Versar INC.
ENVIRONMENTAL RISK MANAGEMENT

Versar INC.

ORIGINAL
(Red)

441605

HERBICIDE ANALYSIS
ANALYTICAL DATA PACKAGE

CLIENT: VERSAR DIV.31
SITE: CDM
PROJECT: 420.1 B#2
CONTROL: 2536
DATE: 05/21/90

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

Versar INC.

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I. NARRATIVE

II. QC SUMMARY

Versar INC.

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Herbicide Analysis Narrative
Versar Project Number 420.1 B# 2; Control# 2536
Client: Versar Div. 31; Camp, Dresser, McGee
May 21, 1990

Please find enclosed the analytical data and calculated results for the analysis of the samples received at Versar on 19 April, 1990. The package includes calculated and summarized results, as well as any QC samples processed with the 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 or his designee, as verified by the following signature.

Reza Karimi

Dr. Reza Karimi
Section Chief
Applied Chromatography
Laboratory Operations

Versar INC.

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Herbicide Analysis Detail
Versar Project Number 420.1 B# 2; Control# 2536
Client: Versar Div. 31; Camp, Dresser, McGee
May 21, 1990

Please find enclosed the analytical data and calculated results for the analysis of the samples received at Versar on 19 April, 1990. The samples were requested for extraction and analysis of chlorinated phenoxy herbicides 2,4-D and silvex under TCLP protocol. The samples were not extracted within the holding times prescribed in the Method. The date of extraction was 4 May, 1990 for the enclosed samples.

SAMPLES

Field ID#	Lab ID#
*1	*16418

*Denotes sample chosen for QC extraction (MS/MSD).

Laboratory IDs were used in tracking samples throughout extraction and analysis.

All criteria were adhered to during analysis. All calibration standard comparison results were acceptable where required. All data has been reviewed for completeness and validity. The sample does not contain either herbicides listed on Forms I above the reported limits. The reported limits are based on the ability of the instrumentation to detect minimum concentrations of 0.02ug/ml at injection. A detection limit standard was analyzed in the sequence and is included in the standard section of the report.

The sample extracts were analyzed on a 3%SP2100 packed column chromatographic systems. All analyses were performed under five point calibration for each of the analytes of interest. Five concentrations of calibration standards were analyzed in calibration, but only three of five concentrations were used in the curve evaluation.

Linearity was evaluated prior to injection of sample extracts, and none of the analytes of interest exceeded the acceptance limits. Again, while five concentrations were analyzed in calibration, only three were evaluated for linearity.

Standard comparison results were acceptable where required. In the final standards none of the analytes exceeded the limits for quantitation.

The sample preparation section of the report includes sample comments in which each sequence is further discussed. The comments address any difficulties encountered during extraction and analysis.

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The QC section of the report includes surrogate, matrix spike and matrix spike duplicate recoveries, as well as method blank results. Overall, QC for the case demonstrates acceptable extraction efficiency, with acceptable surrogate recoveries for all extracts. Matrix spike and matrix spiked duplicate recoveries were good with none of the four greater then 104 or less then 99 percent. Precision, as measured by the relative percent difference (RPD), was good at 5 and 2 percent. No qualified identifications or significant interferents were observed in the laboratory blanks.

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

Christopher E. Bunker
Data Quality Analyst
Applied Chromatography
Laboratory Operations

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WATER PESTICIDE SURROGATE RECOVERY

Lab Name: VERSAR, INC Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	1	98	
02	1MS	91	
03	1MSD	91	
04	11	98	
05	PBLK27	97	
06	TCLPBLK1	91	
07	TCLPBLK2	91	
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 (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 Rev.

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WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Versar Inc Contract: _____

Lab Code: Versar Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix Spike - EPA Sample No.: 1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Lindane PC 2,4D	5000	~~5147~~ Ø	5197	104	56-123
Heptachlor SILVEX	5000	~~5173~~ Ø	5173	103	40-131
Aldrin					40-120
Dieldrin					52-126
Endrin					56-121
4,4' DDT					38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lindane PC 2,4D	5000	4971	99	5	15	56-123
Heptachlor SILVEX	5000	5029	101	2	20	40-131
Aldrin					22	40-120
Dieldrin					18	52-126
Endrin					21	56-121
4,4' DDT					27	38-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

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PESTICIDE METHOD BLANK SUMMARY

Lab Name: VERSAR, INC Contract: -

Lab Code: VERSAR Case No.: R3-7 SAS No.: - SDG No.: 1

Lab Sample ID: RB 8027 Lab File ID: _____

Matrix: (soil/water) H2O Level: (low/med) Low

Date Extracted: 05-04-90 Extraction: (SepF/Cont/Sonc) Sepf

Date Analyzed (1): 05-10-90 Date Analyzed (2): _____

Time Analyzed (1): 0720 Time Analyzed (2): _____

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

GC Column ID (1): 30OSP2100 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	1	16418	05-10-90	
02	1MS	16418MS	↓	
03	1MSD	16418MSD		
04	11	16960		
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM IV PEST

1/87 Rev.

Versar INC.

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III. SAMPLE DATA PACKAGE

D

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID: 16418

Sample wt/vol: 10 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. dec. Date Extracted: 05/04/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/10/90

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4 D	800	U
93-72-1	SILVEX	800	U

D

D

ORIGINAL (Red)

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

ANALYSIS DATE 05/10/90
SAMPLE # 16418

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.50	X	NA	23722.22	0.00	2.00	0.00	40000.00	0.00	400.00
SILVEX	2.10 - 2.14	X	NA	110702	0.00	2.00	0.00	40000.00	0.00	400.00
2,4-DB(SSS)	2.78 - 2.84	2.80	3668.00	14925.00	0.25	2.00	0.12	40000.00	4915.24	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00

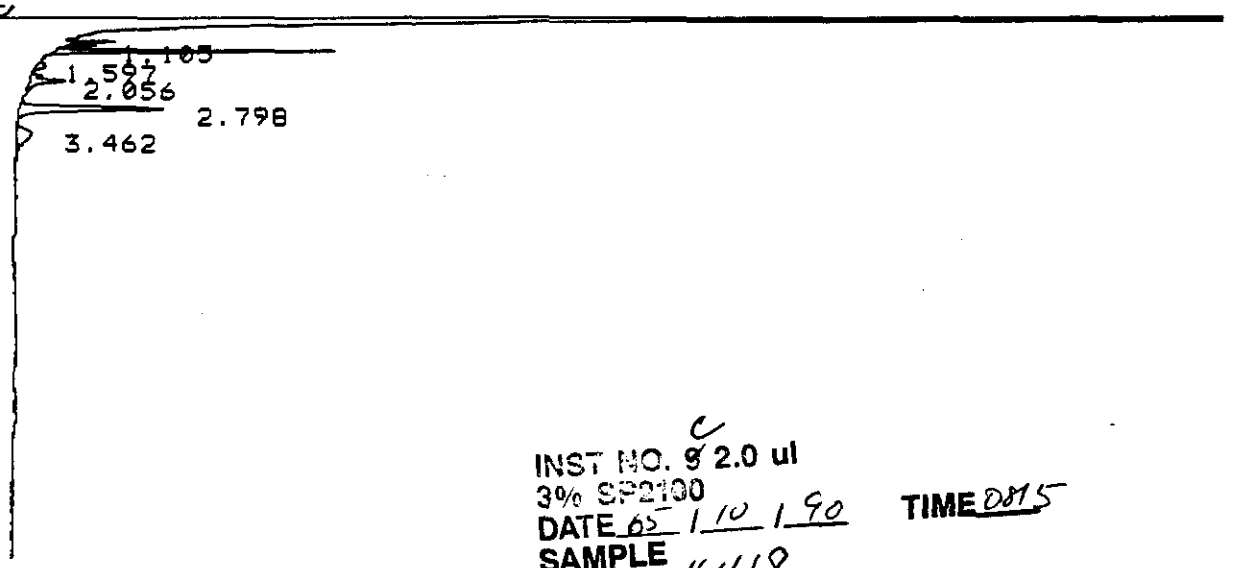
98

05-16-90

varian /sunnyvale calif p/n 03-906362-00

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
AT : 4 ZERO: 5%



INST NO. C 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0815
SAMPLE 16418

TITLE: CLP PESTICIDES 8:15 10 MAY 90

CHANNEL NO: 2 SAMPLE: 16418 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		3500	1.248		3500	VB	3.50
2	G-BHC	879	2.056	-0.104	879	VB	6.30
3	2,4DD	3668	2.798		3668	BB	7.20
4	HEPTACHLOR	994	3.462	-0.038	994	BB	? 20.10
TOTALS:		9041		-0.142	9041		

DETECTED PKS: 8 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -8

RACK: 2 VIAL: 4 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
RSCDM 2536,2565 TCLP HERB
IYORK 2597 EPTOX HERB

D

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TCLPBLANK1

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID: TCLPBLK1

Sample wt/vol: 10 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. dec. Date Extracted: 05/04/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/10/90

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4 D	800	U
93-72-1	SILVEX	800	U

05/16/90

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CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

ANALYSIS DATE 05/10/90
SAMPLE # TCLPBLK1

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.50	X	NA	23722.22	0.00	2.00	0.00	40000.00	0.00	400.00
SILVEX	2.10 - 2.14	X	NA	110702	0.00	2.00	0.00	40000.00	0.00	400.00
2,4-DB(SSS)	2.78 - 2.84	2.80	3549.00	114925.00	0.24	2.00	0.12	40000.00	4755.78	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00

95

05.16.90

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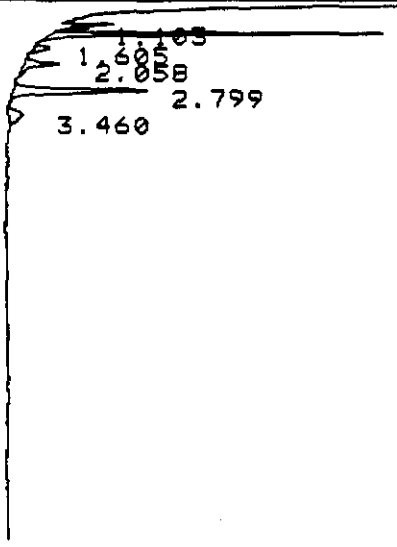
CHART SPEED 0.5 CM/MIN
A: 4 ZERO: 5%



