Versar INC.

ENVIRONMENTAL RISK MANAGEMENT

Versar INC.

441607

PESTICIDE ANALYSIS- WATER/SOILS
DATA SUMMARY PACKAGE

CLIENT: VERSAR DIV.31
SITE: CDM
PROJECT: 420.1 B#4
CONTROL: 2565
DATE: 05/22/90

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

Versar INC.

Pesticide Fraction Analysis Detail
Client: Versar Div. 31; Camp, Dresser, McGee
Lab Operations Project No. 420.1 B#4
Control 2565 - Water, Soils
May 22, 1990

Please find enclosed the analytical data and calculated results for the analysis of the samples received at Versar on 23 April, 1990. The package contains raw data, calculated and summarized results, as well as any QC samples processed with the sample batch.

All standard and QC data would indicate that the analysis is valid and representative for the samples without further qualification.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager of his designee, as verified by the following signature.

Reza Karimi

Dr. Reza Karimi
Section Chief
Applied Chromatography
Laboratory Operations

Versar INC.

ORIGINAL

Pesticide Fraction Analysis Detail
Client: Versar Div. 31; Camp, Dresser, McGee
Lab Operations Project No. 420.1 B#4
Control 2565 - Water, Soils
May 22, 1990

Please find enclosed the analytical data and calculated results for the analysis of the samples received at Versar on 23 April, 1990. The samples were requested for analysis of full organics including pesticides and PCBs under EPA-CLP protocol. All of the samples were extracted and analyzed within the holding time prescribed in the Statement of Work. By request of the project manager, no QC extraction was performed for this batch of samples. The date of extraction was 26 April and 1 May, 1990, for the following water and soil samples respectively:

SAMPLES

Field ID#	Lab ID#
Water	
GW1	16918
Soil	
4	16919
8	16920
9	16921
10	16922
11	16923
12	16924
13	16925
14	16926
15	16927

All criteria were adhered to during analysis. All of the calibration standard results were acceptable where required. All data has been reviewed for completeness and validity. Sample 12 contained endrin ketone above the reported detection limit, and sample 15 contained 4,4'-DDE above the reported detection limit. The remaining samples contained no pesticides or PCBs at levels above the reported detection limits.

Sample extracts were analyzed on two different packed column chromatographic systems. The primary analyses were performed with a full set of multicomponent standards to allow for quantitation of tentatively identified results. The primary analysis of these extracts was completed in three analytical sequences, water and low soils on 3%SP2100 and med soils on a mixed phase packed column system. Samples requiring further analysis were analyzed on either the 3%SP2100 or the mixed phase packed column analytical system, different from the quantitation analysis. The confirmation analysis was completed two analytical sequences.

Versar INC.

Linearity criteria were met prior to analysis of calibration standards and sample extracts, although linearity is not required in confirmation.

Degradation checks performed prior to, and at intervals throughout the analysis had results within the contractual limit of 20% for each analytical sequence.

DBC shift was monitored throughout the analytical sequence and remained well within the contract limit of 2.0% for packed column analyses. Where a shift exceeded the 2.0% criteria it was for an unrelated sample extract. Where "ND" was reported on the form8, DBC was not detected.

All standard comparison result qualified data for quantitation of results. The only outlying standards were observed after completion of sample analyses, therefore no reanalyses were required. Where standard comparison results exceeded the prescribed limits, sample analyses were discontinued and a new sequence was initiated. Since no sample analyses were performed after an outlying standard result, no further analyses were required.

The sample preparation section of the report includes sample comments in which each sequence is further detailed. Comments include discussion of each analytical sequence. In addition, sample preparation comments are included which may include discussion of any difficulties encountered during the analysis.

The QC section of the report includes surrogate recoveries and method blank results. Overall, QC for the case demonstrates good extraction efficiency with only three of thirteen recoveries outside the QC window limits. Internal QC included two method standards (MSTD), or spiked reagent blanks. The MSTD3063 for the low soils had only one of seven spike compounds outside the QC window limits. The MSTD3065 for the med soils had none of the seven spike compounds outside of the QC window limits. The MSTD for the water extracts broke during extraction. No qualified identifications, or significant contamination were observed in the laboratory blanks.

