P
53494-70-5	Endrin ketone	5.3	U
7421-36-3	Endrin aldehyde	5.3	U
5103-71-9	alpha-Chlordane	130	P
5103-74-2	gamma-Chlordane	180	
8001-35-2	Toxaphene	280	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	1000	
11096-82-5	Aroclor-1260	540	P

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X103DLRE

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: 58026DRE

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

% Moisture: 39 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/29/94

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	28	U
319-85-7	beta-BHC	28	U
319-86-8	delta-BHC	28	U
58-89-9	gamma-BHC (Lindane)	28	U
76-44-8	Heptachlor	28	U
309-00-2	Aldrin	28	U
1024-57-3	Heptachlor epoxide	28	U
959-98-8	Endosulfan I	28	U
60-57-1	Dieldrin	14	BJPD
72-55-9	4,4'-DDE	53	U
72-20-8	Endrin	58	BPD
33213-65-9	Endosulfan II	26	JPD
50-29-3	4,4'-DDD	41	JPD
1031-07-8	Endosulfan sulfate	19	JPD
50-29-3	4,4'-DDT	53	U
72-43-5	Methoxychlor	190	DJ
53494-70-5	Endrin ketone	53	U
7421-36-3	Endrin aldehyde	53	U
5103-71-9	alpha-Chlordane	86	PD
5103-74-2	gamma-Chlordane	150	D
8001-35-2	Toxaphene	2800	U
12674-11-2	Aroclor-1016	530	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	530	U
53469-21-9	Aroclor-1242	530	U
12672-29-6	Aroclor-1248	530	U
11097-69-1	Aroclor-1254	1200	D
11096-82-5	Aroclor-1260	490	JPD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458027

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC07

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 9 Date Analyzed: 05/20/94

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	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	~~13~~ 13	~~B~~ U
67-64-1	Acetone	~~11~~ 5	~~B~~ U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	12	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	5	J
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458027

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC07

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 9 Date Analyzed: 05/20/94

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.

X104

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458027

Sample wt/vol: 1.2 (g/mL) G Lab File ID: C0608K03

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 9 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	9200	U
111-44-4	bis(2-Chloroethyl)Ether	9200	U
95-57-8	2-Chlorophenol	9200	U
541-73-1	1,3-Dichlorobenzene	9200	U
106-46-7	1,4-Dichlorobenzene	9200	U
95-50-1	1,2-Dichlorobenzene	9200	U
95-48-7	2-Methylphenol	9200	U
108-60-1	2,2'-oxybis(1-Chloropropane)	9200	U
106-44-5	4-Methylphenol	9200	U
621-64-7	N-Nitroso-Di-n-Propylamine	9200	U
67-72-1	Hexachloroethane	9200	U
98-95-3	Nitrobenzene	9200	U
78-59-1	Isophorone	9200	U
88-75-5	2-Nitrophenol	9200	U
105-67-9	2,4-Dimethylphenol	9200	U
111-91-1	bis(2-Chloroethoxy)Methane	9200	U
120-83-2	2,4-Dichlorophenol	9200	U
120-82-1	1,2,4-Trichlorobenzene	9200	U
91-20-3	Naphthalene	9200	U
106-47-8	4-Chloroaniline	9200	U
87-68-3	Hexachlorobutadiene	9200	UJ
59-50-7	4-Chloro-3-Methylphenol	9200	U
91-57-6	2-Methylnaphthalene	9200	U
77-47-4	Hexachlorocyclopentadiene	9200	U
88-06-2	2,4,6-Trichlorophenol	9200	U
95-95-4	2,4,5-Trichlorophenol	23000	U
91-58-7	2-Chloronaphthalene	9200	U
88-74-4	2-Nitroaniline	23000	U
131-11-3	Dimethylphthalate	9200	U
208-96-8	Acenaphthylene	9200	U
606-20-2	2,6-Dinitrotoluene	9200	U
99-09-2	3-Nitroaniline	23000	UJ
83-32-9	Acenaphthene	9200	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X104

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458027

Sample wt/vol: 1.2 (g/mL) G Lab File ID: C0608K03

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 9 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	23000	U
100-02-7	4-Nitrophenol	23000	U
132-64-9	Dibenzofuran	9200	U
121-14-2	2,4-Dinitrotoluene	9200	U
84-66-2	Diethylphthalate	9200	U
7005-72-3	4-Chlorophenyl-phenylether	9200	U
86-73-7	Fluorene	9200	U
100-10-6	4-Nitroaniline	23000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	23000	U
86-30-6	N-Nitrosodiphenylamine (1)	9200	U
101-55-3	4-Bromophenyl-phenylether	9200	U
118-74-1	Hexachlorobenzene	9200	U
87-86-5	Pentachlorophenol	23000	U
85-01-8	Phenanthrene	17000	
120-12-7	Anthracene	3500	J
86-74-8	Carbazole	4400	J
84-74-2	Di-n-Butylphthalate	~~8100~~ 9200	~~BJ~~ U
206-44-0	Fluoranthene	26000	
129-00-0	Pyrene	28000	
85-68-7	Butylbenzylphthalate	9200	U
91-94-1	3,3'-Dichlorobenzidine	9200	U
56-55-3	Benzo(a)Anthracene	15000	
218-01-9	Chrysene	20000	
117-81-7	bis(2-Ethylhexyl)Phthalate	9200	U
117-84-0	Di-n-Octyl Phthalate	9200	U
205-99-2	Benzo(b)Fluoranthene	32000	
207-08-9	Benzo(k)Fluoranthene	9200	U
50-32-8	Benzo(a)Pyrene	18000	
193-39-5	Indeno(1,2,3-cd)Pyrene	17000	
53-70-3	Dibenz(a,h)Anthracene	4600	J
191-24-2	Benzo(g,h,i)Perylene	20000	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X104

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458027

Sample wt/vol: 1.2 (g/mL) G Lab File ID: C0608K03

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 9 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	PENTANONE,HYDROXYMETHYL	8.39	14000	~~JNBA~~ u
2.	UNKNOWN	8.80	3800	~~BJ~~ u
3. 930-68-7	CYCLOHEXENONE	10.45	3800	JNA
4.	UNKNOWN ALIP. ACID	21.05	2600	J
5.	UNKNOWN	25.36	5000	J
6. 243-42-5	BENZONAPHTHOFURAN	27.49	10000	JN
7.	UNKNOWN	28.11	4000	J
8.	UNKNOWN	28.41	9300	J
9.	UNKNOWN	29.77	3200	J
10.	UNKNOWN	30.07	6800	J
11.	UNKNOWN	30.16	6400	J
12.	UNKNOWN	30.22	4300	J
13.	UNKNOWN	30.32	2600	J
14.	UNKNOWN	31.16	4000	J
15.	UNKNOWN	32.11	4600	J
16.	UNKNOWN	35.31	6300	J
17.	UNKNOWN BENZOPYRENE	36.16	36000	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X104

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458027

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

% Moisture: 9 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.0	
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	4.2	BP
72-55-9	4,4'-DDE	3.6	U
72-20-8	Endrin	29	BP
33213-65-9	Endosulfan II	13	P
50-29-3	4,4'-DDD	2.3	JP
1031-07-8	Endosulfan sulfate	3.6	U
50-29-3	4,4'-DDT	13	P
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	43	
7421-36-3	Endrin aldehyde	3.6	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	16	
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	73	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	210	P
11096-82-5	Aroclor-1260	350	P

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458028

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC08

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 5 Date Analyzed: 05/20/94

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	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	12	BU
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	7	J
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

X105

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458028

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0520LC08

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 5 Date Analyzed: 05/20/94

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

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458028

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0608K04

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 6 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	9700	U
111-44-4	bis(2-Chloroethyl)Ether	9700	U
95-57-8	2-Chlorophenol	9700	U
541-73-1	1,3-Dichlorobenzene	9700	U
106-46-7	1,4-Dichlorobenzene	9700	U
95-50-1	1,2-Dichlorobenzene	9700	U
95-48-7	2-Methylphenol	9700	U
108-60-1	2,2'-oxybis(1-Chloropropane)	9700	U
106-44-5	4-Methylphenol	9700	U
621-64-7	N-Nitroso-Di-n-Propylamine	9700	U
67-72-1	Hexachloroethane	9700	U
98-95-3	Nitrobenzene	9700	U
78-59-1	Isophorone	9700	U
88-75-5	2-Nitrophenol	9700	U
105-67-9	2,4-Dimethylphenol	9700	U
111-91-1	bis(2-Chloroethoxy)Methane	9700	U
120-83-2	2,4-Dichlorophenol	9700	U
120-82-1	1,2,4-Trichlorobenzene	9700	U
91-20-3	Naphthalene	9700	U
106-47-8	4-Chloroaniline	9700	U
87-68-3	Hexachlorobutadiene	9700	UJ
59-50-7	4-Chloro-3-Methylphenol	9700	U
91-57-6	2-Methylnaphthalene	9700	U
77-47-4	Hexachlorocyclopentadiene	9700	U
88-06-2	2,4,6-Trichlorophenol	9700	U
95-95-4	2,4,5-Trichlorophenol	24000	U
91-58-7	2-Chloronaphthalene	9700	U
88-74-4	2-Nitroaniline	24000	U
131-11-3	Dimethylphthalate	9700	U
208-96-8	Acenaphthylene	9700	U
606-20-2	2,6-Dinitrotoluene	9700	U
99-09-2	3-Nitroaniline	24000	UJ
83-32-9	Acenaphthene	9700	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X105