INST NO. C 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0738
SAMPLE TCLPBLANK 1

TITLE: CLP PESTICIDES 7:38 10 MAY 90

CHANNEL NO: 2 SAMPLE: TCLPBLANK1 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		4621	1.247		4621	VB	3.70
2	G-BHC	1130	2.058	-0.102	1130	VB	6.40
3	2,4-DB	3549	2.799		3549	BB	7.50
4	HEPTACHLOR	718	3.460	-0.040	718	BB	? 19.40
TOTALS:		10018		-0.142	10018		

DETECTED PKS: 8 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -10

RACK: 2 VIAL: 1 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
TIYORK 2454 EPTOX HERB
RSCDM 2536,2565 TCLP HERB
TIYORK 2597 EPTOX HERB

varian /sunnyvale,calif.p/n 03-906362-00

D

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TCLPBLANK2

ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract: _____

b Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID: TCLPBLK2

Sample wt/vol: 10 (g/ml) ML Lab File ID: ____

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 05/04/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/10/90

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

D

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7--------	2,4 D	800	U
93-72-1--------	SILVEX	800	U

05-16-90

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D

ORIGINAL
(Red)

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

ANALYSIS DATE 05/10/90
SAMPLE # TCLPBLK2

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.50	X	NA	23722.22	0.00	2.00	0.00	40000.00	0.00	400.00
SILVEX	2.10 - 2.14	X	NA	110702	0.00	2.00	0.00	40000.00	0.00	400.00
2,4-DB(SSS)	2.78 - 2.84	2.81	3407.00	14925.00	0.23	2.00	0.11	40000.00	4565.49	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00

05-16-90

ORIGINAL
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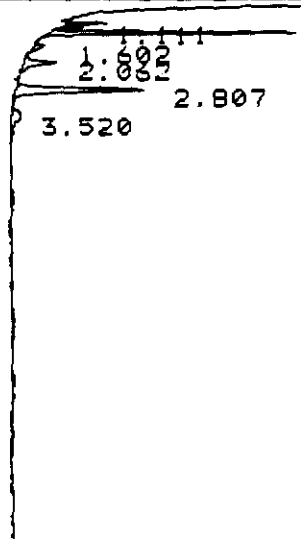
CHART SPEED 0.5 CM/MIN
ATTN: 4 ZERO: 5%



INST NO. C 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0756
SAMPLE TCLP BLANK2

TITLE: CLP PESTICIDES 7:56 10 MAY 90

CHANNEL NO: 2 SAMPLE: TCLPBLANK2 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		3299	1.254		3299	VB	3.85
2	G-BHC	982	2.062	-0.098	982	VB	6.00
3	2,4-DB	3407	2.807		3407	BB	7.50
TOTALS:		7688		-0.098	7688		

DETECTED PKS: 7 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -9

RACK: 2 VIAL: 2 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian /sunnyvale,calif.p/n 03-906362-00

ORIGINAL
(Red)

Versar INC.

IV. STANDARDS DATA

STANDARD CURVE DATA ENTRY FORM

ORIGINAL
(Red)

CURVE #_____1 INSTRUMENT ID _____C

CASE # _____R3-7 COLUMN _____3%SP2100

ANALYSIS DATE _____05/10/90 ANALYST _____TPH

CONTRACT #_____

INJECTION VOLUME = 2.00 ul

ANALYTE	STD #1 CONC = 0.05 ug/ml		STD #2 CONC = 0.10 ug/ml		STD #3 CONC = 0.15 ug/ml	
	RT	AREA	RT	AREA	RT	AREA
2,4-D	1.50	2235	1.49	4806	1.49	7436
SILVEX	2.13	10882	2.12	22101	2.12	33834
2,4-DB(SSS)	2.81	X	2.81	2985	2.81	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X

TPH 05-10-90

STANDARD CURVE DATA SUMMARY FORM

ORIGINAL (Red)

CURVE # 1 INSTRUMENT ID C

CASE # R3-7 COLUMN 3%SP2100

ANALYSIS DATE 05/10/90 ANALYST TPH

CONTRACT #

INJECTION VOLUME = 2.00 ul

ANALYTE	STD #1 CALIBRATION FACTOR	STD #2 CALIBRATION FACTOR	STD #3 CALIBRATION FACTOR	AVERAGE CALIBRATION FACTOR	%RSD	RETENTION TIME WINDOW (min)
2,4-D	22350	24030	24787	23722	5	0.01
SILVEX	108820	110505	112780	110702	2	0.02
2,4-DB(SSS)	14925	14925	14925	14925	0	0.03
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00
	0	0	0	0	ERR	0.00

JAH 05-10-90

DAILY STANDARD DATA ENTRY FORM

ORIGINAL (Red)

CLIENT VERSCOM INSTRUMENT ID C

CASE # R3-7 COLUMN 3%SP2100

ANALYSIS DATE 05/10/90 ANALYST TPH

CONTRACT #

INJECTION VOLUME = 2.00 ul DAILY1

ANALYTE	STANDARD CONC (ug/ml)	BEGINNING STANDARD RT	BEGINNING STANDARD AREA	STANDARD CONC (ug/ml)	FINAL STANDARD RT	FINAL STANDARD AREA
2,4-D	0.10	1.49	4806	0.10	1.487	5622
SILVEX	0.10	2.12	22101	0.10	2.121	25492
2,4-DB(SSS)	0.10	2.81	2985	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X

05-16-90

DAILY STANDARD SUMMARY FORM

ORIGINAL
(Red)

CLIENT VERSCOM INSTRUMENT ID C

CASE # R3-7 COLUMN 3%SP2100

ANALYSIS DATE 05/10/90 ANALYST TPH

CONTRACT #

ANALYTE	BEGINNING RETENTION TIME	BEGINNING CAL FACTOR	FINAL RETENTION TIME	FINAL CAL FACTOR	%D RT	%D CAL FACTOR
2,4-D	1.49	24030	1.49	28110	0.1	17.0
SILVEX	2.12	110505	2.12	127460	0.0	15.3
2,4-DB(SSS)	2.81	14925	X	ERR	100.0	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR

TPH 05-16-90

DAILY STANDARD COMPARISON TO CURVE

ORIGINAL
(Red)

INSTRUMENT ID _____C ANALYST, STANDARD CUR TPH

COLUMN _____3%SP2100 ANALYST, DAILY STANDARD _____TPH

CURVE #----)						
DATE----)	05/10/90					DAILY1
ANALYTE	AVERAGE RT FROM CURVE	CAL FACTOR FROM CURVE	RETENTION TIME, DAILY STANDARD	CAL FACTOR, DAILY STANDARD	%D RT	%D CAL FACTOR
2,4-D	1.49	23722	1.49	28110	-0	18
SILVEX	2.12	110702	2.12	127460	-0	15
2,4-DB(SSS)	2.81	14925	X	ERR	-100	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR

JDH 05-16-90

DAILY STANDARD DATA ENTRY FORM

ORIGINAL (Red)

CLIENT VERSCOM INSTRUMENT ID C

CASE # R3-7 COLUMN 3%SP2100

ANALYSIS DATE 05/10/90 ANALYST TPH

CONTRACT #

INJECTION VOLUME = 2.00 ul DAILY2

ANALYTE	STANDARD CONC (ug/ml)	BEGINNING STANDARD RT	BEGINNING STANDARD AREA	STANDARD CONC (ug/ml)	FINAL STANDARD RT	FINAL STANDARD AREA
2,4-D	0.10	1.49	4806	0.10	1.489	5488
SILVEX	0.10	2.12	22101	0.10	2.124	25003
2,4-DB(SSS)	0.10	2.81	2985	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X
	0.00	X	X	0.00	X	X

05 16 90

DAILY STANDARD SUMMARY FORM

ORIGINAL (Red)

CLIENT VERSCOM

INSTRUMENT ID C

CASE # R3-7

COLUMN 3%SP2100

ANALYSIS DATE 05/10/90

ANALYST TPH

CONTRACT #

ANALYTE	BEGINNING RETENTION TIME	BEGINNING CAL FACTOR	FINAL RETENTION TIME	FINAL CAL FACTOR	%D RT	%D CAL FACTOR
2,4-D	1.49	24030	1.49	27440	-0.1	14.2
SILVEX	2.12	110505	2.12	125015	-0.1	13.1
2,4-DB(SSS)	2.81	14925	X	ERR	100.0	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR
	X	0	X	ERR	ERR	ERR

MH 05-16-90

DAILY STANDARD COMPARISON TO CURVE

ORIGINAL (Red)

INSTRUMENT ID _____C ANALYST, STANDARD CUR TPH

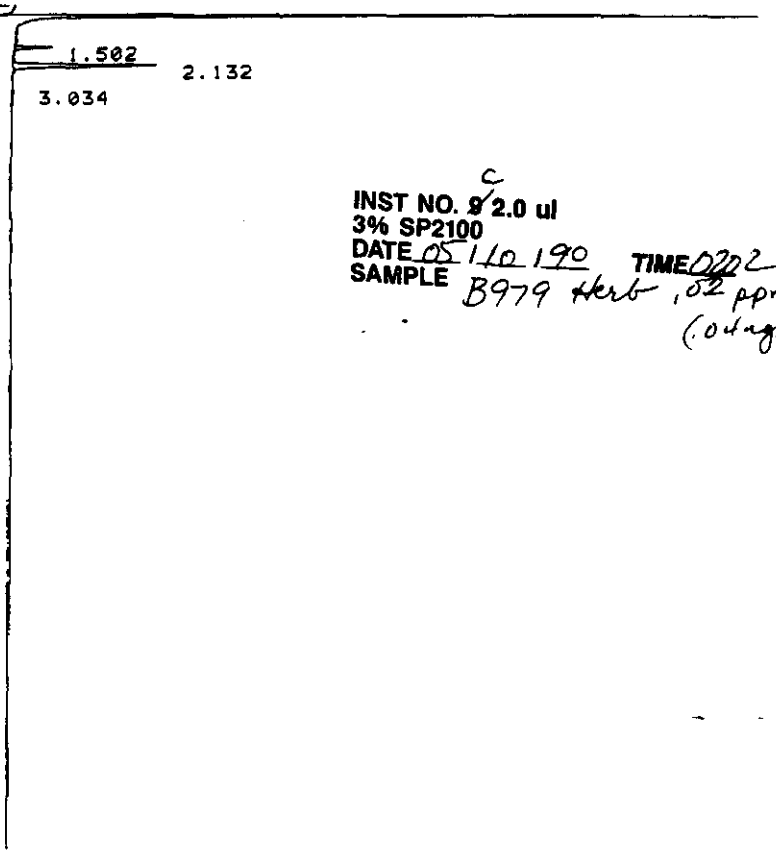
COLUMN _____3%SP2100 ANALYST, DAILY STANDARD _____TPH