If you have any questions regarding the pesticide analyses detailed herein, please feel free to call me at your convenience.

Christopher E. Bunker
Data Quality Analyst
Applied Chromatography
Laboratory Operations

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: VERSAR Contract: _____

Lab Code: VERSAR Case No.: CTC # 2565 SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PBLK61	75	
02	GW1	64	
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
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28			
29			
30			

ADVISORY QC LIMITS (24-154)

S1 (DBC) = Dibutylchlorendate

Column used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

FORM II PEST-1

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SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: VERSAR, INC Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 4

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PBLK00	58	
02	8	10 *	
03	10	ND D *	
04	12	52	
05	13	25	
06	14	26	
07	15	43	
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchlorendate

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

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ORIGINAL (Red)

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: VERSAR, INC Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 4

Level: (low/med) MED

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PBLK02	98	
02	4	79	
03	9	72	
04	11	175*	
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchlorendate

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

FORM II PEST-2

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PESTICIDE METHOD BLANK SUMMARY

ORIGINAL (Red)

Lab Name: VERSAR, INC Contract: _____

Lab Code: VERSAR Case No.: CTL# 2565 SAS No.: _____ SDG No.: _____

Lab Sample ID: PBLK Col Lab File ID: _____

Matrix: (soil/water) WATER Level: (low/med) LOW

Date Extracted: 04/26/90 Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed (1): 05/15/90 Date Analyzed (2): _____

Time Analyzed (1): 1713 Time Analyzed (2): _____

Instrument ID (1): C Instrument ID (2): _____

GC Column ID (1): 30mSP2100 GC Column ID (2): _____

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	GW1	16918	05/15/90	
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
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21				
22				
23				
24				
25				
26				

COMMENTS: _____

KC 5/16/90

FORM IV PEST

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PESTICIDE METHOD BLANK SUMMARY

ORIGINAL (Red)

Lab Name: VERSAR, INC Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 4

Lab Sample ID: PBLK00 Lab File ID: _____

Matrix: (soil/water) SOIL Level: (low/med) LOW

Date Extracted: 05/01/90 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 05/18/90 Date Analyzed (2): 05/21/90

Time Analyzed (1): 1308 Time Analyzed (2): 1432

Instrument ID (1): C Instrument ID (2): A

GC Column ID (1): 30 SP2100 GC Column ID (2): SP2250/SP2401

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	8	~~16920~~ / 16920	05/18/90	05/21/90
02	10	~~16922~~ / 16922	05/18/90	05/21/90
03	12	~~16924~~ / 16924	05/18/90	05/21/90
04	13	~~16925~~ / 16925	05/18/90	05/21/90
05	14	~~16926~~ / 16926	05/18/90	05/21/90
06	15	~~16927~~ / 16927	05/18/90	05/21/90
07				
08				
09				
10				
11				
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26				

COMMENTS: _____

FORM IV PEST

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ORIGINAL (Red)

PESTICIDE METHOD BLANK SUMMARY

Lab Name: VERSAR, INC Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 4

Lab Sample ID: RB8002 Lab File ID: _____

Matrix: (soil/water) SOIL Level: (low/med) MED

Date Extracted: 05-01-90 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 05-06-90 Date Analyzed (2): 05-09-90

Time Analyzed (1): 0410 Time Analyzed (2): 0952

Instrument ID (1): A Instrument ID (2): C

GC Column ID (1): SP2250/SP2401 GC Column ID (2): 3% SP2100

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	4	16909	05-06-90	05-09-90
02	9	16911	05-06-90	05-09-90
03	11	16913	05-06-90	05-09-90
04				
05				
06				
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25				
26				

COMMENTS: _____

FORM IV PEST

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW1 ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract: _

Lab Code: VERSAR Case No.: VERSCDM SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 16918

Sample wt/vol: 1000 (g/ml) ML Lab File ID: ____

Level: (low/med) LOW Date Received: 04/24/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: _ 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.10	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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5/16/90

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

8	ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16920

Sample wt/vol: 30 (g/ml) G Lab File ID:

vel: (low/med) LOW Date Received: 04/23/90

% Moisture: not dec. 38 dec. Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/18/90