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458028

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0608K04

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 6 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	24000	U
100-02-7	4-Nitrophenol	24000	U
132-64-9	Dibenzofuran	9700	U
121-14-2	2,4-Dinitrotoluene	9700	U
84-66-2	Diethylphthalate	9700	U
7005-72-3	4-Chlorophenyl-phenylether	9700	U
86-73-7	Fluorene	9700	U
100-10-6	4-Nitroaniline	24000	UJ
534-52-1	4,6-Dinitro-2-methylphenol	24000	U
86-30-6	N-Nitrosodiphenylamine (1)	9700	U
101-55-3	4-Bromophenyl-phenylether	9700	U
118-74-1	Hexachlorobenzene	9700	U
87-86-5	Pentachlorophenol	24000	U
85-01-8	Phenanthrene	9700	U
120-12-7	Anthracene	9700	U
86-74-8	Carbazole	9700	U
84-74-2	Di-n-Butylphthalate	13000	BU
206-44-0	Fluoranthene	3400	J
129-00-0	Pyrene	3400	J
85-68-7	Butylbenzylphthalate	9700	U
91-94-1	3,3'-Dichlorobenzidine	9700	U
56-55-3	Benzo(a)Anthracene	2000	J
218-01-9	Chrysene	2500	J
117-81-7	bis(2-Ethylhexyl)Phthalate	9700	U
117-84-0	Di-n-Octyl Phthalate	9700	U
205-99-2	Benzo(b)Fluoranthene	9700	U
207-08-9	Benzo(k)Fluoranthene	9700	U
50-32-8	Benzo(a)Pyrene	9700	U
193-39-5	Indeno(1,2,3-cd)Pyrene	4000	J
53-70-3	Dibenz(a,h)Anthracene	9700	U
191-24-2	Benzo(g,h,i)Perylene	9700	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X105

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458028

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0608K04

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 6 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	PENTANONE,HYDROXYMETHYL	8.40	17000	~~JNBA~~ u
2.	UNKNOWN	8.84	4000	~~BJ~~ u
3.	UNKNOWN ALIP. HYDROCARBON	20.95	4600	J
4.	UNKNOWN ALIP. HYDROCARBON	22.17	8500	J
5.	UNKNOWN ALIP. HYDROCARBON	22.25	10000	J
6.	UNKNOWN	22.84	3500	J
7.	UNKNOWN ALIP. HYDROCARBON	23.34	5300	J
8.	UNKNOWN ALIP. HYDROCARBON	23.47	4400	J
9. 17851-53-5	BENZENEDICARBOXYLIC ACID, ES	24.27	53000	~~BJ~~ u
10.	UNKNOWN	34.97	1100	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X105

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458028

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

% Moisture: 5 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0.38	JP
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	14	BP
72-55-9	4,4'-DDE	3.4	U
72-20-8	Endrin	41	B
33213-65-9	Endosulfan II	13	
50-29-3	4,4'-DDD	5.5	P
1031-07-8	Endosulfan sulfate	3.4	U
50-29-3	4,4'-DDT	15	P
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	3.4	U
7421-36-3	Endrin aldehyde	3.4	U
5103-71-9	alpha-Chlordane	7.3	P
5103-74-2	gamma-Chlordane	5.3	P
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	70	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	380	
11096-82-5	Aroclor-1260	310	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458029

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC04

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 21 Date Analyzed: 05/23/94

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	27	~~B~~ U
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	UJ
71-55-6	1,1,1-Trichloroethane	48	J
56-23-5	Carbon Tetrachloride	13	UJ
75-27-4	Bromodichloromethane	13	UJ
78-87-5	1,2-Dichloropropane	13	UJ
10061-01-5	cis-1,3-Dichloropropene	13	UJ
79-01-6	Trichloroethene	13	UJ
124-48-1	Dibromochloromethane	13	UJ
79-00-5	1,1,2-Trichloroethane	13	UJ
71-43-2	Benzene	13	UJ
10061-02-6	trans-1,3-Dichloropropene	13	UJ
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.

X106

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458029

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC04

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 21 Date Analyzed: 05/23/94

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.

X106

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458029

Sample wt/vol: 1.2 (g/mL) G Lab File ID: C0607K12

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	11000	U
111-44-4	bis(2-Chloroethyl)Ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1,3-Dichlorobenzene	11000	U
106-46-7	1,4-Dichlorobenzene	11000	U
95-50-1	1,2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-Di-n-Propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2,4-Dimethylphenol	11000	U
111-91-1	bis(2-Chloroethoxy)Methane	11000	U
120-83-2	2,4-Dichlorophenol	11000	U
120-82-1	1,2,4-Trichlorobenzene	11000	U
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	UJ
59-50-7	4-Chloro-3-Methylphenol	11000	U
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2,4,6-Trichlorophenol	11000	U
95-95-4	2,4,5-Trichlorophenol	26000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	26000	U
131-11-3	Dimethylphthalate	11000	U
208-96-8	Acenaphthylene	11000	U
606-20-2	2,6-Dinitrotoluene	11000	U
99-09-2	3-Nitroaniline	26000	UJ
83-32-9	Acenaphthene	11000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

ıb Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458029

Sample wt/vol: 1.2 (g/mL) G Lab File ID: C0607K12

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	26000	U
100-02-7	4-Nitrophenol	26000	U
132-64-9	Dibenzofuran	11000	U
121-14-2	2,4-Dinitrotoluene	11000	U
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	11000	U
100-10-6	4-Nitroaniline	26000	U
534-52-1	4,6-Dinitro-2-methylphenol	26000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	UJ
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	26000	U
85-01-8	Phenanthrene	3900	J
120-12-7	Anthracene	11000	U
86-74-8	Carbazole	11000	U
84-74-2	Di-n-Butylphthalate	14000	BU
206-44-0	Fluoranthene	7000	J
129-00-0	Pyrene	5900	J
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3,3'-Dichlorobenzidine	11000	U
56-55-3	Benzo(a)Anthracene	11000	U
218-01-9	Chrysene	6300	J
117-81-7	bis(2-Ethylhexyl)Phthalate	11000	U
117-84-0	Di-n-Octyl Phthalate	11000	U
205-99-2	Benzo(b)Fluoranthene	14000	
207-08-9	Benzo(k)Fluoranthene	9900	J
50-32-8	Benzo(a)Pyrene	4600	J
193-39-5	Indeno(1,2,3-cd)Pyrene	14000	
53-70-3	Dibenz(a,h)Anthracene	11000	U
191-24-2	Benzo(g,h,i)Perylene	17000	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X106

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458029

Sample wt/vol: 1.2 (g/mL) G Lab File ID: C0607K12

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 21 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 24

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALIP. HYDROCARBON	18.30	210000	J
2.	UNKNOWN ALIP. HYDROCARBON	18.39	410000	J
3.	UNKNOWN ALIP. HYDROCARBON	18.52	110000	J
4.	UNKNOWN ALIP. HYDROCARBON	18.59	75000	J
5.	UNKNOWN ALIP. HYDROCARBON	19.04	210000	J
6.	UNKNOWN ALIP. HYDROCARBON	19.10	88000	J
7.	UNKNOWN	19.20	380000	J
8.	UNKNOWN ALIP. HYDROCARBON	19.37	66000	J
9.	UNKNOWN	19.45	75000	J
10.	UNKNOWN ALIP. HYDROCARBON	19.47	71000	J
11.	UNKNOWN	19.50	27000	J
12.	UNKNOWN ALIP. HYDROCARBON	19.70	26000	J
13.	UNKNOWN ALIP. HYDROCARBON	19.77	850000	J
14.	UNKNOWN	19.85	200000	J
15.	UNKNOWN ALIP. HYDROCARBON	20.12	97000	J
16.	UNKNOWN	20.22	58000	J
17.	UNKNOWN ALIP. HYDROCARBON	20.35	240000	J
18.	UNKNOWN ALIP. HYDROCARBON	20.44	160000	J
19.	UNKNOWN ALIP. HYDROCARBON	20.57	210000	J
20.	UNKNOWN	20.59	150000	J
21.	UNKNOWN ALIP. HYDROCARBON	20.67	41000	J
22.	UNKNOWN ALIP. HYDROCARBON	21.04	440000	J
23.	UNKNOWN	21.15	480000	J
24.	UNKNOWN ALIP. HYDROCARBON	22.22	270000	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458029