CURVE #——)						
DATE——)	05/10/90					DAILY2
ANALYTE	AVERAGE RT FROM CURVE	CAL FACTOR FROM CURVE	RETENTION TIME, DAILY STANDARD	CAL FACTOR, DAILY STANDARD	%D RT	%D CAL FACTOR
2,4-D	1.49	23722	1.49	27440	-0	16
SILVEX	2.12	110702	2.12	125015	0	13
2,4-DB(SSS)	2.81	14925	X	ERR	-100	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR
	0.00	0	X	ERR	ERR	ERR

JAH 05-16-90

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. ~~B~~ C 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0202
SAMPLE B979 Herb .02 ppm
(.04 ug)

sales sunnyvale calif p/n 3E-906362-00

TITLE: CLP PESTICIDES 2:02 10 MAY 90

CHANNEL NO: 2 SAMPLE: B979 HERB .02 METHOD: CLP-2H

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~Dcl~~ 2,4-D	781	1.502		781	BB	4.55
2	~~G-BHC~~ Silvex	3828	2.132	-0.028	3828	BB	5.90
TOTALS:		4609		-0.028	4609		

DETECTED PKS: 4 REJECTED PKS: 2

DIVISOR: 1.00000 MULTIPLIER: 10000.0

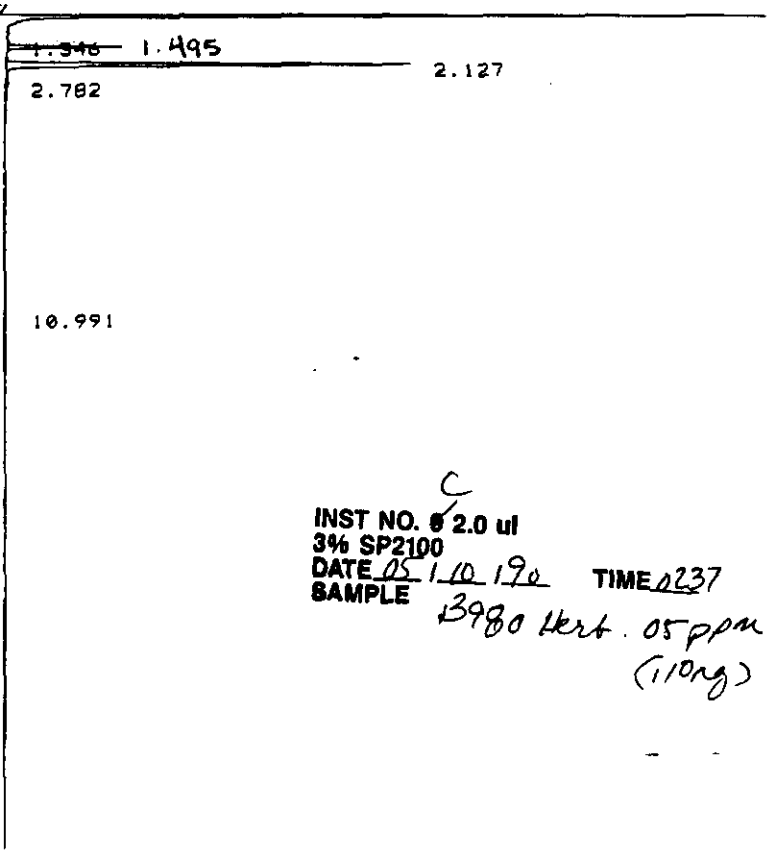
NOISE: 6.1 OFFSET: -7

RACK: 1 VIAL: 1 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT• OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. ~~6~~ C 2.0 ul
3% SP2100
DATE 05 10 90 TIME 0237
SAMPLE B980 Herb. 05 ppm
(110ng)

TITLE: CLP PESTICIDES 2:37 10 MAY 90

CHANNEL NO: 2 SAMPLE: B980 HERB.05 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	2,4-D	2235	1.495		2235	VB	4.25
2	~~G-BHC~~ Silver	10882	2.127	-0.033	10882	BB	5.85
TOTALS:		13117		-0.033	13117		

DETECTED PKS: 7 REJECTED PKS: 5

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -10

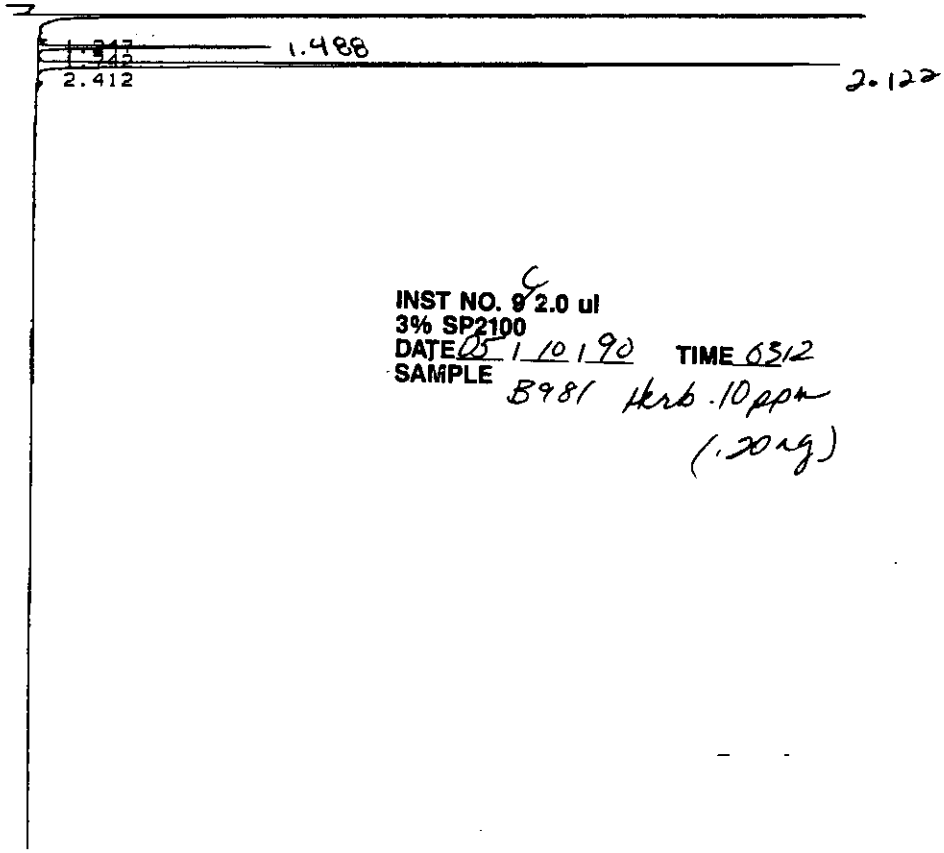
RACK: 1 VIAL: 2 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian sunnyvale calif p/n 13-906362-00
varian sunnyva

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. 6 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0512
SAMPLE B981 Herb .10ppm (.20ng)

TITLE: CLP PESTICIDES 3:12 10 MAY 90

CHANNEL NO: 2 SAMPLE: B981 HERB.10 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	2,4-D	4806	1.488		4806	VV	4.30
2	~~G-BHC~~ Silvex	22101	2.122	-0.038	22101	VV	6.00
TOTALS:		26907		-0.038	26907		

DETECTED PKS: 9 REJECTED PKS: 7

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -18

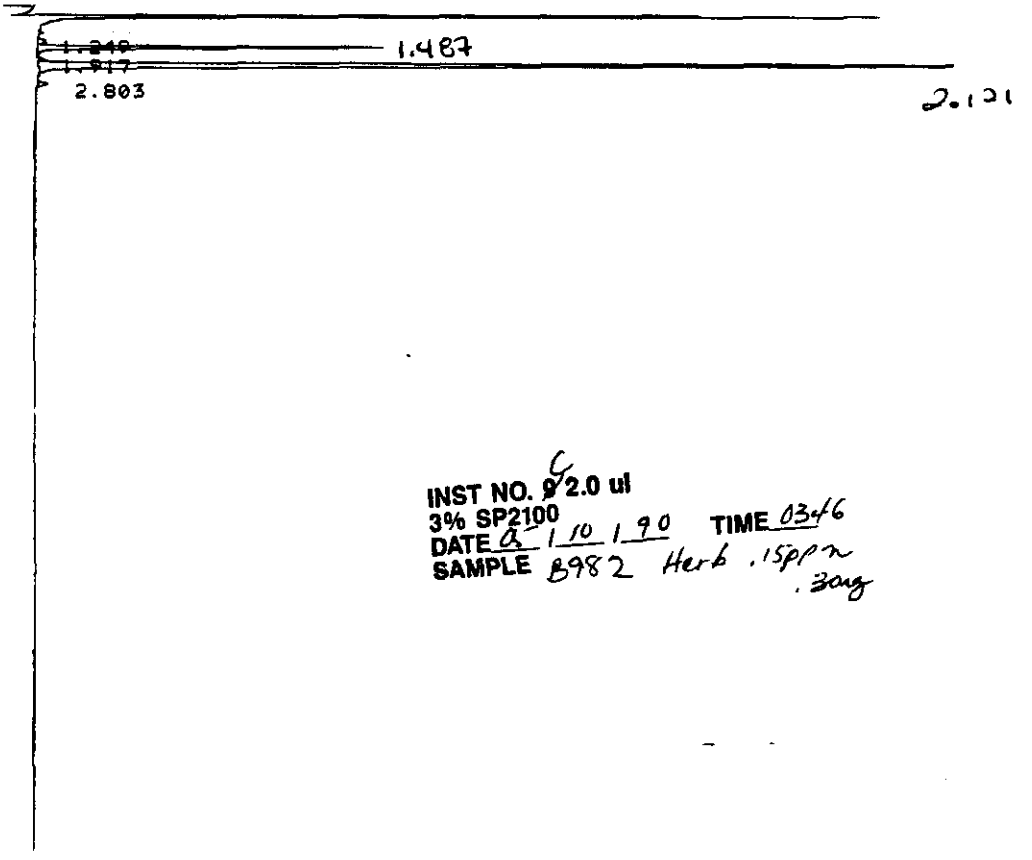
RACK: 1 VIAL: 4 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

alt.p/n 13-906362-00
mrlab :sunnyvale,calif p/n 13-906362-00

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. C 2.0 ul
3% SP2100
DATE 1/10/90 TIME 0346
SAMPLE B982 Herb .15ppm .3ang