GPC Cleanup: (Y/N) Y pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	13	U
319-85-7	beta-BHC	13	U
319-86-8	delta-BHC	13	U
58-89-9	gamma-BHC (Lindane)	13	U
76-44-8	Heptachlor	13	U
309-00-2	Aldrin	13	U
1024-57-3	Heptachlor Epoxide	13	U
959-98-8	Endosulfan I	13	U
60-57-1	Dieldrin	26	U
72-55-9	4,4'-DDE	26	U
72-20-8	Endrin	26	U
33213-65-9	Endosulfan II	26	U
72-54-8	4,4'-DDD	26	U
1031-07-8	Endosulfan Sulfate	26	U
50-29-3	4,4'-DDT	26	U
72-43-5	Methoxychlor	130	U
53494-70-5	Endrin Ketone	26	U
5103-71-9	alpha-Chlordane	26	U
5103-74-2	gamma-Chlordane	26	U
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	130	U
11104-28-2	Aroclor-1221	130	U
11141-16-5	Aroclor-1232	130	U
53469-21-9	Aroclor-1242	130	U
12672-29-6	Aroclor-1248	130	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

10

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16922

Sample wt/vol: 30 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 04/23/90

% Moisture: not dec. 32 dec. Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/18/90

Cleanup: (Y/N) Y pH: 6.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	12	U
319-85-7	beta-BHC	12	U
319-86-8	delta-BHC	12	U
58-89-9	gamma-BHC (Lindane)	12	U
76-44-8	Heptachlor	12	U
309-00-2	Aldrin	12	U
1024-57-3	Heptachlor Epoxide	12	U
959-98-8	Endosulfan I	12	U
60-57-1	Dieldrin	23	U
72-55-9	4,4'-DDE	23	U
72-20-8	Endrin	23	U
33213-65-9	Endosulfan II	23	U
72-54-8	4,4'-DDD	23	U
1031-07-8	Endosulfan Sulfate	23	U
50-29-3	4,4'-DDT	23	U
72-43-5	Methoxychlor	120	U
53494-70-5	Endrin Ketone	23	U
5103-71-9	alpha-Chlordane	23	U
5103-74-2	gamma-Chlordane	23	U
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	120	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	120	U
53469-21-9	Aroclor-1242	120	U
12672-29-6	Aroclor-1248	120	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U

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05/21/90

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

12 ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16924

Sample wt/vol: 30 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 04/23/90

% Moisture: not dec. 7 dec. Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/18/90

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.6	U
319-85-7	beta-BHC	8.6	U
319-86-8	delta-BHC	8.6	U
58-89-9	gamma-BHC (Lindane)	8.6	U
76-44-8	Heptachlor	8.6	U
309-00-2	Aldrin	8.6	U
1024-57-3	Heptachlor Epoxide	8.6	U
959-98-8	Endosulfan I	8.6	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan Sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	86	U
53494-70-5	Endrin Ketone	17	
5103-71-9	alpha-Chlordane	17	U
5103-74-2	gamma-Chlordane	17	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	86	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	86	U
53469-21-9	Aroclor-1242	86	U
12672-29-6	Aroclor-1248	86	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

5/22/90

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13 ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract: _

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16925

Sample wt/vol: 30 (g/ml) G Lab File ID: ____

Level: (low/med) LOW Date Received: 04/23/90

% Moisture: not dec. 60 dec. _____ Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/18/90

% Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

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	40	U
72-55-9	4,4'-DDE	40	U
72-20-8	Endrin	40	U
33213-65-9	Endosulfan II	40	U
72-54-8	4,4'-DDD	40	U
1031-07-8	Endosulfan Sulfate	40	U
50-29-3	4,4'-DDT	40	U
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin Ketone	40	U
5103-71-9	alpha-Chlordane	40	U
5103-74-2	gamma-Chlordane	40	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	400	U
11096-82-5	Aroclor-1260	400	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