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

% Moisture: 21 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/28/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	62	
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	68	P
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	20	BP
33213-65-9	Endosulfan II	4.1	U
50-29-3	4,4'-DDD	10	P
1031-07-8	Endosulfan sulfate	34	P
50-29-3	4,4'-DDT	43	
72-43-5	Methoxychlor	21	U
53494-70-5	Endrin ketone	4.1	U
7421-36-3	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	95	
5103-74-2	gamma-Chlordane	81	
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	280	P

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X106DLRE

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: 58029DRE

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

% Moisture: 21 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/29/94

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	50	PD
319-85-7	beta-BHC	21	U
319-86-8	delta-BHC	21	U
58-89-9	gamma-BHC (Lindane)	21	U
76-44-8	Heptachlor	21	U
309-00-2	Aldrin	21	U
1024-57-3	Heptachlor epoxide	46	PD
959-98-8	Endosulfan I	37	PD
60-57-1	Dieldrin	41	U
72-55-9	4,4'-DDE	41	U
72-20-8	Endrin	18	BJPD
33213-65-9	Endosulfan II	41	U
50-29-3	4,4'-DDD	41	U
1031-07-8	Endosulfan sulfate	48	D
50-29-3	4,4'-DDT	48	D
72-43-5	Methoxychlor	210	U
53494-70-5	Endrin ketone	41	U
7421-36-3	Endrin aldehyde	41	U
5103-71-9	alpha-Chlordane	74	D
5103-74-2	gamma-Chlordane	53	D
8001-35-2	Toxaphene	2100	U
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	840	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	410	U
11096-82-5	Aroclor-1260	390	JPD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458030

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 24 Date Analyzed: 05/23/94

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	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 ~~10~~	~~BI~~ U
67-64-1	Acetone	19	~~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	9	J
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

X107

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458030

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 24 Date Analyzed: 05/23/94

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

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALIP. HYDROCARBON	17.24	21	J
2.	UNKNOWN ALIP. HYDROCARBON	17.67	29	J
3.	UNKNOWN ALIP. HYDROCARBON	18.37	6	J
4.	UNKNOWN	18.54	10	J
5.	UNKNOWN ALIP. HYDROCARBON	18.64	54	J
6.	UNKNOWN ALIP. HYDROCARBON	19.20	48	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X107

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458030

Sample wt/vol: 30.1 (g/mL) G Lab File ID: C0524E07

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 6.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2600	U
111-44-4	bis(2-Chloroethyl)Ether	2600	U
95-57-8	2-Chlorophenol	2600	U
541-73-1	1,3-Dichlorobenzene	2600	U
106-46-7	1,4-Dichlorobenzene	2600	U
95-50-1	1,2-Dichlorobenzene	2600	U
95-48-7	2-Methylphenol	2600	U
108-60-1	2,2'-oxybis(1-Chloropropane)	2600	U
106-44-5	4-Methylphenol	2600	U
621-64-7	N-Nitroso-Di-n-Propylamine	2600	U
67-72-1	Hexachloroethane	2600	U
98-95-3	Nitrobenzene	2600	U
78-59-1	Isophorone	2600	U
88-75-5	2-Nitrophenol	2600	U
105-67-9	2,4-Dimethylphenol	2600	U
111-91-1	bis(2-Chloroethoxy)Methane	2600	U
120-83-2	2,4-Dichlorophenol	2600	U
120-82-1	1,2,4-Trichlorobenzene	2600	U
91-20-3	Naphthalene	2600	U
106-47-8	4-Chloroaniline	2600	UJ
87-68-3	Hexachlorobutadiene	2600	U
59-50-7	4-Chloro-3-Methylphenol	2600	U
91-57-6	2-Methylnaphthalene	2600	U
77-47-4	Hexachlorocyclopentadiene	2600	U
88-06-2	2,4,6-Trichlorophenol	2600	U
95-95-4	2,4,5-Trichlorophenol	6300	U
91-58-7	2-Chloronaphthalene	2600	U
88-74-4	2-Nitroaniline	6300	U
131-11-3	Dimethylphthalate	2600	U
208-96-8	Acenaphthylene	2600	U
606-20-2	2,6-Dinitrotoluene	2600	U
99-09-2	3-Nitroaniline	6300	UJ
83-32-9	Acenaphthene	2600	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X107

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458030

Sample wt/vol: 30.1 (g/mL) G Lab File ID: C0524E07

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 6.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	6300	UJ
100-02-7	4-Nitrophenol	6300	UJ
132-64-9	Dibenzofuran	2600	U
121-14-2	2,4-Dinitrotoluene	2600	U
84-66-2	Diethylphthalate	2600	U
7005-72-3	4-Chlorophenyl-phenylether	2600	U
86-73-7	Fluorene	2600	U
100-10-6	4-Nitroaniline	6300	UJ
534-52-1	4,6-Dinitro-2-methylphenol	6300	U
86-30-6	N-Nitrosodiphenylamine (1)	2600	U
101-55-3	4-Bromophenyl-phenylether	2600	U
118-74-1	Hexachlorobenzene	2600	U
87-86-5	Pentachlorophenol	6300	U
85-01-8	Phenanthrene	820	J
120-12-7	Anthracene	2600	U
86-74-8	Carbazole	2600	U
84-74-2	Di-n-Butylphthalate	2600	RU
206-44-0	Fluoranthene	1900	J
129-00-0	Pyrene	2000	J
85-68-7	Butylbenzylphthalate	2600	U
91-94-1	3,3'-Dichlorobenzidine	2600	UJ
56-55-3	Benzo(a)Anthracene	1600	J
218-01-9	Chrysene	1900	J
117-81-7	bis(2-Ethylhexyl)Phthalate	2600	U
117-84-0	Di-n-Octyl Phthalate	2600	UJ
205-99-2	Benzo(b)Fluoranthene	2600	U
207-08-9	Benzo(k)Fluoranthene	2600	UJ
50-32-8	Benzo(a)Pyrene	2900	
193-39-5	Indeno(1,2,3-cd)Pyrene	2600	U
53-70-3	Dibenz(a,h)Anthracene	2600	U
191-24-2	Benzo(g,h,i)Perylene	2600	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X107

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458030

Sample wt/vol: 30.1 (g/mL) G Lab File ID: C0524E07

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 24 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 6.0

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

Number TICs found: 30

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.77	5000	~~BJ~~ u
2. 123-42-2	PENTANONE,HYDROXYMETHYL	8.45	190000	~~JNBA~~ u
3.	UNKNOWN ALIP. HYDROCARBON	16.39	3400	J
4.	UNKNOWN ALIP. HYDROCARBON	17.94	2700	J
5.	UNKNOWN ALIP. HYDROCARBON	18.25	2200	J
6.	UNKNOWN ALIP. HYDROCARBON	19.10	3500	J
7.	UNKNOWN ALIP. HYDROCARBON	19.62	3200	J
8.	UNKNOWN	20.44	1100	J
9.	TRIMETHYL PHENANTHRENE	20.65	750	J
10.	UNKNOWN ALIP. HYDROCARBON	20.79	670	J
11.	UNKNOWN ALIP. HYDROCARBON	20.89	2000	J
12.	UNKNOWN	21.02	1800	J
13.	UNKNOWN ALIP. HYDROCARBON	22.12	2900	J
14.	UNKNOWN ALIP. HYDROCARBON	22.20	5100	J
15.	UNKNOWN	22.77	530	J
16.	UNKNOWN ALIP. HYDROCARBON	23.29	1000	J
17.	UNKNOWN ALIP. HYDROCARBON	23.42	3300	J
18.	UNKNOWN	24.40	740	J
19.	UNKNOWN	26.29	1300	J
20.	UNKNOWN ALIP. HYDROCARBON	26.47	310	J
21.	UNKNOWN	27.81	580	J
22.	UNKNOWN	28.04	690	J
23.	UNKNOWN	28.37	1100	J
24.	UNKNOWN	28.56	510	J
25.	UNKNOWN	28.67	800	J
26.	UNKNOWN	28.94	320	J
27.	UNKNOWN ALIP. ACID ESTER	29.31	6000	~~BJ~~ u
28.	UNKNOWN	30.14	2100	J
29.	UNKNOWN ALIP. HYDROCARBON	31.09	1200	J
30.	UNKNOWN ALIP. HYDROCARBON	32.17	1300	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X107

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458030

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

% Moisture: 24 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0.66	JP
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	~~43 20.48~~	~~BJP~~ u
72-55-9	4,4'-DDE	4.3	U
72-20-8	Endrin	2.7	BJP
33213-65-9	Endosulfan II	1.4	JP
50-29-3	4,4'-DDD	1.0	JP
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	1.7	J
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	2.2	U
5103-74-2	gamma-Chlordane	1.3	J
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	14	JP
11096-82-5	Aroclor-1260	43	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108RE

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458031RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC11

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 8 Date Analyzed: 05/23/94

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	UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	14	BU
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	UJ
71-55-6	1,1,1-Trichloroethane	20	
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	8	J
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	UJ
591-78-6	2-Hexanone	11	UJ
127-18-4	Tetrachloroethene	11	UJ
79-34-5	1,1,2,2-Tetrachloroethane	11	UJ
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	11	UJ
100-41-4	Ethylbenzene	11	UJ
100-42-5	Styrene	11	UJ
1330-20-7	Xylene (total)	11	UJ

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108RE

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458031RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC11

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 8 Date Analyzed: 05/23/94

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.