TITLE: CLP PESTICIDES 3:46 10 MAY 90

CHANNEL NO: 2 SAMPLE: B982 HERB.15 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	2,4-D	7436	1.487		7436	VV	4.65
2	~~G-BHC~~ Silvex	33834	2.121	-0.039	33834	VB	6.25
TOTALS:		41270		-0.039	41270		

DETECTED PKS: 6 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -12

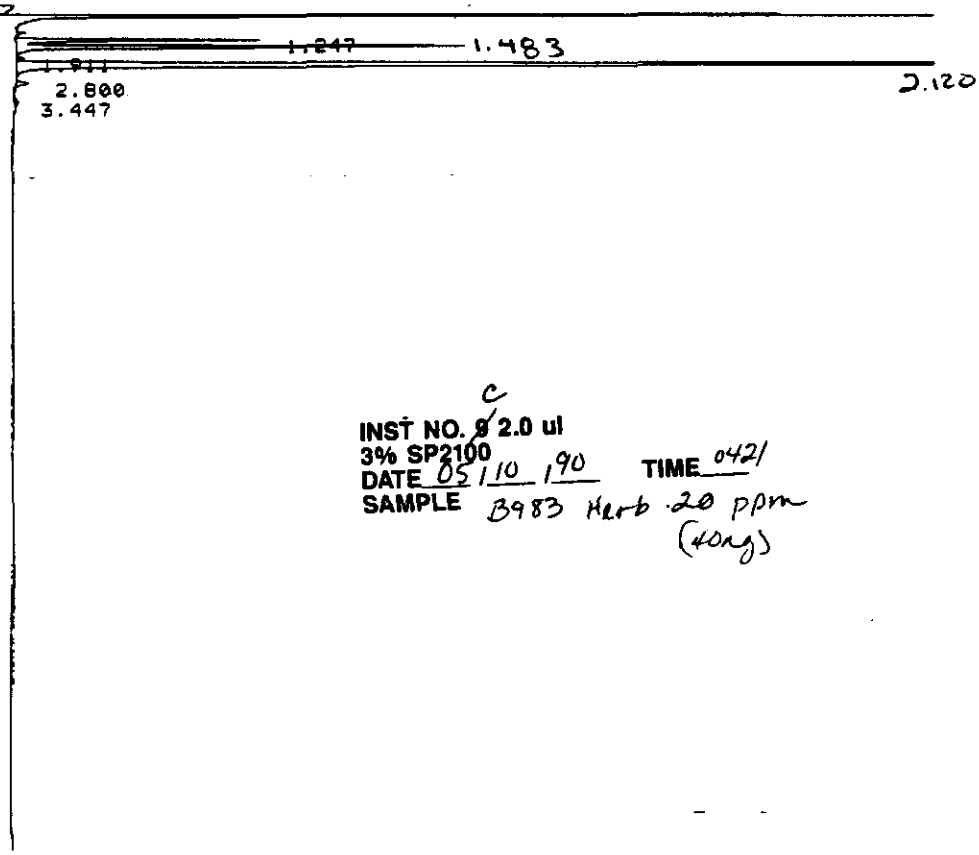
RACK: 1 VIAL: 5 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian sunnyvale calif p/n 03-906362-00

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. ~~B~~ C 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0421
SAMPLE B983 Herb .20 ppm
(40ng)

varian sunnyvale, calif p/n 13-906362-00

TITLE: CLP PESTICIDES 4:21 10 MAY 90

CHANNEL NO: 2 SAMPLE: B983 HERB.20 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		4835	1.247		4835	BV	3.85
2	2,4-D	10092	1.483		10092	VV	4.65
3	~~G-BHC~~ Silver	44049	2.120	-0.040	44049	VB	6.45
TOTALS:		58976		-0.040	58976		

DETECTED PKS: 6 REJECTED PKS: 3

DIVISOR: 1.00000 MULTIPLIER: 10000.0

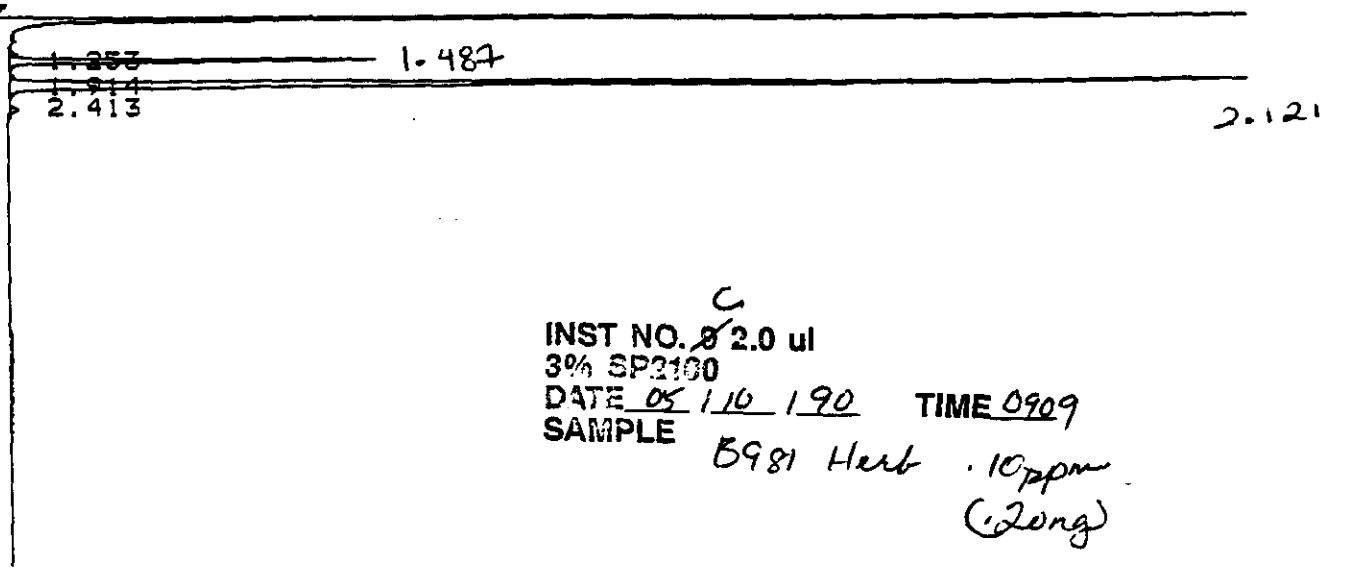
NOISE: 6.1 OFFSET: -14

RACK: 1 VIAL: 7 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. ~~B~~ C 2.0 ul
3% SP2100
DATE 05 / 10 / 90 TIME 0909
SAMPLE B981 Herb .10ppm (.20ng)

(VA) varian /sunnyvale, calif. p/n 03-906362-00

TITLE: CLP PESTICIDES 9:09 10 MAY 90

CHANNEL NO: 2 SAMPLE: B981 HERB.10 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	2,4-D	5622	1.487		5622	VB	4.30
2	~~G-BHC~~ Silvex	25492	2.121	-0.039	25492	VV	6.00
TALS:		31114		-0.039	31114		

DETECTED PKS: 7 REJECTED PKS: 5

DIVISOR: 1.00000 MULTIPLIER: 10000.0

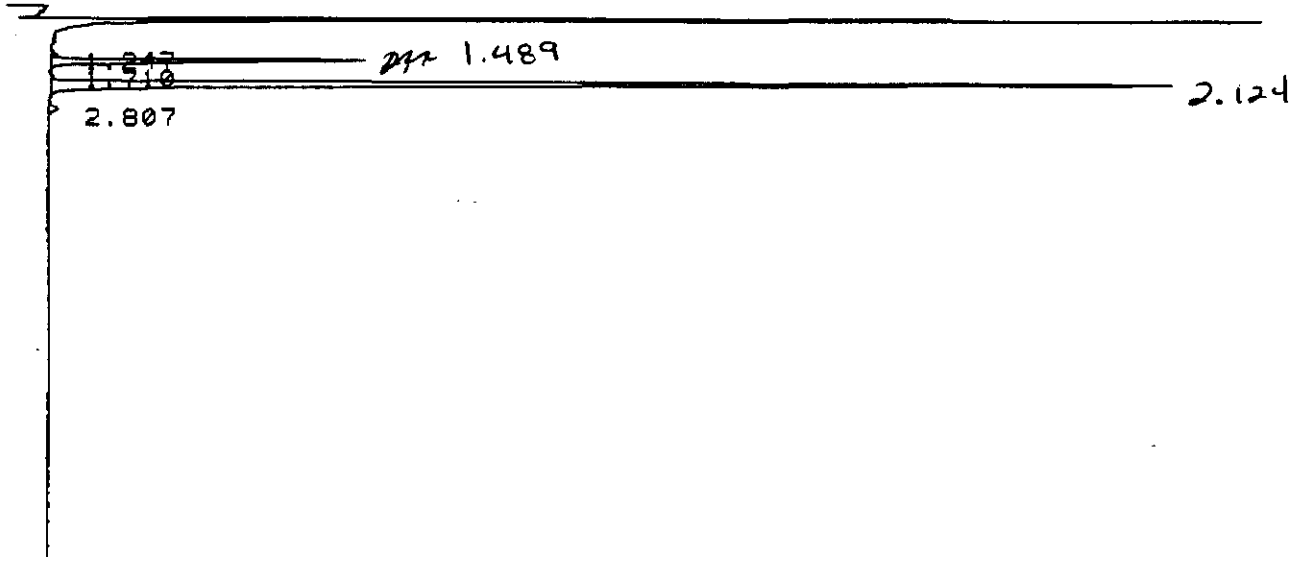
NOISE: 6.1 OFFSET: -16

RACK: 2 VIAL: 8 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian /sunnyvale, calif. p/n 03-906362-00