14

_____VERSAR, INC.___ Contract:_

327

VERSAR Case No.:R3-7 SAS No.: SDG No.:4

soil/water)SOIL Lab Sample ID: ___ 16926

vol: 30 (g/ml) G Lab File ID: ____

low/med) LOW Date Received: ___04/23/90

: not dec. 51 dec._____ Date Extracted:___05/01/90

: (SepF/Cont/Sonc) ____SONC Date Analyzed: ___05/18/90

p: (Y/N)Y pH:____9.3 Dilution Factor: _1.0

NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)_UG/KG	Q
-84-6	alpha-BHC	16	U
-95-7	beta-BHC	16	U
8	delta-BHC	16	U
	gamma-BHC (Lindane)	16	U
4-8	Heptachlor	16	U
-00-2	Aldrin	16	U
1-57-3	Heptachlor Epoxide	16	U
-98-8	Endosulfan I	16	U
7-1	Dieldrin	32	U
5-9	4,4'-DDE	32	U
0-8	Endrin	32	U
3-65-9	Endosulfan II	32	U
4-	4,4'-DDD	32	U
-07-8	Endosulfan Sulfate	32	U
9-3	4,4'-DDT	32	U
3-5	Methoxychlor	160	U
1-70-5	Endrin Ketone	32	U
-71-9	alpha-Chlordane	32	U
-74-2	gamma-Chlordane	32	U
5-2	Toxaphene	320	U
2	Aroclor-1016	160	U
2	Aroclor-1221	160	U
-16-5	Aroclor-1232	160	U
3-21-9	Aroclor-1242	160	U
2-29-6	Aroclor-1248	160	U
-69-1	Aroclor-1254	320	U
-82-5	Aroclor-1260	320	U

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FORM I PEST 1/87 Rev.

EPA SAMPLE NO.

4

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: VERSAR, INC. Contract: _

b Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16909

Sample wt/vol: 1.02 (g/ml) G Lab File ID: ____

Level: (low/med) MED Date Received: 04/23/90

% Moisture: not dec. 13.8 dec. _____ Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	68	U
319-85-7	beta-BHC	68	U
319-86-8	delta-BHC	68	U
58-89-9	gamma-BHC (Lindane)	68	U
76-44-8	Heptachlor	68	U
309-00-2	Aldrin	68	U
1024-57-3	Heptachlor Epoxide	68	U
959-98-8	Endosulfan I	68	U
60-57-1	Dieldrin	140	U
72-55-9	4,4'-DDE	140	U
72-20-8	Endrin	140	U
33213-65-9	Endosulfan II	140	U
72-54-8	4,4'-DDD	140	U
1031-07-8	Endosulfan Sulfate	140	U
50-29-3	4,4'-DDT	140	U
72-43-5	Methoxychlor	680	U
53494-70-5	Endrin Ketone	140	U
5103-71-9	alpha-Chlordane	140	U
5103-74-2	gamma-Chlordane	140	U
8001-35-2	Toxaphene	1400	U
12674-11-2	Aroclor-1016	680	U
11104-28-2	Aroclor-1221	680	U
11141-16-5	Aroclor-1232	680	U
53469-21-9	Aroclor-1242	680	U
12672-29-6	Aroclor-1248	680	U
11097-69-1	Aroclor-1254	1400	U
11096-82-5	Aroclor-1260	1400	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

9

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16911

Sample wt/vol: 1.00 (g/ml) G Lab File ID:

Level: (low/med) MED Date Received: 04/23/90

% Moisture: not dec. 16.1 dec. Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/06/90

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	72	U
319-85-7	beta-BHC	72	U
319-86-8	delta-BHC	72	U
58-89-9	gamma-BHC (Lindane)	72	U
76-44-8	Heptachlor	72	U
309-00-2	Aldrin	72	U
1024-57-3	Heptachlor Epoxide	72	U
959-98-8	Endosulfan I	72	U
60-57-1	Dieldrin	140	U
72-55-9	4,4'-DDE	140	U
72-20-8	Endrin	140	U
33213-65-9	Endosulfan II	140	U
72-54-8	4,4'-DDD	140	U
1031-07-8	Endosulfan Sulfate	140	U
50-29-3	4,4'-DDT	140	U
72-43-5	Methoxychlor	720	U
53494-70-5	Endrin Ketone	140	U
5103-71-9	alpha-Chlordane	140	U
5103-74-2	gamma-Chlordane	140	U
8001-35-2	Toxaphene	1400	U
12674-11-2	Aroclor-1016	720	U
11104-28-2	Aroclor-1221	720	U
11141-16-5	Aroclor-1232	720	U
53469-21-9	Aroclor-1242	720	U
12672-29-6	Aroclor-1248	720	U
11097-69-1	Aroclor-1254	1400	U
11096-82-5	Aroclor-1260	1400	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