X108

b Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458031

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K09

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 8 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	9900	U
111-44-4	bis(2-Chloroethyl)Ether	9900	U
95-57-8	2-Chlorophenol	9900	U
541-73-1	1,3-Dichlorobenzene	9900	U
106-46-7	1,4-Dichlorobenzene	9900	U
95-50-1	1,2-Dichlorobenzene	9900	U
95-48-7	2-Methylphenol	9900	U
108-60-1	2,2'-oxybis(1-Chloropropane)	9900	U
106-44-5	4-Methylphenol	9900	U
621-64-7	N-Nitroso-Di-n-Propylamine	9900	U
67-72-1	Hexachloroethane	9900	U
98-95-3	Nitrobenzene	9900	U
78-59-1	Isophorone	9900	U
88-75-5	2-Nitrophenol	9900	U
105-67-9	2,4-Dimethylphenol	9900	U
111-91-1	bis(2-Chloroethoxy)Methane	9900	U
120-83-2	2,4-Dichlorophenol	9900	U
120-82-1	1,2,4-Trichlorobenzene	9900	U
91-20-3	Naphthalene	9900	U
106-47-8	4-Chloroaniline	9900	U
87-68-3	Hexachlorobutadiene	9900	UJ
59-50-7	4-Chloro-3-Methylphenol	9900	U
91-57-6	2-Methylnaphthalene	9900	U
77-47-4	Hexachlorocyclopentadiene	9900	U
88-06-2	2,4,6-Trichlorophenol	9900	U
95-95-4	2,4,5-Trichlorophenol	25000	U
91-58-7	2-Chloronaphthalene	9900	U
88-74-4	2-Nitroaniline	25000	U
131-11-3	Dimethylphthalate	9900	U
208-96-8	Acenaphthylene	9900	U
606-20-2	2,6-Dinitrotoluene	9900	U
99-09-2	3-Nitroaniline	25000	UJ
83-32-9	Acenaphthene	9900	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458031

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K09

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 8 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	25000	U
100-02-7	4-Nitrophenol	25000	U
132-64-9	Dibenzofuran	9900	U
121-14-2	2,4-Dinitrotoluene	9900	U
84-66-2	Diethylphthalate	9900	U
7005-72-3	4-Chlorophenyl-phenylether	9900	U
86-73-7	Fluorene	9900	U
100-10-6	4-Nitroaniline	25000	U
534-52-1	4,6-Dinitro-2-methylphenol	25000	U
86-30-6	N-Nitrosodiphenylamine (1)	9900	UJ
101-55-3	4-Bromophenyl-phenylether	9900	U
118-74-1	Hexachlorobenzene	9900	U
87-86-5	Pentachlorophenol	25000	U
85-01-8	Phenanthrene	9900	U
120-12-7	Anthracene	9900	U
86-74-8	Carbazole	9900	U
84-74-2	Di-n-Butylphthalate	19000	BU
206-44-0	Fluoranthene	9900	U
129-00-0	Pyrene	9900	U
85-68-7	Butylbenzylphthalate	9900	U
91-94-1	3,3'-Dichlorobenzidine	9900	U
56-55-3	Benzo(a)Anthracene	9900	U
218-01-9	Chrysene	9900	U
117-81-7	bis(2-Ethylhexyl)Phthalate	9900	U
117-84-0	Di-n-Octyl Phthalate	9900	U
205-99-2	Benzo(b)Fluoranthene	9900	U
207-08-9	Benzo(k)Fluoranthene	9900	U
50-32-8	Benzo(a)Pyrene	9900	U
193-39-5	Indeno(1,2,3-cd)Pyrene	9900	U
53-70-3	Dibenz(a,h)Anthracene	9900	U
191-24-2	Benzo(g,h,i)Perylene	9900	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X108

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458031

Sample wt/vol: 1.1 (g/mL) G Lab File ID: C0607K09

Level: (low/med) MED Date Received: 05/18/94

% Moisture: 8 decanted: (Y/N) N Date Extracted: 05/25/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/07/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 26

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 17851-53-5	BENZENEDICARBOXYLIC ACID, ES	24.29	100000	~~JNB~~ u
2.	UNKNOWN	31.24	4400	J
3.	UNKNOWN	31.54	4500	J
4.	UNKNOWN	31.64	6500	J
5.	UNKNOWN	31.64	13000	J
6.	UNKNOWN	31.86	33000	J
7.	UNKNOWN	32.16	4300	J
8.	UNKNOWN	32.64	10000	J
9.	UNKNOWN	32.81	18000	J
10.	UNKNOWN	32.82	22000	J
11.	UNKNOWN	33.07	9300	J
12.	UNKNOWN	33.17	6400	J
13.	UNKNOWN	33.39	3900	J
14.	UNKNOWN	33.86	17000	J
15.	UNKNOWN	33.91	17000	J
16.	UNKNOWN	34.02	5000	J
17.	UNKNOWN	34.29	7200	J
18.	UNKNOWN	34.44	1700	J
19.	UNKNOWN	34.71	9800	J
20.	UNKNOWN	34.72	12000	J
21.	UNKNOWN	34.82	730	J
22.	UNKNOWN	34.99	17000	J
23.	UNKNOWN	35.24	900	J
24.	UNKNOWN	35.27	3500	J
25.	UNKNOWN	35.29	3700	J
26.	UNKNOWN	35.71	15000	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

X108

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458031

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

% Moisture: 8 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	3.7	P
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	50	B
72-55-9	4,4'-DDE	50	
72-20-8	Endrin	84	BP
33213-65-9	Endosulfan II	84	P
50-29-3	4,4'-DDD	8.5	P
1031-07-8	Endosulfan sulfate	3.6	U
50-29-3	4,4'-DDT	3.6	U
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	22	P
7421-36-3	Endrin aldehyde	56	P
5103-71-9	alpha-Chlordane	11	
5103-74-2	gamma-Chlordane	4.5	P
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	410	
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	1000	
11096-82-5	Aroclor-1260	1800	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X108DLRE

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: 58031DRE

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

% Moisture: 8 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/29/94

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	18	U
319-85-7	beta-BHC	18	U
319-86-8	delta-BHC	18	U
58-89-9	gamma-BHC (Lindane)	18	U
76-44-8	Heptachlor	18	U
309-00-2	Aldrin	18	U
1024-57-3	Heptachlor epoxide	18	U
959-98-8	Endosulfan I	18	U
60-57-1	Dieldrin	65	BD
72-55-9	4,4'-DDE	36	U
72-20-8	Endrin	120	BPD
33213-65-9	Endosulfan II	100	D
50-29-3	4,4'-DDD	8.2	JPD
1031-07-8	Endosulfan sulfate	36	U
50-29-3	4,4'-DDT	36	U
72-43-5	Methoxychlor	180	UJ
53494-70-5	Endrin ketone	36	U
7421-36-3	Endrin aldehyde	36	U
5103-71-9	alpha-Chlordane	12	DJ
5103-74-2	gamma-Chlordane	5.3	JPD
8001-35-2	Toxaphene	1800	U
12674-11-2	Aroclor-1016	500	D
11104-28-2	Aroclor-1221	720	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	1200	D
11096-82-5	Aroclor-1260	2100	D

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458032

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC12

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 38 Date Analyzed: 05/23/94

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	U
75-09-2	Methylene Chloride	16 ~~12~~	~~BJ~~ U
67-64-1	Acetone	52	~~B~~ U
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	15	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	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
108-88-3	Toluene	16	U
108-90-7	Chlorobenzene	16	U
100-41-4	Ethylbenzene	16	U
100-42-5	Styrene	16	U
1330-20-7	Xylene (total)	16	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X109

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458032

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC12

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 38 Date Analyzed: 05/23/94

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.