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



T E: CLP PESTICIDES 11:16 10 MAY 90

CHANNEL NO: 2 SAMPLE: B981 HERB.10 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	2,4-D	5488	1.489		5488	VV	5.10
2	~~G BHC~~ Silvex	25003	2.124	-0.036	25003	VB	6.50
T ALS:		30491		-0.036	30491		

DETECTED PKS: 7 REJECTED PKS: 5

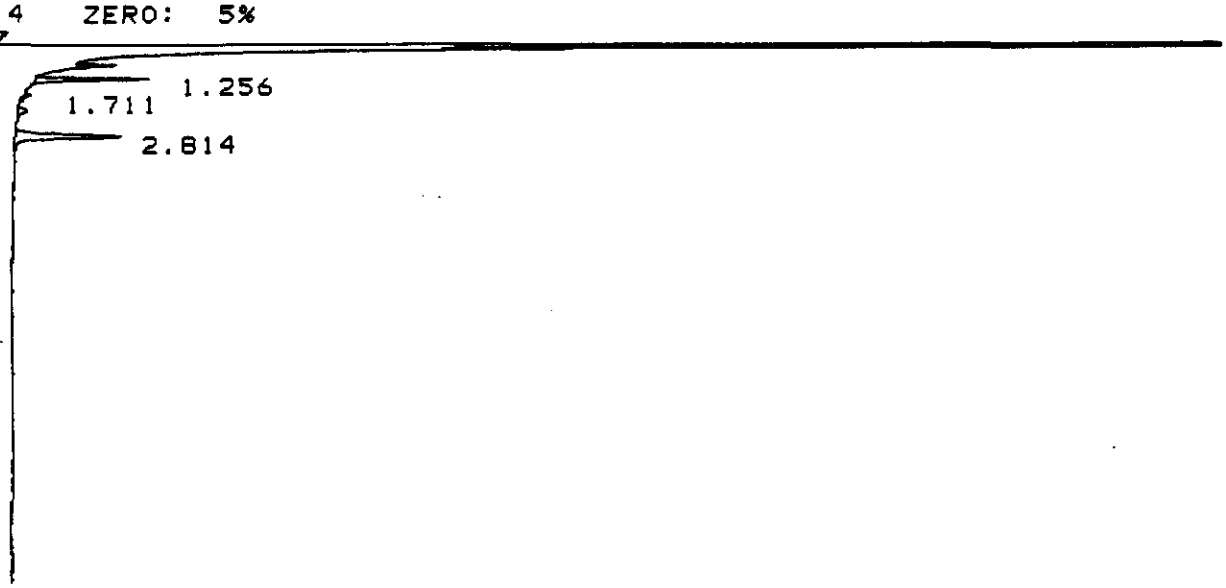
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -14

RACK: 3 VIAL: 4 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

CHART SPEED 0.5 CM/MIN
AT N: 4 ZERO: 5%



TITLE: CLP PESTICIDES 11:35 10 MAY 90

CHANNEL NO: 2 SAMPLE: 2,4 DB (SSS) METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		1690	1.256		1690	BB	4.45
2	2,4-DB	2985	2.814		2985	BB	7.85
TOTALS:		4675			4675		

DETECTED PKS: 4 REJECTED PKS: 2

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -16

RACK: 3 VIAL: 5 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian 'sunnyvale, calif. p/n 03-906362-00

Versar INC.

ORIGINAL (Red)

REAGENT BLANK DATA

D 1D EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

FBLK27 ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: R3-7 SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID: RB8027

Sample wt/vol: 10 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. dec. Date Extracted: 05/04/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/10/90

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4 D	800	U
93-72-1	SILVEX	800	U

D

05-16-90

FORM I PEST 1/87 Rev.

D

ORIGINAL (Red)

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

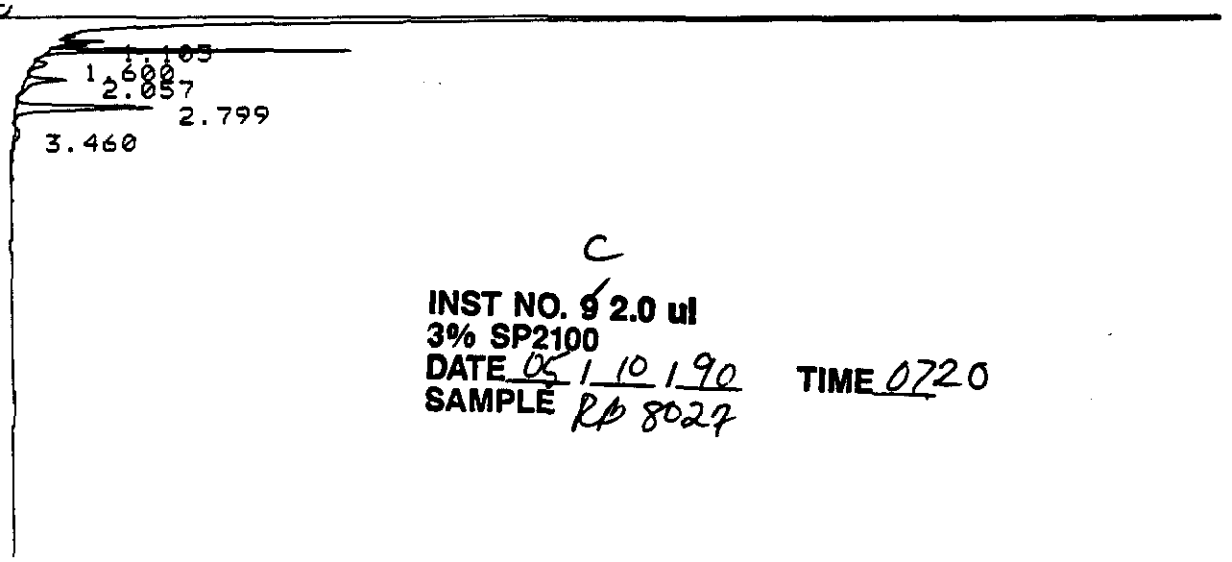
ANALYSIS DATE 05/10/90
SAMPLE # RB8027

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.50	X	NA	23722.22	0.00	2.00	0.00	40000.00	0.00	400.00
SILVEX	2.10 - 2.14	X	NA	110782	0.00	2.00	0.00	40000.00	0.00	400.00
2,4-DB(SSS)	2.78 - 2.84	2.80	3617.00	14925.00	0.24	2.00	0.12	40000.00	4846.90	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00

JPAK 05-16-90

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



C

INST NO. 9 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0720
SAMPLE RB 8027

TITLE: CLP PESTICIDES 7:20 10 MAY 90

CHANNEL NO: 2 SAMPLE: RB8027 METHOD: CLP-2A

F	K	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
	1		4023	1.248		4023	VB	3.65
	2	G-BHC	1274	2.057	-0.103	1274	BB	6.35
	3		3617	2.799		3617	BB	7.50
TOTALS:			8914		-0.103	8914		

DETECTED PKS: 7 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -8

RACK: 1 VIAL: 14 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
T= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian /sunnyvale, calif.p/n 03-906362-00

Versar INC.

ORIGINAL (Red)

MATRIX SPIKE DATA

D 1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1MS

ORIGINAL (Red)

Lab Name: VERSAR, INC. Contract: _____

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID: 16418MS

Sample wt/vol: 10 (g/ml) ML Lab File ID: ____

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 05/04/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/10/90

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

D

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7--------	2,4 D	800	U
93-72-1--------	SILVEX	800	U

5-16-90

FORM I PEST 1/87 Rev.

D

ORIGINAL (Red)

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

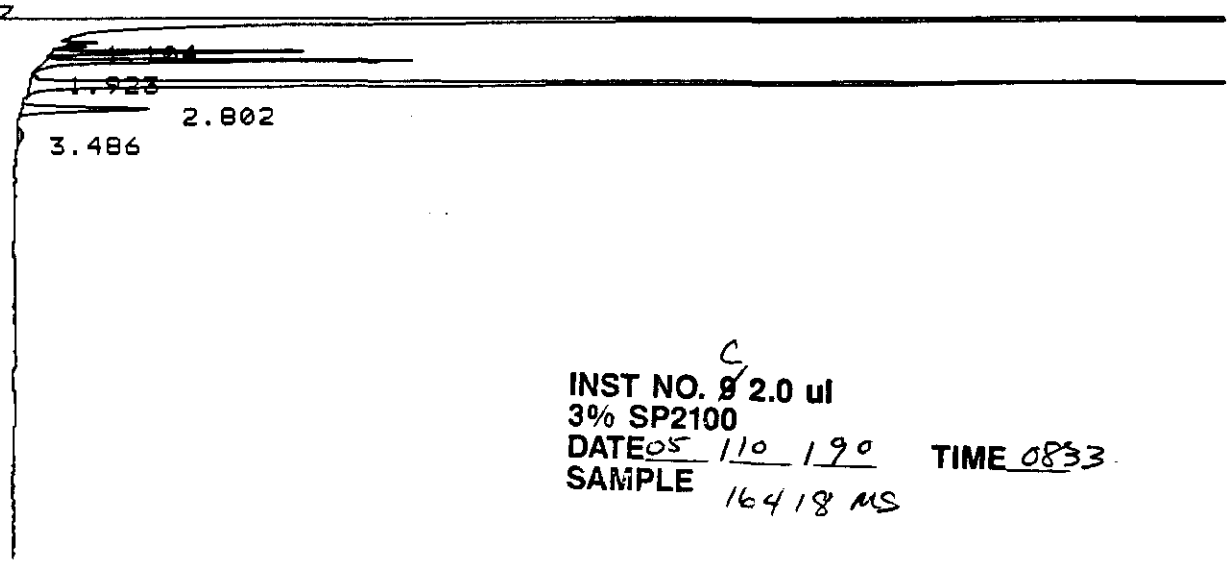
ANALYSIS DATE 05/10/90
SAMPLE # 16418MS

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.50	1.49	6164.00	23722.22	0.26	2.00	0.13	40000.00	5196.81	400.00
SILVEX	2.10 - 2.14	2.12	28632.00	110702	0.26	2.00	0.13	40000.00	5172.82	400.00
2,4-DB(SSS)	2.78 - 2.84	2.80	3411.00	14925.00	0.23	2.00	0.11	40000.00	4570.85	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00

5-16-90

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. ~~B~~ C 2.0 ul
3% SP2100
DATE 05/10/90 TIME 0833
SAMPLE 16418 MS

T(I: CLP PESTICIDES 8:33 10 MAY 90

CHANNEL NO: 2 SAMPLE: 16418MS METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	2,4-D	3335	1.248		3335	VV	3.75
2	Silvex 2,4-D	6164	1.487		6164	VB	4.40
3	~~G-BHC~~ Silvex	28632	2.121	-0.039	28632	VB	6.15
4	2,4-DB	3411	2.802		3411	BB	7.50
TOTALS:		41542		-0.039	41542		

DETECTED PKS: 7 REJECTED PKS: 3

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -13

RACK: 2 VIAL: 5 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
TIYORK 2597 EPTOX HERB

varian sunnyvale, calif. p/n 03-906362-00

ORIGINAL
(Red)

Versar INC.

