Versar INC.

ENVIRONMENTAL RISK MANAGEMENT

ORIGINAL
(Red)

Versar INC.

441609

PESTICIDE ANALYSIS - TCLP
DATA SUMMARY PACKAGE

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

ORIGINAL (Red)

Versar INC.

Pesticide Fraction Analysis Narrative

Client: Versar Div. 31; Camp, Dresser, McGee

Lab Operations Project No. 420.1 B#4; Control 2565 - Leachates

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 (Red)

Pesticide Fraction Analysis Detail
Client: Versar Div. 31; Camp, Dresser, McGee
Lab Operations Project No. 420.1 B#4; Control 2565 - Leachates
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 TCLP pesticides under method 608 protocol. By request of the project manager, no sample QC was provided for this batch of samples. The samples were not extracted within the holding time prescribed in the Statement of Work. The date of extraction was 8 May, 1990, for the following samples:

SAMPLES

Field ID#	Lab ID#
11	16960

All criteria were adhered to during analysis. All calibration standard results were acceptable where required. All data has been reviewed for completeness and validity. None of the samples contained any of the compounds of interest at levels above the reported detection limits.

Sample extracts were analyzed on a mixed phase, SP2250/SP2401, packed column under five point calibration for the individual pesticides, and with a full set of multicomponent standards to allow for quantitation of tentatively identified results. The primary analysis of these extracts was completed in a single analytical sequence.

Linearity criteria were met prior to analysis of calibration standards and sample extracts.

Degradation checks performed prior to, and at intervals throughout the analysis had results within the contractual limit of 20 percent.

DBC shift was monitored throughout the analytical sequence and remained well within the contract limit of 2.0% for packed column analyses.

All standard comparison result qualified data for quantitation of results. 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.

Versar INC.

ORIGINAL
(Red)

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. Surrogate recoveries for the case exhibit good extraction efficiency with none of the four recoveries outside the QC limit windows. Internal QC included a method standard, MSTD3080, with zero of five spike recoveries outside QC window limits. No qualified identifications, or significant contamination were observed in the laboratory blank.

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

ORIGINAL (Red)

Lab Name: VERSAR Contract: _____

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

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PBLK49	74	
02	EXTBLANK1	75	
03	EXT BLANK2	75	
04	~~1~~	~~75~~	
05	~~1MS~~	~~81~~	
06	~~1MSD~~	~~82~~	
07	11	83	
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

CEB 5/22/90

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

1/87 Re

100005

gp

slinlon

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: RB8049 Lab File ID: _____

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

Date Extracted: 05-08-90 Extraction: (SepF/~~Cont/Sonc~~) WRIST SHAKER

Date Analyzed (1): 05-11-90 Date Analyzed (2): —

Time Analyzed (1): 1911 Time Analyzed (2): —

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

GC Column ID (1): SP2250/SP2401 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	EXTBLANK1	EXTBLANK1	05-11-90	
02	EXTBLANK2	EXTBLANK2	05-11-90	
03	~~1~~	~~16418~~	~~05-11-90~~	
04	~~1MS~~	~~16418MS~~	~~05-11-90~~	
05	~~1MSD~~	~~16418MSD~~	~~05-11-90~~	
06	11	16960	05-11-90	
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: ~~Reanalyze~~ B#4 only, B#4 was EXTRACTED WITH B#2

page 1 of 1

FORM IV PEST

1/87

100006

qa

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

11 ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract: _

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

Matrix: (soil/water) WATER Lab Sample ID: 16960

Sample wt/vol: 20.00 (g/ml) ML Lab File ID: ____

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

% Moisture: not dec. _____ dec. _____ Date Extracted: 05/08/90

Extraction: (SepF/Wrist Shaker) WRIST SHAKER Date Analyzed: 05/11/90

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	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor Epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	5.0	U
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan Sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin Ketone	5.0	U
5103-71-9	alpha-Chlordane	5.0	U
5103-74-2	gamma-Chlordane	5.0	U
8001-35-2	Toxaphene	50	U
12674-11-2	Aroclor-1016	25	U
11104-28-2	Aroclor-1221	25	U
11141-16-5	Aroclor-1232	25	U
53469-21-9	Aroclor-1242	25	U
12672-29-6	Aroclor-1248	25	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXTBLANK1

Lab Name: VERSAR, INC. Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: EXTBLANK1

Sample wt/vol: 20.00 (g/ml) ML Lab File ID:

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

% Moisture: not dec. dec. Date Extracted: 05/08/90

Extraction: (SepF/Wrist Shaker) WRIST SHAKER Date Analyzed: 05/11/90

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	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor Epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	5.0	U
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan Sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin Ketone	5.0	U
5103-71-9	alpha-Chlordane	5.0	U
5103-74-2	gamma-Chlordane	5.0	U
8001-35-2	Toxaphene	50	U
12674-11-2	Aroclor-1016	25	U
11104-28-2	Aroclor-1221	25	U
11141-16-5	Aroclor-1232	25	U
53469-21-9	Aroclor-1242	25	U
12672-29-6	Aroclor-1248	25	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXTBLANK2

Lab Name: VERSAR, INC. Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: EXTBLANK2

Sample wt/vol: 20.00 (g/ml) ML Lab File ID:

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

% Moisture: not dec. dec. Date Extracted: 05/08/90

Extraction: (SepF/Wrist Shaker) WRIST SHAKER Date Analyzed: 05/11/90

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	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor Epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	5.0	U
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan Sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin Ketone	5.0	U
5103-71-9	alpha-Chlordane	5.0	U
5103-74-2	gamma-Chlordane	5.0	U
8001-35-2	Toxaphene	50	U
12674-11-2	Aroclor-1016	25	U
11104-28-2	Aroclor-1221	25	U
11141-16-5	Aroclor-1232	25	U
53469-21-9	Aroclor-1242	25	U
12672-29-6	Aroclor-1248	25	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK49

Lab Name: VERSAR, INC. Contract: _

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

Matrix: (soil/water) WATER Lab Sample ID: RB8049

Sample wt/vol: 20.00 (g/ml) ML Lab File ID: ____

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

% Moisture: not dec. _____ dec. _____ Date Extracted: 05/08/90

Extraction: (SepF/Wrist Shaker) WRIST SHAKER Date Analyzed: 05/11/90

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	2.5	U
319-85-7	beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor Epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	5.0	U
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan Sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin Ketone	5.0	U
5103-71-9	alpha-Chlordane	5.0	U
5103-74-2	gamma-Chlordane	5.0	U
8001-35-2	Toxaphene	50	U
12674-11-2	Aroclor-1016	25	U
11104-28-2	Aroclor-1221	25	U
11141-16-5	Aroclor-1232	25	U
53469-21-9	Aroclor-1242	25	U
12672-29-6	Aroclor-1248	25	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

100077