X109

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458032

Sample wt/vol: 30.6 (g/mL) G Lab File ID: C0608K05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 38 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	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	U
87-68-3	Hexachlorobutadiene	520	UJ
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	150	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458032

Sample wt/vol: 30.6 (g/mL) G Lab File ID: C0608K05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 38 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	U
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	140	J
100-10-6	4-Nitroaniline	1300	UJ
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	250	J
120-12-7	Anthracene	520	U
86-74-8	Carbazole	520	U
84-74-2	Di-n-Butylphthalate	2100	~~B~~U
206-44-0	Fluoranthene	370	J
129-00-0	Pyrene	350	J
85-68-7	Butylbenzylphthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benzo(a)Anthracene	520	U
218-01-9	Chrysene	250	J
117-81-7	bis(2-Ethylhexyl)Phthalate	520	U
117-84-0	Di-n-Octyl Phthalate	520	U
205-99-2	Benzo(b)Fluoranthene	570	
207-08-9	Benzo(k)Fluoranthene	520	U
50-32-8	Benzo(a)Pyrene	280	J
193-39-5	Indeno(1,2,3-cd)Pyrene	330	J
53-70-3	Dibenz(a,h)Anthracene	520	U
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.

X109

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458032

Sample wt/vol: 30.6 (g/mL) G Lab File ID: C0608K05

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 38 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 06/08/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 29

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.00	2400	J
2.	UNKNOWN	8.55	9800	J
3. 123-42-2	HYDROXYMETHYLPENTANONE	8.72	120000	~~JNBA~~ u g
4.	UNKNOWN	10.09	1900	BJ
5.	UNKNOWN ALIP. ACID	25.09	2400	BJ
6.	UNKNOWN ALIP. HYDROCARBON	28.42	630	J
7.	UNKNOWN	28.74	110	J
8.	UNKNOWN	29.12	40	J
9.	UNKNOWN ALIP. ACID ESTER	29.39	61000	BJ
10.	UNKNOWN	29.64	150	J
11.	UNKNOWN ALIP. HYDROCARBON	30.19	2200	J
12.	UNKNOWN	30.36	66	J
13.	UNKNOWN	30.56	130	J
14.	UNKNOWN	31.16	580	J
15.	UNKNOWN	31.54	170	J
16.	UNKNOWN	31.59	120	J
17.	UNKNOWN ALIP. HYDROCARBON	32.26	2700	J
18.	UNKNOWN	32.74	360	J
19.	UNKNOWN ALIP. HYDROCARBON	33.56	710	J
20.	UNKNOWN	34.21	1400	J
21.	UNKNOWN	34.94	390	J
22.	UNKNOWN ALIP. HYDROCARBON	35.09	2800	J
23.	UNKNOWN	35.21	2500	J
24.	UNKNOWN	35.51	250	J
25.	UNKNOWN	35.64	190	J
26.	UNKNOWN	35.86	79	J
27.	UNKNOWN	36.01	71	J
28.	UNKNOWN	36.21	470	J
29.	UNKNOWN	44.76	2400	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X109

ab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458032

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

% Moisture: 38 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0.55	JP
319-85-7	beta-BHC	2.7	U
319-86-8	delta-BHC	8.8	P
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	5.4	BP
72-55-9	4,4'-DDE	18	
72-20-8	Endrin	5.8	BP
33213-65-9	Endosulfan II	5.3	U
50-29-3	4,4'-DDD	33	
1031-07-8	Endosulfan sulfate	5.3	U
50-29-3	4,4'-DDT	17	P
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	4.0	P
5103-74-2	gamma-Chlordane	4.4	P
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	160	
11096-82-5	Aroclor-1260	62	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X201

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458033

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC13

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 40 Date Analyzed: 05/23/94

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	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17 ~~N~~	~~B~~U
67-64-1	Acetone	25	~~B~~U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	8	J
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (total)	17	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

X201

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458033

Sample wt/vol: 5.0 (g/mL) G Lab File ID: B0523LC13

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: not dec. 40 Date Analyzed: 05/23/94

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.

X201

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458033

Sample wt/vol: 30.3 (g/mL) G Lab File ID: C0524E06

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	540	U
111-44-4	bis(2-Chloroethyl)Ether	540	U
95-57-8	2-Chlorophenol	540	U
541-73-1	1,3-Dichlorobenzene	540	U
106-46-7	1,4-Dichlorobenzene	540	U
95-50-1	1,2-Dichlorobenzene	540	U
95-48-7	2-Methylphenol	540	U
108-60-1	2,2'-oxybis(1-Chloropropane)	540	U
106-44-5	4-Methylphenol	540	U
621-64-7	N-Nitroso-Di-n-Propylamine	540	U
67-72-1	Hexachloroethane	540	U
98-95-3	Nitrobenzene	540	U
78-59-1	Isophorone	540	U
88-75-5	2-Nitrophenol	540	U
105-67-9	2,4-Dimethylphenol	540	U
111-91-1	bis(2-Chloroethoxy)Methane	540	U
120-83-2	2,4-Dichlorophenol	540	U
120-82-1	1,2,4-Trichlorobenzene	540	U
91-20-3	Naphthalene	540	U
106-47-8	4-Chloroaniline	540	UJ
87-68-3	Hexachlorobutadiene	540	U
59-50-7	4-Chloro-3-Methylphenol	540	U
91-57-6	2-Methylnaphthalene	540	U
77-47-4	Hexachlorocyclopentadiene	540	U
88-06-2	2,4,6-Trichlorophenol	540	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	540	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	540	U
208-96-8	Acenaphthylene	540	U
606-20-2	2,6-Dinitrotoluene	540	U
99-09-2	3-Nitroaniline	1300	UJ
83-32-9	Acenaphthene	540	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X201

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458033

Sample wt/vol: 30.3 (g/mL) G Lab File ID: C0524E06

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1300	UJ
100-02-7	4-Nitrophenol	1300	UJ
132-64-9	Dibenzofuran	540	U
121-14-2	2,4-Dinitrotoluene	540	U
84-66-2	Diethylphthalate	540	U
7005-72-3	4-Chlorophenyl-phenylether	540	U
86-73-7	Fluorene	540	U
100-10-6	4-Nitroaniline	1300	UJ
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamine (1)	540	U
101-55-3	4-Bromophenyl-phenylether	540	U
118-74-1	Hexachlorobenzene	540	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	640	
120-12-7	Anthracene	540	U
86-74-8	Carbazole	540	U
84-74-2	Di-n-Butylphthalate	2400	BU
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	1600	
85-68-7	Butylbenzylphthalate	540	U
91-94-1	3,3'-Dichlorobenzidine	540	UJ
56-55-3	Benzo(a)Anthracene	1300	
218-01-9	Chrysene	1100	
117-81-7	bis(2-Ethylhexyl)Phthalate	540	U
117-84-0	Di-n-Octyl Phthalate	540	UJ
205-99-2	Benzo(b)Fluoranthene	1200	
207-08-9	Benzo(k)Fluoranthene	800	J
50-32-8	Benzo(a)Pyrene	1200	
193-39-5	Indeno(1,2,3-cd)Pyrene	790	
53-70-3	Dibenz(a,h)Anthracene	540	U
191-24-2	Benzo(g,h,i)Perylene	540	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

X201

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458033

Sample wt/vol: 30.3 (g/mL) G Lab File ID: C0524E06

Level: (low/med) LOW Date Received: 05/18/94

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/19/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 05/24/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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	PENTANONE,HYDROXYMETHYL	8.65	100000	~~JNBA~~ u J
2.	UNKNOWN ALIP. ACID	25.06	1900	BJ
3.	UNKNOWN	25.94	950	J
4.	UNKNOWN ALIP. HYDROCARBON	27.44	620	J
5.	UNKNOWN	28.31	160	J
6.	UNKNOWN ALIP. HYDROCARBON	28.37	1800	J
7.	UNKNOWN	28.56	470	J
8.	UNKNOWN	28.67	380	J
9.	UNKNOWN	28.92	170	J
10.	UNKNOWN ALIP. ACID ESTER	29.29	28000	J
11.	UNKNOWN ALIP. ACID ESTER	29.36	31000	~~BJ~~ u J
12.	UNKNOWN	30.06	320	J
13.	UNKNOWN ALIP. HYDROCARBON	30.16	3600	J
14.	UNKNOWN	30.31	330	J
15.	UNKNOWN	30.51	350	J
16.	UNKNOWN ALIP. HYDROCARBON	31.09	910	J
17.	UNKNOWN	31.37	350	J
18.	UNKNOWN	31.76	340	J
19.	UNKNOWN	32.09	460	J
20.	UNKNOWN ALIP. HYDROCARBON	32.19	3700	J
21.	UNKNOWN	32.24	1800	J
22.	UNKNOWN	32.46	230	J
23.	UNKNOWN	32.49	360	J
24.	UNKNOWN	32.67	500	J
25.	UNKNOWN	32.71	130	J
26.	UNKNOWN ALIP. HYDROCARBON	33.46	510	J
27.	UNKNOWN	34.79	590	J
28.	UNKNOWN ALIP. HYDROCARBON	34.97	3600	J
29.	UNKNOWN	35.09	1800	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X201