MATRIX SPIKE DUPLICATE DATA

D

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ORIGINAL (Red)

1MSD

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-7 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID: 16418MSD

Sample wt/vol: 10 (g/ml) ML Lab File ID: ____

Level: (low/med) LOW Date Received: 04/19/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 05/04/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/10/90

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7--------	2,4 D	800	U
93-72-1--------	SILVEX	800	U

D

05/16/90

FORM I PEST 1/87 Rev.

D

ORIGINAL
(Red)

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

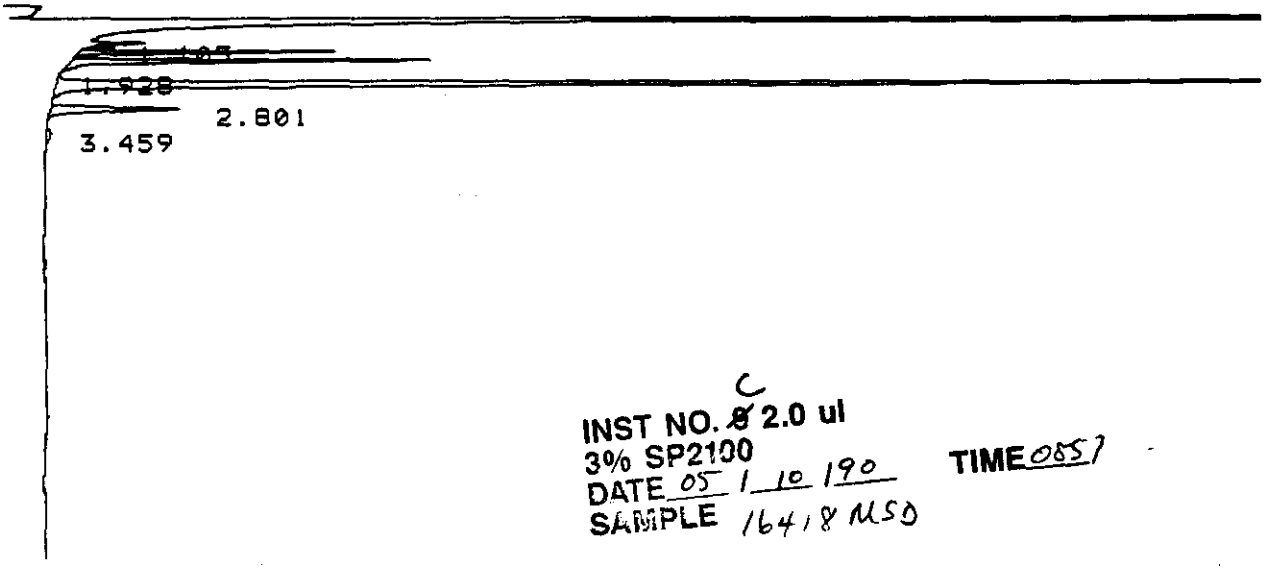
ANALYSIS DATE 05/10/90
SAMPLE # 16418MSD

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.58	1.49	5896.00	123722.22	0.25	2.00	0.12	40000.00	4970.87	400.00
SILVEX	2.10 - 2.14	2.12	27836.00	110702	0.25	2.00	0.13	40000.00	5829.01	400.00
2,4-DB(SSS)	2.78 - 2.84	2.80	3269.00	114925.00	0.22	2.00	0.11	40000.00	4380.57	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA		0.00	ERR	2.00	ERR	40000.00	ERR	400.00

05-16-90

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



INST NO. ~~8~~ C 2.0 ul
3% SP2100
DATE 05 / 10 / 90 TIME 0857
SAMPLE 16418 MSD

..LE: CLP PESTICIDES 8:51 10 MAY 90

CHANNEL NO: 2 SAMPLE: 16418MSD METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		3297	1.248		3297	VV	3.65
2	2,4-P	5896	1.487		5896	VB	4.30
3	~~G-BHC~~ Silvex	27836	2.121	-0.039	27836	VB	6.05
4	2,4-DB	3269	2.801		3269	BB	7.45
TOTALS:		40298		-0.039	40298		

DETECTED PKS: 8 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -16

RACK: 2 VIAL: 7 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
TIYORK 2597 EPTOX HERB

varian sunnyvale, calif. p/n 03-906362-00

ORIGINAL (Red)

Versar INC.

VI. SAMPLE PREPARATION PACKAGE

1. Parameter Request Sheet
2. Screening Data Summary (soils only)
3. Comments
   a. Extraction
   b. Volatiles
   c. Semivolatiles
   d. Pesticides
4. Extraction Worksheets
   a. Chronicle
   b. Dry Weight Factor (soils only)
   c. Dilution Factor (B) Worksheets
5. Injection Sequence Logs
6. Chain of Custody

VERSAR LIMS 04/23/90

VERSAR LABORATORY OPERATIONS
*** ~~REVISED~~ PARAMETER REQUEST SHEET ***

Deliver To: 46

Control: 2536
Code: VERSCDM
Batch: 2
Job Number: 420.1.0

Case: R3-7
SDG: 1
Quote: 9000194 - 90
Charge:

Manager: BECKMAN
Company: VERSAR DIV 31

Site: CDM

Received: 19-APR-90
Due: 17-MAY-90

Sampled: 18-APR-90
Report: 17-MAY-90

Comments: Protocols-Organic SOW 2/88; Inorganic Metals SOW 787 and CN SOW 788; TCLP by the new reg. Do sample QC on field # 1.

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests
BNAL - 48							
	16419	A		1 QC FOR BNA MID SOILS	SLUDGE	C-82	XBNA
	16420	A		2	SLUDGE	C-82	XBNA
low GPC	16421	A		3	SLUDGE	C-82	XBNA
	16422	A		5 MID	SLUDGE	C-82	XBNA
	16423	B		6 7 TOTAL	SLUDGE	C-82	XBNA
	16424	B		7	SLUDGE	C-82	XBNA
CLPM - 43							
	16401	A		1	SLUDGE	C-82	
	16402	A		2	SLUDGE	C-82	
	16403	A		3	SLUDGE	C-82	
	16404	A		5	SLUDGE	C-82	
	16405	B		6	SLUDGE	C-82	
	16432	B		7	SLUDGE	C-82	
CNM - 44							
	16406	A		1	SLUDGE	C-82	TS
	16407	A		2	SLUDGE	C-82	TS
	16408	A		3	SLUDGE	C-82	TS
	16409	A		5	SLUDGE	C-82	TS
	16410	B		6	SLUDGE	C-82	TS
	16411	B		7	SLUDGE	C-82	TS
PEST - 47							
	16412	A		1	SLUDGE	C-82	XPES
low GPC	16413	A		2	SLUDGE	C-82	XPES
	16414	A		3	SLUDGE	C-82	XPES
	16415	A		5 MID/NO QC	SLUDGE	C-82	XPES
	16416	B		6 1 RB, 1 MS/SD 4 TOTAL	SLUDGE	C-82	XPES
	16417	B		7	SLUDGE	C-82	XPES
TCBN - 48							
	16418	B		1	SLUDGE	C-82	TCLM TCLX XTCB TCPS XTCP TCHB XTCH
~~TCHB~~ - 47							
	16418	B		1	SLUDGE	C-82	TCLM TCLX TCBN XTCB TCPS XTCP XTCH
TCLM - 43							

Continued ->

ORIGINAL (Red)

Control #: 2536

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests		
	16418	B		1	SLUDGE	C-82	TCLX TCPS XTCH	TCBN XTCP	XTCB TCHB
TCLV - 48									
	16425	B		1	SLUDGE	GCMS	ZHE		
TCLX - 43									
	16418	B		1	SLUDGE	C-82	TCLM TCPS XTCH	TCBN XTCP	XTCB TCHB
TCPS - 47									
	16418	B		1	SLUDGE	C-82	TCLM XTCB XTCH	TCLX XTCP	TCBN TCHB
TS - 44									
	16406	A		1	SLUDGE	C-82	CNM		
	16407	A		2	SLUDGE	C-82	CNM		
	16408	A		3	SLUDGE	C-82	CNM		
	16409	A		5	SLUDGE	C-82	CNM		
	16410	B		6	SLUDGE	C-82	CNM		
	16411	B		7	SLUDGE	C-82	CNM		
VOAL - 48									
	16426	B		1	SLUDGE	GCMS			
	16427	B		2	SLUDGE	GCMS			
	16428	B		3	SLUDGE	GCMS			
	16429	B		5	SLUDGE	GCMS			
	16430	B		6	SLUDGE	GCMS			
	16431	B		7	SLUDGE	GCMS			
XBNA - 46									
	16419	A		1	SLUDGE	C-82	BNAL		
	16420	A		2	SLUDGE	C-82	BNAL		
	16421	A		3	SLUDGE	C-82	BNAL		
	16422	A		5	SLUDGE	C-82	BNAL		
	16423	B		6	SLUDGE	C-82	BNAL		
	16424	B		7	SLUDGE	C-82	BNAL		
XPES - 46									
	16412	A		1	SLUDGE	C-82	PEST		
	16413	A		2	SLUDGE	C-82	PEST		
	16414	A		3	SLUDGE	C-82	PEST		
	16415	A		5	SLUDGE	C-82	PEST		
	16416	B		6	SLUDGE	C-82	PEST		
	16417	B		7	SLUDGE	C-82	PEST		
XTCB - 46									
	16418	B		1	SLUDGE	C-82	TCLM TCPS XTCH	TCLX XTCP	TCBN TCHB
XTCH - 46									
	16418	B		1	SLUDGE	C-82	TCLM XTCB TCHB	TCLX TCPS	TCBN XTCP
XTCP - 46									
	16418	B		1	SLUDGE	C-82	TCLM XTCB XTCH	TCLX TCPS	TCBN TCHB
ZHE - 43									
	16425	B		1	SLUDGE	GCMS	TCLV		