11

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: 16913

Sample wt/vol: 1.14 (g/ml) G Lab File ID:

Level: (low/med) MED Date Received: 04/23/90

% Moisture: not dec. 60.4 dec. Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/06/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	130	U
319-85-7	beta-BHC	130	U
319-86-8	delta-BHC	130	U
58-89-9	gamma-BHC (Lindane)	130	U
76-44-8	Heptachlor	130	U
309-00-2	Aldrin	130	U
1024-57-3	Heptachlor Epoxide	130	U
959-98-8	Endosulfan I	130	U
60-57-1	Dieldrin	270	U
72-55-9	4,4'-DDE	270	U
72-20-8	Endrin	270	U
33213-65-9	Endosulfan II	270	U
72-54-8	4,4'-DDD	270	U
1031-07-8	Endosulfan Sulfate	270	U
50-29-3	4,4'-DDT	270	U
72-43-5	Methoxychlor	1300	U
53494-70-5	Endrin Ketone	270	U
5103-71-9	alpha-Chlordane	270	U
5103-74-2	gamma-Chlordane	270	U
8001-35-2	Toxaphene	2700	U
12674-11-2	Aroclor-1016	1300	U
11104-28-2	Aroclor-1221	1300	U
11141-16-5	Aroclor-1232	1300	U
53469-21-9	Aroclor-1242	1300	U
12672-29-6	Aroclor-1248	1300	U
11097-69-1	Aroclor-1254	2700	U
11096-82-5	Aroclor-1260	2700	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK61

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: VERSCDM SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: RB7961

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

Level: (low/med) LOW Date Received: 04/24/90

% Moisture: not dec. dec. Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/15/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.10	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK00

Lab Name: VERSAR, INC. Contract: _

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: RB8000

Sample wt/vol: 30 (g/ml) G Lab File ID: ____

Level: (low/med) LOW Date Received: 04/23/90

% Moisture: not dec. 0 dec. _____ Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/18/90

GPC Cleanup: (Y/N) Y pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor Epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan Sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin Ketone	16	U
5103-71-9	alpha-Chlordane	16	U
5103-74-2	gamma-Chlordane	16	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK02

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 4

Matrix: (soil/water) SOIL Lab Sample ID: RB8002

Sample wt/vol: 1.00 (g/ml) G Lab File ID:

Level: (low/med) MED Date Received: 04/23/90

% Moisture: not dec. 0.0 dec. Date Extracted: 05/01/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/06/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	60	U
319-85-7	beta-BHC	60	U
319-86-8	delta-BHC	60	U
58-89-9	gamma-BHC (Lindane)	60	U
76-44-8	Heptachlor	60	U
309-00-2	Aldrin	60	U
1024-57-3	Heptachlor Epoxide	60	U
959-98-8	Endosulfan I	60	U
60-57-1	Dieldrin	120	U
72-55-9	4,4'-DDE	120	U
72-20-8	Endrin	120	U
33213-65-9	Endosulfan II	120	U
72-54-8	4,4'-DDD	120	U
1031-07-8	Endosulfan Sulfate	120	U
50-29-3	4,4'-DDT	120	U
72-43-5	Methoxychlor	600	U
53494-70-5	Endrin Ketone	120	U
5103-71-9	alpha-Chlordane	120	U
5103-74-2	gamma-Chlordane	120	U
8001-35-2	Toxaphene	1200	U
12674-11-2	Aroclor-1016	600	U
11104-28-2	Aroclor-1221	600	U
11141-16-5	Aroclor-1232	600	U
53469-21-9	Aroclor-1242	600	U
12672-29-6	Aroclor-1248	600	U
11097-69-1	Aroclor-1254	1200	U
11096-82-5	Aroclor-1260	1200	U

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