Lab Name: ILLINOIS EPA Contract: 0310000000

Lab Code: SPFLD Case No.: DRUM SAS No.: _____ SDG No.: 458024

Matrix: (soil/water) SOIL Lab Sample ID: D458033

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

% Moisture: 40 decanted: (Y/N) N Date Received: 05/18/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/24/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/16/94

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.8	U
319-85-7	beta-BHC	2.8	U
319-86-8	delta-BHC	2.8	U
58-89-9	gamma-BHC (Lindane)	2.8	U
76-44-8	Heptachlor	2.8	U
309-00-2	Aldrin	2.8	U
1024-57-3	Heptachlor epoxide	2.8	U
959-98-8	Endosulfan I	2.8	U
60-57-1	Dieldrin	1.3	BJP
72-55-9	4,4'-DDE	5.5	U
72-20-8	Endrin	5.3	BJP
33213-65-9	Endosulfan II	5.5	U
50-29-3	4,4'-DDD	9.5	P
1031-07-8	Endosulfan sulfate	5.5	U
50-29-3	4,4'-DDT	5.5	U
72-43-5	Methoxychlor	3.3	JP
53494-70-5	Endrin ketone	5.5	U
7421-36-3	Endrin aldehyde	5.5	U
5103-71-9	alpha-Chlordane	3.2	
5103-74-2	gamma-Chlordane	1.8	JP
8001-35-2	Toxaphene	280	U
12674-11-2	Aroclor-1016	20	JP
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	74	
11096-82-5	Aroclor-1260	73	

Data Validation Checklist
Site Name: U.S Drum
SDG No.: 458024
Laboratory: IEPA
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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:
all ok

2. *Case Narrative*

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

Comments:
all ok

Data Validation Checklist
Site Name: U.S Drum
SDG No.: 458024
Laboratory: IEPA
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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.
X101	D458024	5/18/94	5/18/94	(2) 5/20/94	(1) 5/19/94	(5) 5/24/94	(6) 5/24/94	(23) 6/16/94
X101RE	"	"	"	(2) 5/20/94				
X101DL	"	"	"				(6) 5/24/94	(20) 6/23/94
X101DLRE	"	"	"				(6) 5/24/94	(32) 6/29/94
X102	-025	5/17	5/18	(3) 5/20	(8) 5/25	(13) 6/07	(7) 5/24	(24) 6/17
X102DL	"	"	"				(7) 5/24	(30) 6/23
X102DLRE	"	"	"				(7) 5/24	(36) 6/29
X103	-026	5/17/94	5/18	(3) 5/20	(8) 5/25	(13) 6/07	(7) 5/24	(24) 6/17
X103DL	"	"	"				(7) 5/24	(30) 6/23
X103DLRE	"	"	"				(7) 5/24	(36) 6/29
X104	-027	5/17	5/18	(3) 5/20	(8) 5/25	(14) 6/08	(7) 5/24	(23) 6/16
X105	-028	5/17	5/18	(3) 5/20	(8) 5/25	(14) 6/08	(7) 5/24	(23) 6/16
X106	-029	5/17	5/18	(6) 5/23	(9) 5/25	(13) 6/07	(7) 5/24	(35) 6/28
X106RE	"	"	"	(6) 5/23				
X106DL	"	"	"				(7) 5/24	(30) 6/23
X106DLRE	"	"	"				(7) 5/24	(36) 6/29
X107	-030	5/17	5/18	(6) 5/23	(2) 5/19	(9) 5/24	(7) 5/24	(23) 6/16
X108	-031	5/17	5/18	(6) 5/23	(8) 5/25	(13) 6/07	(7) 5/24	(23) 6/16
X108RE	"	"	"	(6) 5/23				
X108DL	"	"	"				(7) 5/24	(30) 6/23
X108DLRE	"	"	"				(7) 5/24	(36) 6/29

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

All OK

Data Validation Checklist
Site Name: U.S. Drum
SDG No.: 458024
Laboratory: IEPA
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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.
X109	D458032	5/17/94	5/18/94	5/23/94	5/19/94	6/8/94	5/24/94	6/16/94
X201	-033	5/18	5/18	5/23	5/19	5/24	5/24	6/16

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

All OK

Data Validation Checklist
Site Name: U.S. Drum
SDG
No.: 458024
Laboratory: IEPA
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II. GC/MS Instrument Performance Check

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Evaluate Forms V and Raw Data***

	YES	NO	
a.	[✓]	[ ]	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:
all ok

VOLATILE CALIBRATION OUTLIERS

3/90 SOW

Lab Name: IEPA

Case: U.S. Drum

Instrument # 5100B DATE/TIME.	Minimum RRF	Initial Cal. 4/26/94			Contin. Cal. 5/20/94			Contin. Cal. 5/23/94			Contin. Cal.			Contin. Cal.		
		RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q	RF	%RSD	Q
Chloromethane	0.010															
Bromomethane	0.100															
Vinyl Chloride	0.100															
Chloroethane	0.010															
Methylene Chloride	0.010															
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								-34.5							
1,1,1-Trichloroethane	0.100															
Carbon Tetrachloride	0.100															
Bromodichloromethane	0.200															
1,2-Dichloropropane	0.010															
cis-1,3-Dichloropropene	0.200															
Trichloroethene	0.300															
Dibromochloromethane	0.100															
1,1,2-Trichloroethane	0.100															
Benzene	0.500															
trans-1,3-Dichloropropene	0.100															
Bromoform	0.100															
4-Methyl-2-Pentanone	0.010															
2-Hexanone	0.010															
Tetrachloroethene	0.200															
1,1,2,2-Tetrachloroethane	0.500															
Toluene	0.400															
Chlorobenzene	0.500															
Ethylbenzene	0.100															
Styrene	0.300															
Xylene(total)	0.300															
Bromofluorobenzene	0.300															

ok ok ok ok ok ok ok ok ok ok

AFFECTED SAMPLES.

VBLKSL1	VBLKSL2
X101	X106
X102	X107
X103	X108
X104	X106RE
X105	X108RE
X101RE	X109
X105MS	X201
X105MSD	

Reviewer's Initials/Date

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

Data Validation Checklist
Site Name: U.S. Drum
SDG No.: 458024
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III. Initial Calibration

GC/MS

Fraction: (VOA) SemiVOA (*circle one*)

1. ***Verify that the Correct Standard Concentrations Were Used.***

YES NO
[✓] [ ] 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: all ok

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:

all OK

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		
Date Anal. or Extr.	5/20/94	5/23/94		
Instrument	5100B	5100B		

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
$MeCl_2$	3	$MeCl_2$	5				
Acetone	9	Acetone	12				

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
None							

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. [✓] [ ] 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:
X106 RC Toluene-d8 %R 140 (QC limits 84-138)

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.

X105ms Compound	Orig. Result	MS Result	MSD Result	%RSD
Methylene chloride	12	8	10	20
1,1,1-Trichloroethane	7	5	5	20

Comments:
all ms + msd ok

Data Validation Checklist
Site Name: U.S Drum
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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:

X101Re: Bromochloromethane low area (2683) (Lower Limit 3244)
1,4-Dichlorobenzene low area (11970) (LL 18288)
Chlorobenzene-d_5 low area (9647) (LL 17360)

X101: Chlorobenzene-d_5 low area (12983) (LL 17360)

X106: DFB low area (15168) (LL 17338)
CBZ low area (8842) (LL 17210)

X106Re: CBZ low area (11141) (LL 17210)

X108: DFB low area (16653) (LL 17338)
CBZ low area (9103) (LL 17210)

X108RE: CBZ low area (8730)

Use: X106, X101, X108Re,

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:
all OK

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:
all ok

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.***

   NA 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.