2536 5/17
2565 5/21

ORIGINAL

EXTRACTS READY FOR ANALYSIS

DATE 5-4-90

CODE VRASCDM BATCH 2,4 CONTROL # 2536, 2565

DATE RECEIVED 4-19, 23-90 DATE EXTRACTED 5-4-90

OF EXTRACT 9 # OF SAMPLES 2

MATRIX HON PARAMETER TCHB LOCATION 5

IS THIS A RE-EXTRACTION? NO

COMMENTS WS 1, Blank 1, Blank 2, 16418, 16418MS, 16418MSD, 16960, RB8027, MSTD 3073

TECHNICIAN SIGNATURE M. Iden

==========

SUPERVISOR USE ONLY

PROVIDE AN EXPLANATION IF ANSWER IS NO

Was the extraction holding time met?	☑ YES	☐ NO
Was proper QC performed with the extraction?	☑ YES	☐ NO
Are all columns complete, initialed, and dated?	☑ YES	☐ NO
Is column information accurate?	☑ YES	☐ NO
Is header information complete and accurate?	☑ YES	☐ NO
Were the correct standards used in the extraction?	☑ YES	☐ NO
Are final volumes correct?	☑ YES	☐ NO
Are sample comments included, initialed and dated?	☑ YES	☐ NO
Are dry weights included with the data package?	☐ YES	☑ NO Leachate
Are dry weights correct?	☐ YES	☑ NO ↓

What clean-up procedure was used? None

SUPERVISOR _____ SECTION CHIEF J. Ling

VERSAR INC.

SAMPLE PREPARATION COMMENT SHEET

ORIGINAL (Red)

PROJECT Versar BATCH 2,4 CASE R3-7

CONTROL 2536, 2565

MATRIX HOH PREPARATION PARAMETER TCHB

VERSAR SAMPLE NUMBER 16418	CLEAR LIQUID SAMPLE, MH 5-4-90
FIELD SAMPLE NUMBER 1	
SOIL SAMPLE pH	
VERSAR SAMPLE NUMBER 16960	CLEAR LIQUID SAMPLE MH 5-4-90
FIELD SAMPLE NUMBER 11	
SOIL SAMPLE pH	
VERSAR SAMPLE NUMBER	
FIELD SAMPLE NUMBER	
SOIL SAMPLE pH	

Versar INC.

ORIGINAL (Red)

SAMPLE COMMENTS (PESTICIDES)
VERSCOM 2536, 2565 TCLP Herb
CASE GTI YORK 2454, 2597 EPTOX Herb

Primary Analysis, Inst C, 5/9

EPA #	COMMENTS
	Set-up Herb Analysis. Put on ASM at 2 o'clock.
	~~Validity~~ Curve needs to be checked. Used Herb 0.10
	as continuing check. JA 5/9/90
	Please check GTI YORK 2454 - in Prep Data
	sample is 14620 but vial is labelled 14590. JA 5/9/90
	linearity for 3 point curve .05, .10, .15
	which % RSD all in criteria < 10%.
	Daily standard checked and % D < 20%
	2,4 DB (SSS) was ~~on~~ PC run at the end
	of analysis and used to quantitate for
	% Recovery of surrogate.
	Sample 14620 was mislabeled as 1490 which
	~~already~~ PC already checked with Prep. Technicians
	PC 5/10/90.

Signature Date

VERSAR INC. HERBICIDE WATER SAMPLE PREPARATION SHEET

PROJECT Versar
CASE R3-7
BATCH 2,4
DATE 5-4-90

EXTRACTION PARAMETER TCHB
EXTRACTION START DATE 5-4-90
DATE EXTRACTION COMPLETE 5-4-90
ESTERIFICATION METHOD DIAZA[redacted]

MATRIX SPIKE SOLUTION B589
SURROGATE SOLUTION B587

WORKING STANDARD
SPIKE # B445
CONC. 10ppm
VOL. USED 1mL

VERSAR SAMPLE NUMBER	FIELD SAMPLE NUMBER	SAMPLE VOLUME IN ML.	SPIKE SURR.	SPIKE MS	DATE RECOVERED	DATE CONCENTRN	FINAL UNCLEANED VOLUME	VOLUME TO BE CLEANED	FINAL CLEANED VOLUME	GENERAL SAMPLE COMMENTS
WS 1	NA	NA	NA	NA	NA	NA	1mL	1mL	10mL	No clean-up; Extracts diluted
TCLP Blank 1	~~—~~ MH	10mL	50µl	—	5-4-90	NO	40mL			
TCLP Blank 2	—	10mL	50µl	—						
16418	1	10mL	50µl	—						
16418MS	1	10mL	50µl	50µl						
16418MSD	1	10mL	50µl	50µl						
16960	11	10mL	50µl	—						
RB8027	PBLK27	10mL	50µl	—						
NSTD3073	—	10mL	50µl	50µl						
MH 5-4-90		MH 5-4-90			MH 5-4-90		MH 5-4-90			5-7-90

MH

ORIGINAL (Red)

CLIENT_____VERSCOM DILUTION FACTOR TABLE

CASE # _____R3-7

EXTRACTION DATE ___05/04/90 EXTRACTED BY ____MH

	SOIL (S) OR WATER (W)	SAMPLE #	WT (g) OR VOL (ml) OF SAMPLE	% MOISTURE (SOILS ONLY) ("0" FOR WATERS)	INITIAL EXTRACT FINAL VOL (ML)	ALIQUOT TO PEST (ML)	FINAL PEST VOL (ML)	DILUTION AT INSTRUMEN	DILUTION FACTOR (DF) (ml/Kg)
1	WATER (W)	TCLPBLK1	10	X	40	1	10	1	40000.00
2	WATER (W)	TCLPBLK2	10	X	40	1	10	1	40000.00
3	WATER (W)	16418	10	X	40	1	10	1	40000.00
4	WATER (W)	16418MS	10	X	40	1	10	1	40000.00
5	WATER (W)	16418MSD	10	X	40	1	10	1	40000.00
6	WATER (W)	16960	10	X	40	1	10	1	40000.00
7	WATER (W)	RB0027	10	X	40	1	10	1	40000.00
8	WATER (W)	MSTD3073	10	X	40	1	10	1	40000.00
9	WATER (W)	WS1	10	X	1	1	10	1	1000.00
10	X	X	X	X	40	1	10	1	ERR
11	X	X	X	X	40	1	10	1	ERR
12	X	X	X	X	40	1	10	1	ERR
13	X	X	X	X	40	1	10	1	ERR
14	X	X	X	X	40	1	10	1	ERR
15	X	X	X	X	40	1	10	1	ERR
16	X	X	X	X	40	1	10	1	ERR
17	X	X	X	X	40	1	10	1	ERR
18	X	X	X	X	40	1	10	1	ERR
19	X	X	X	X	40	1	10	1	ERR
20	X	X	X	X	40	1	10	1	ERR
21	X	X	X	X	40	1	10	1	ERR
22	X	X	X	X	40	1	10	1	ERR
23	X	X	X	X	40	1	10	1	ERR
24	X	X	X	X	40	1	10	1	ERR
25	X	X	X	X	40	1	10	1	ERR
26	X	X	X	X	40	1	10	1	ERR
27	X	X	X	X	40	1	10	1	ERR
28	X	X	X	X	40	1	10	1	ERR
29	X	X	X	X	40	1	10	1	ERR
30	X	X	X	X	40	1	10	1	ERR

SAT 05-16-90

DATE 05-09-90 SUBJECT Inj log C PROJECT NO.

Oper. Judy Amador Date 5-9-90
Detec. ECD Temp. 300
Column 6' x 2mm Type 3% SP2100
Carrier Gas Ar/CH4 at
Oven 190 °C for 15 min at 150 °C/min
for min at °C/min
Inst. ID C
Project 6TIYDRK 2454, Parameter Alky 2↑4
2592 EP Herb / VERSCOM 2536, 2545 TCLP Herb

Changed septum
Pure Col 2 TFE
Baked septum 90-5

SAMP#	RACK/VIAL	TYPE SAMPLE ID
1	1/ 1	B979 HERB.02
2	1/ 2	B980 HERB.05
3	1/ 4	B981 HERB.10
4	1/ 5	B982 HERB.15
5	1/ 7	B983 HERB.20
6	1/ 8	RB7903
7	1/10	EPBLK 2454
8	1/11	14620
9	1/13	MSTD3030
10	1/14	RB8027
11	2/ 1	TCLPBLANK1
12	2/ 2	TCLPBLANK2
13	2/ 4	16418
14	2/ 5	16418MS
15	2/ 7	16418MSD
16	2/ 8	B981 HERB.10
17	2/10	16960
18	2/11	MSTD3073
19	2/13	RB8028
20	2/14	EPBLK 2597
21	3/ 1	17641
22	3/ 2	MSTD3074
23	3/ 4	B981 HERB.10
24	3/ 5	WS VERSCOM
25	3/ 7	WS 2597

Inserted B999 2.4 DB .10 ppm
PC 5/10/90

Judy Amador

WITNESSED AND UNDERSTOOD

SIGNED DATE SIGNED Judy Amador

PAGE 5
CHART SPEED
PAGES OR CM/MIN: C
INIT VALUE: 0.5

PAGE 6
PLOT ATTEN
INIT PLOT ATTEN: 4

SECTION 2: TIME EVENTS
PAGE 1

LINE#	TIME	EVENT	VALUE
1	0.00	PR	700
2	0.00	SN	2
3	0.00	T%	5.0
4	0.00	WI	4
5	0.00	II	1.00

SECTION 3: PEAK TABLE
PAGE 1
STD PK#: 0
RELATIVE RETEN PK#: 0
RESOLUTION PK#: 0
RESOLUTION MINIMUM: 0.0
FACT%: 5.0
IDENTIFICATION TIME WINDOWS +/-
REF
%: 10
MIN: 0.00
NON REF
%: 5
MIN: 0.00