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:
all ok

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:
all OK

Case : U.S. Drum

(VOA) SV PEST

Water sample surrogate %R

Sample # (and column # for PEST) : _____
Surrogate : _____
Concentration added (ug/L) : _____
Calculated %R : _____
Reported %R : _____

NA

Comment : _____

Soil sample surrogate %R

Sample # (and column # for PEST) : X06RE
Surrogate : Toluene-d8
Concentration added (ug/Kg) : 63.3
Calculated %R : 140
Reported %R : 140

$$\frac{(18931)(250)}{(11141)(1.216)(5.0)(.79)} = \frac{88.4}{50 \div .79} \times 100 = 140\%$$

Comment : OK

Water sample MS/MSD

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____
%R calculated correctly? _____

NA

Comment : _____

Soil sample MS/MSD

Sample # (and column # for PEST) : X105MS
Compound : Toluene
Calculated concentration (ug/Kg) : ~~52.42~~ 52.42
Reported concentration : 52.42
%R calculated correctly? Yes

$$\frac{(27931)(250)}{(22255)(1.260)(5.0)(.95)} = \frac{52.42 - 0 \text{ (sample)}}{52.60} \times 100 = 100$$

Comment : OK

Case : U.S Drum

(VOA) SV PEST

Water sample TCL

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

NA

Comment : _____

Soil sample TCL

Sample # (and column # for PEST) : X101
Compound : Benzene
Calculated concentration (ug/Kg) : 4.4
Reported concentration : 4

$\frac{(1476)(250)}{(18350)(1.092)(5.0)(.83)}$
= 4.4

Comment : OK

Multicomponent analyte (PEST only)

Sample and column # : _____
Compound : _____
Calculated concentration : _____
Reported concentration : _____

NA

Comment : _____

TICs

Water sample # : _____
TIC # : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

NA

Comment : _____

Soil sample # : X107
TIC # : R.T. 17.67, unk ALIP. HYDRC.
Calculated concentration (ug/Kg) : 29
Reported concentration : 29

$\frac{(35655)(250)}{(79860)(1.0)(5.0)(.76)}$
= 29

Comment : OK

Data Validation Checklist
Site Name: U.S. Drum
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II. GC/MS Instrument Performance Check

Fraction: VOA (SemiVOA) *(circle one)*

1. ***Evaluate Forms V and Raw Data***

	YES	NO	
a.	[✓]	[ ]	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:
all ok

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

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: U S Drum

Instrument # XL	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	5/12/94			5/24/94											
		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	OK														
2,4-Dichlorophenol	0.200															
1,2,4-Trichlorobenzene	0.200															
Naphthalene	0.700															
4-Chloroaniline	0.010				0.020	33.3										
Hexachlorobutadiene	0.010															
4-Chloro-3-methylphenol	0.200															
2-Methylnaphthalene	0.400															
Hexachlorocyclopentadiene	0.010															
2,4,6-Trichlorophenol	0.200															
2,4,5-Trichlorophenol	0.200															
2-Chloronaphthalene	0.800															
2-Nitroaniline	0.010															
Dimethylphthalate	0.010															
Acenaphthylene	1.300															
2,6-Dinitrotoluene	0.200															
3-Nitroaniline	0.010		48.4		0.042	51.2										
Acenaphthene	0.800															
2,4-Dinitrophenol	0.010					29.0										
4-Nitrophenol	0.010				0.027	80.4										
Dibenzofuran	0.800															
2,4-Dinitrotoluene	0.200															

AFFECTED SAMPLES:

3BLKSL
X101
X201
X107

Reviewer's Initials/Date

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

SEMIVOLATILE CALIBRATION OUTLIERS

Page 2

Lab Name: IEPA

Case: U.S Drum

Instrument # XL	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	5/12/94			5/24/94											
		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				0.030	58.3										
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	OK														
Pyrene	0.600															
Butylbenzylphthalate	0.010															
3,3'-Dichlorobenzidine	0.010		38.5			34.1										
Benzo(a)anthracene	0.800															
Chrysene	0.700															
bis(2-Ethylhexyl)phthalate	0.010															
Di-n-octylphthalate	0.010					-39.7										
Benzo(b)fluoranthene	0.700															
Benzo(k)fluoranthene	0.700					-31.1										
Benzo(a)pyrene	0.700															
Indeno(1,2,3-cd)pyrene	0.500															
Dibenz(a,h)anthracene	0.400															
Benzo(g,h,i)perylene	0.500															
Nitrobenzene-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

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SEE PAGE 1 FOR AFFECTED SAMPLES

Reviewer's
Initials/Date

SEMIVOLATILE CALIBRATION OUTLIERS

Page 1

Lab Name: IEPA

Case: U.S Drum

Instrument # XL	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	6/1/94			6/7/94			6/8/94								
		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	0.030	45.3													
Hexachlorobutadiene	0.010					25.8			-25.3							
4-Chloro-3-methylphenol	0.200															
2-Methylnaphthalene	0.400															
Hexachlorocyclopentadiene	0.010															
2,4,6-Trichlorophenol	0.200															
2,4,5-Trichlorophenol	0.200															
2-Chloronaphthalene	0.800															
2-Nitroaniline	0.010															
Dimethylphthalate	0.010															
Acenaphthylene	1.300															
2,6-Dinitrotoluene	0.200															
3-Nitroaniline	0.010		61.0		0.011	88.8			70.4							
Acenaphthene	0.800															
2,4-Dinitrophenol	0.010															
4-Nitrophenol	0.010															
Dibenzofuran	0.800															
2,4-Dinitrotoluene	0.200															

RK OK

AFFECTED SAMPLES:

None

SALKSM
X108
X102
X103
X106

X104
X105
X109
X109MS
X109MSD
X108MS
X108MSD

Reviewer's Initials/Date

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

SEMIVOLATILE CALIBRATION OUTLIERS

Page 2

Lab Name: IEPA

Case: U.S. Drum

Instrument # XL	Minimum	Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
DATE/TIME:	RRF	6/1/94			6/7/94			6/8/94								
		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								40.2							
4,6-Dinitro-2-methylphenol	0.010															
N-Nitrosodiphenylamine (1)	0.010					31.2										
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															
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															
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															

All OK

All OK

All OK

All OK

3/92

Q - This column of flags should be applied to the analytes on the sample data sheets.

SEE PAGE 1 FOR AFFECTED SAMPLES

Reviewer's
Initials/Date

Data Validation Checklist
Site Name: U.S. Drum
SDG No.: 458024
Laboratory: IEPA
Page 26 of 47

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		SBLKSM	
Date Anal. or Extr.	Ext 5/19/94, Anl. 5/24		5/25, 06/07	
Instrument	XL		XL	

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
Di-n-Butyl phthalate	1600			Di-n-butyl phthalate	7200		

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount
Fluoranene methyl	830	unk Acid Acetate	74	Fluoranene Hydroxymethyl	15,000		
unk. Acid Alcohol	400	unk. R.T. 10.02	680	unk R.T 8.45	5,800		
unk R.T. 7.43	220	unk. R.T. 10.15	140	Benzoic acid. methyl ester	42,000		
unk R.T. 7.55	390	unk. Acid ketone	300				
unk R.T. 7.78	840	unk R.T. 11.80	69				
unk. R.T. 8.25	220	unk. Acid Acid R.T. 25.41	100				
Fluoranene Hydroxyl	62,000	unk R.T. 27.17	100				
unk. Acid Ester R.T. 8.21	180	unk Acid Acid ester	84,000				
unk R.T 8.80	190						

Data Validation Checklist
Site Name: U.S. Drum
SDG
No.: 458024
Laboratory: IEPA
Page 27 of 47

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.*

NA YES NO
a. X [ ] [ ] Check that reanalyses were performed as required.

b. [✓] [ ] Check that surrogate recoveries in blanks met criteria.

4. *Evaluate Reanalyses.*

NA YES NO
X [ ] [ ] Whenever there are two or more analyses for a particular sample, determine which are the best analyses to use. This determination must be performed in conjunction with the evaluation of the internal standard area response criteria. List below the results of the reviewers determinations.

Comments:
X109 MS+MSD % R for Chloral-dc was slightly high
X106 2-Fluorophenol % R slightly low -23% (QC limit 25)

Data Validation Checklist
Site Name: U.S. Drum
SDG
No.: 458034
Laboratory: IEPA
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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.

X108 Compound	Orig. Result	MS Result	MSD Result	%RSD
~~Bis-butylphthalate~~	19000	15000	16000	12.5%
X109				
Phenanthrene	250	420	220	36.%
Di-n-butyl phthalate	2100	2400	2400	7.5
Fluoranthene	370	680	360	39
Chrysene	250	470	250	39

Comments:
X109MS: Phenol-H, 4-Nitrophenol-0%, 2,4-Dinitrotoluene-H, PCP-H
X109MSD Phenol-H, 4-Nitrophenol-H, 2,4-Dinitrotoluene-H, PCP-H
109MSD: RPD-H for 4-nitrophenol

Case : U.S Drum

VOA (SV) PEST

~~Water~~ Soil sample TCL

Low

Sample # (and column # for PEST) : X109
Compound : Acenaphthene
Calculated concentration (~~ug/L~~ ug/Kg) : 151
Reported concentration : 150

$$\frac{(31156)(40)(500)(1.0)(2.0)}{(169374)(1.283)(2.0)(30.6)(.62)} = 151$$

Comment : OK

Soil sample TCL

Medium

Sample # (and column # for PEST) : X102
Compound : Pyrene
Calculated concentration (ug/Kg) : 4154
Reported concentration : 4200

$$\frac{(65289)(40)(500)(1.0)(2.0)}{(287282)(1.658)(2.0)(1.1)(.60)} = 4153.7$$

Comment : OK

Multicomponent analyte (PEST only)

Sample and column # : _____
Compound : _____
Calculated concentration : _____
Reported concentration : _____

NA

Comment : _____

TICs

Low

~~Water~~ Soil sample # : X101
TIC # : Benzanthrene, methyl R.T. 24.99
Calculated concentration (~~ug/L~~ ug/Kg) 313
Reported concentration : 310

$$\frac{(192786)(40)(500)(1.0)(2.0)}{(494645)(1.0)(2.0)(30)(.83)} = 313$$

Comment : OK

Medium

Soil sample # : X103
TIC # : Cyclohexenone R.T. 10.49
Calculated concentration (ug/Kg) : 5227
Reported concentration : 5200

$$\frac{(108978)(40)(500)(1.0)(2.0)}{(621436)(1.0)(2.0)(1.1)(.61)} = 5227$$

Comment : OK

Case : U.S. Drum

VOA (SV) PEST

Low

~~Water~~ Soil sample surrogate %R

Sample # (and column # for PEST) : X107
Surrogate : Phenol-d5
Concentration added (ug/~~L~~Kg) 3278.5
Calculated %R : 81.9
Reported %R : 82

$$\frac{(44277)(40)(500)(6.0)(2.0)}{(71044)(1.218)(2.0)(30.1)(.76)} = \frac{2684.97}{3278.5} \times 100 = 81.9\%$$

Comment : OK

Medium

Soil sample surrogate %R

Sample # (and column # for PEST) : X108
Surrogate : Nitrobenzene-d5
Concentration added (ug/Kg) : 49,407
Calculated %R : 71
Reported %R : 71

$$\frac{(272060)(40)(500)(1.0)(2.0)}{(338442)(.453)(2.0)(1.1)(.92)} = \frac{35,070}{49,407} \times 100 = 71\%$$

Comment : OK

Low

~~Water~~ Soil sample MS/MSD

Sample # (and column # for PEST) : X109ms
Compound : Phenol
Calculated concentration (ug/~~L~~Kg) 3940
Reported concentration : 3939
%R calculated correctly? Yes

$$\frac{(622819)(40)(500)(1.0)(2.0)}{(99928)(1.684)(2.0)(30.3)(.6-}$$
$$= 3940$$

Comment : OK

Medium

Soil sample MS/MSD

Sample # (and column # for PEST) : X108ms
Compound : Pentachlorophenol
Calculated concentration (ug/Kg) : 57,977
Reported concentration : 58,000
%R calculated correctly? Yes

$$\frac{(101002)(40)(500)(1)(2.0)}{(302008)(0.114)(2.0)(1.1)(.92)}$$
$$= 57,977$$

Comment : OK

Data Validation Checklist
Site Name: U.S. Drum
SDG
No.: 458024
Laboratory: IEPA
Page _____ of _____

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: all OK

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:
all OK

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.

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: all ok

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:
all ok

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	
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.
b.	[✓]	[ ]	Check the PEM data from the initial and continuing calibrations to verify that the resolution criterion was met.
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.
d.	[✓]	[ ]	Check that the *RPDs* meet the criterion.
e.	[✓]	[ ]	Check that the breakdowns for 4,4'-DDT and Endrin meet the criteria.

Comments:
all OK

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.

all OK

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:

all OK

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.	PBLKS1			
Date Anal. or Extr.	6/28/94, 5/24/94			
Instrument	Beth			

TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount	TCL Comp'd.	Amount
Dieldrin	0.14						
Endrin	0.18						

TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount	TIC Comp'd.	Amount

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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.

1=608 2=1701 QC limits (60-150)

Comments:

X102: DCB1 215%, DCB2 0%
~~X102DL DCB1 2750%~~
X102DLRE: DCB1 0%
~~X103DL DCB1 2200%~~
X103DLRE: TCX1 164%, TCX2 155%, DCB1 0%
X105 DCB1 184%
X106 TCX1 234%, TCX2 296%
~~X106DL TCX1 285%, TCX2 430%, DCB1 0%~~
X106DLRE: TCX1 385%, TCX2 488%, DCB1 0%
~~X105DL DCB2 1540%~~
X109MS DCB1 157%
X109MSD DCB1 162%

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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.

X109ms Compound	Orig. Result	MS Result	MSD Result	%RSD
4,4-DDE	18	21	24	14.3
4,4-DDD	33	35	36	4.4
alpha-Chlordane	4.0	2.2	2.6	32
gamma-Chlordane	4.4	4.1	3.7	8.6

Comments:
All recoveries within limits

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:
Lot # 941906

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:
none

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:
all ok

Case : U.S. Drum

VOA SV PEST

Water sample TCL

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

NA

Comment : _____

Soil sample TCL

Col. DB-1701

Sample # (and column # for PEST) : X101
Compound : Endosulfan II
Calculated concentration (ug/Kg) : 8.79
Reported concentration : 8.8

$$\frac{(28645)(5000)(1.0)(2.0)}{(1300000)(30.2)(1.0)(.83)} = 8.79$$

Comment : OK

Multicomponent analyte (PEST only)

Sample and column # : X103DL, col. DB-608
Compound : Aroclor-1016
Calculated concentration : 477
Reported concentration : 486

#1 $\frac{(1413)(5000)(10.0)(2.0)}{(146000)(1.0)(30.2)(.92)} = 34.$

#2 $\frac{(2767)(5000)(10.0)(2.0)}{(207000)(1.0)(30.2)(.92)} = 48.1$

#3 $\frac{(1150)(5000)(10.0)(2.0)}{(77800)(1.0)(30.2)(.92)} = 53.2$

#4 $\frac{(2001)(5000)(10.0)(2.0)}{(85700)(1.0)(30.2)(.92)} = 840$

#5 $\frac{(38073)(5000)(10.0)(2.0)}{(63300)(1.0)(30.2)(.92)} = 2164.$

Ave = 477

Comment : OK

TICs

Water sample # : _____
TIC # : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____

NA

Comment : _____

Soil sample # : _____
TIC # : _____
Calculated concentration (ug/Kg) : _____
Reported concentration : _____

NA

Comment : _____

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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:
INDAMO 7: Methoxychlor RPD 29.5%

Case : U.S. Drum

VOA SV (PEST)

Water sample surrogate %R

Sample # (and column # for PEST) : _____
Surrogate : ~~TCX~~
Concentration added (ug/L) : _____
Calculated %R : _____
Reported %R : _____

NA

Comment : _____

Soil sample surrogate %R

Col. DB-608

Sample # (and column # for PEST) : X101
Surrogate : TCX
Concentration added (ug/Kg) : 15.95
Calculated %R : 113%
Reported %R : 113

$$\frac{(79278)(5000)(1.0)(2.0)}{(1750000)(30.2)(1.0)(.83)}$$

$$= \frac{18.07}{15.95} \times 100 = 113\%$$

$$\frac{0.4\,\mu g}{(30.2)(.83)} \times 1000\ g/kg = 15.95$$

Comment : OK

Water sample MS/MSD

Sample # (and column # for PEST) : _____
Compound : _____
Calculated concentration (ug/L) : _____
Reported concentration : _____
%R calculated correctly? _____

NA

Comment : _____

Soil sample MS/MSD

DB-608

Sample # (and column # for PEST) : X109.m
Compound : Heptachlor
Calculated concentration (ug/Kg) : 29.96
Reported concentration : 30.0
%R calculated correctly? Yes

$$\frac{(72915)(5000)(1.0)(2.0)}{(1300000)(30.2)(1.0)(.62)}$$

$$= 29.96$$

Comment : OK

IEPA DIVISION OF LABORATORIES
QUALITY ASSURANCE SECTION
INORGANIC DATA VALIDATION
CHECKLIST

Site:	U.S. Drum
Laboratory:	IEPA
SDG:	110
Analytical Protocol:	ILM03.0
Date:	July 18, 1994
Reviewer:	Chris Bridges
Reviewer Signature:	Chris Bridges

I. PRELIMINARY REVIEW

Number Aqueous Samples: 0 Analytes: N/A
Number Solid/Soil Samples: 10 Analytes: Trace metals, 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		
ICV and CCV concentrations different?	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 (- 15.5/10.0) X101 is qualified as estimated (J).

Cu (- 9.2/5.0) No data affected.

Tl (- 1.0/1.0) X106, X107, X108, X109, and X201 are qualified as estimated (J).

Pb (-1.4, - 1.3, -1.2/1.0) No data 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)

Fe (3.1/1.0) Contamination noted, 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)

NONE

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 - X101, X104, X105, X107, and X109 are qualified as estimated (UJ).
X102, X103, X106, X108, and X201 are qualified as estimated (J).

As - X101, X102, X103, X104, X105, X106, X107, X108, X109, and X201 are qualified as estimated (J).

Se - X101, X102, X103, X104, X105, X106, and X108 are qualified as estimated (J).
X107, X109, X201 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

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

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" 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