PAGE 2

PK#	TIME	NAME	FACTOR	AMOUNT REF	GR#	MUST LO	MUST HI
1	1.83	A-BHC	1.000000	1.000000		0.000000	0.000000
2	1.96	B-BHC	1.000000	1.000000		0.000000	0.000000
3	2.16	G-BHC	1.000000	1.000000		0.000000	0.000000
4	2.22	D-BHC	1.000000	1.000000		0.000000	0.000000
5	3.50	HEPTACHLOR	1.000000	1.000000		0.000000	0.000000
6	4.34	ALDRIN	1.000000	1.000000		0.000000	0.000000
7	5.31	HEPT EPOX	1.000000	1.000000		0.000000	0.000000
8	6.09	G-CHLORDAN	1.000000	1.000000		0.000000	0.000000
9	6.63	A-ENDOSULF	1.000000	1.000000		0.000000	0.000000
10	6.76	A-CHLORDAN	1.000000	1.000000		0.000000	0.000000
11	7.77	DDE/DIELD.	1.000000	1.000000		0.000000	0.000000
12	8.68	ENDRIN	1.000000	1.000000		0.000000	0.000000
13	8.89	B-ENDOSULF	1.000000	1.000000		0.000000	0.000000
14	9.79	DDD	1.000000	1.000000		0.000000	0.000000
15	9.84	ENDRIN ALD	1.000000	1.000000		0.000000	0.000000
16	11.45	ESS	1.000000	1.000000		0.000000	0.000000
17	12.86	DDT	1.000000	1.000000		0.000000	0.000000
18	14.73	END KETONE	1.000000	1.000000		0.000000	0.000000
19	19.29	METHOXYCHL	1.000000	1.000000		0.000000	0.000000
20	26.53	DBC	1.000000	1.000000		0.000000	0.000000

SECTION 4: GC INSTRUMENT CONTROL
PAGE 1
COL TEMP
ISO/INIT COL TEMP: 190
INIT HOLD TIME: 15.00

PAGE 2
DETECTORS
DET A TYPE: ECD
DET B TYPE:

LN#	TIME	SIDE	ATTN	RANGE	ZERO
1	0.00	A	4	10	Y
2	0.00	B			Y

PAGE 3
TEMP/FLOW
INJ A TEMP: 245
INJ B TEMP: 245
ION TEMP: 300
TCD TEMP:
TCD FIL TEMP:

INST NO. 9 2.0 ul
3% SP2100
DATE___/___/___ TIME___
SAMPLE Method

varian /sunnyvale,calif.p/n 13-906362-00

ORIGINAL
(Red)

SINGLE CHANNEL METHOD: CLP-2A 6:55 10 MAY 90

SECTION 1: BASIC
PAGE 1
ANALYSIS PARAMETERS
CHANNEL: 2
CALCULATION: ES
AREA/HT: A
STOP TIME: 15.00
NUMB EXPECTED PKS: 100
EQUILIBRATION TIME: 8
UNRETAINED PK TIME: 0.00
UNIDENT PK FACTOR: 1.000000
SLICE WIDTH: 10

PAGE 2
SAMPLE PARAMETERS
RUN TYPE: A
SAMPLE ID: MSTD3030
DIVISOR: 1.000000
AMT STD: 1.000000
MLTPLR: 10000.00

PAGE 3
REPORT INSTRUCTIONS
WHERE TO REPORT: L
COPIES: 1
TITLE: CLP PESTICIDES
FORMAT: E
DECIMAL PLACE: 0
RESULT UNITS: AREA
REPORT UNIDENT PKS: Y
REPORT INSTRUMENT CONDITIONS: N

INST NO. 9 2.0 ul
3% SP2100
DATE
SAMPLE method
TIME

PAGE 4
PLOT INSTRUCTIONS
PLOT: N
ZERO OFFSET: 5
ANNOTATION
RETENTION TIME: Y
PLOT CONTROL: N
TIME TICKS: N
TIME EVENTS: N
PK START/END: N

COL A FLOW:
COL B FLOW:

PAGE 4

(Rod)

SECTION 7: POST RUN
PAGE 1
FILE NAME:
SAVE INSTRUCTIONS
TYPE:
WHERE TO SAVE: M
TRANSMIT/REPLOT INSTRUCTIONS
TRANSMIT RAW DATA: N
REPLOT WITH BASELINES: Y
RAW DATA LOCATION: U
TRANSMIT REPORT: N

PAGE 2
METHOD LINKING INSTRUCTIONS
METHOD:
LINK CALC RESULTS: N
PROGRAM EXECUTION
PROGRAM:
PARAMETERS:
RESERVE PRINTER: N

SECTION 9: SAMPLE LIST+A/S CONTROL
PAGE 1
AUTOSAMPLER CONTROL
INJECT/CALIBRATION: 1
INJECT/ANALYSIS: 1
SAMP VOLUME: 1
VISTA AUTOSAMPLER ONLY
A/S MODE: MR
PURGE PULSES: 2
INJECT TIME: 0.03

PAGE 2

SAMP#	RACK/VIAL	TYPE	SAMPLE ID	DIVISOR	AMT STD	MLTPLR
1	1/ 1		B979 HERB.02			
2	1/ 2		B980 HERB.05			
3	1/ 4		B981 HERB.10			
4	1/ 5		B982 HERB.15			
5	1/ 7		B983 HERB.20			
6	1/ 8		RB7903			
7	1/10		EPBLK 2454			
8	1/11		14620			
9	1/13		MSTD3030			
10	1/14		RB8027			
11	2/ 1		TCLPBLANK1			
12	2/ 2		TCLPBLANK2			
13	2/ 4		16418			
14	2/ 5		16418MS			
15	2/ 7		16418MSD			
16	2/ 8		B981 HERB.10			
17	2/10		16960			
18	2/11		MSTD3073			
19	2/13		RB8028			
20	2/14		EPBLK 2597			
21	3/ 1		17641			
22	3/ 2		MSTD3074			
23	3/ 4		B981 HERB.10			
24	3/ 5		2,4 DB (SSS)			
25	3/ 7		WS VERCDM			
26	3/ 8		WS2597			

INST NO. 9 2.0-ul
3% SP2100
DATE ___/___/___ TIME ___
SAMPLE Method

SECTION 10: NOTE PAD
PAGE 1

LINE#	VALUE
1	INSTRUMENT ID: C
2	COLUMN: 3% SP2100
3	INJECTION VOLUME 2 UL
4	ORT= OUTSIDE RETENTION TIME WINDOW
5	GTIYORK 2454 EPTOX HERB
6	VERSCDM 2536,2565 TCLP HERB
7	GTIYORK 2597 EPTOX HERB

varian /sunnyvale calif.p/n 03-906362-00

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

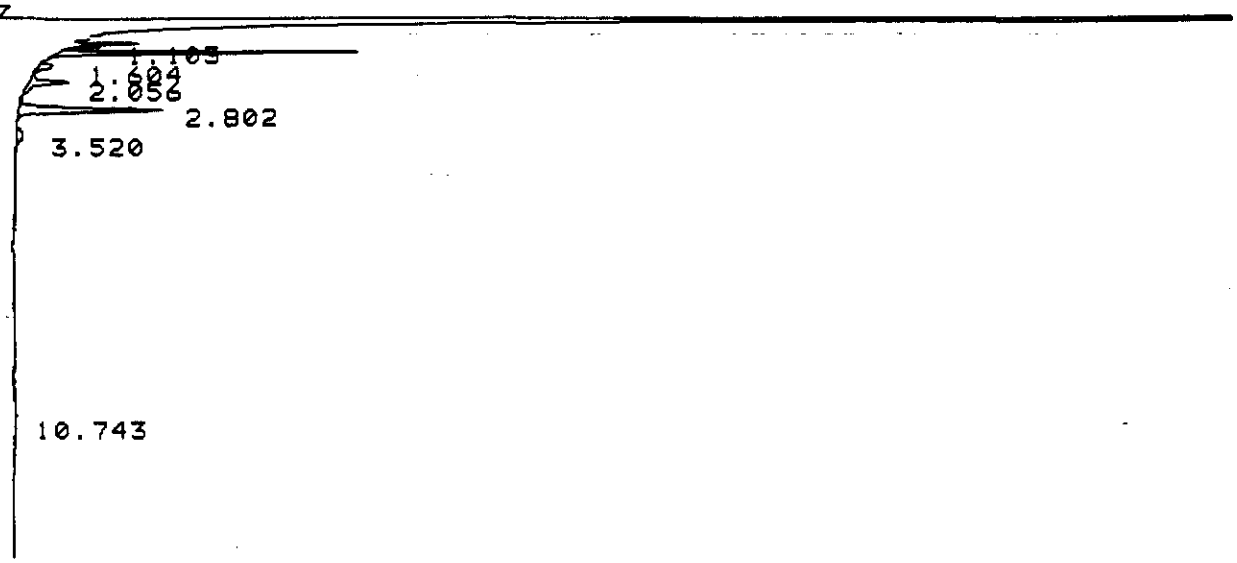
ANALYSIS DATE 05/10/90
SAMPLE # MSTD3073

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)
2,4-D	1.48 - 1.50	X	NA	23722.22	0.00	2.00	0.00	40000.00	0.00	400.00
SILVEX	2.10 - 2.14	X	NA	110702	0.00	2.00	0.00	40000.00	0.00	400.00
2,4-DB(SSS)	2.78 - 2.84	2.80	3749.00	14925.00	0.25	2.00	0.13	40000.00	5023.79	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	40000.00	ERR	400.00

100%

05-10-90

CHART SPEED 0.5 CM/MIN
AT 1: 4 ZERO: 5%



TITLE: CLP PESTICIDES 9:45 10 MAY 90

CHANNEL NO: 2 SAMPLE: MSTD3073 METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		3830	1.247		3830	VB	3.60
2	G-BHC	1001	2.056	-0.104	1001	VB	6.00
3		3749	2.802		3749	BB	7.50
TOTALS:		8580		-0.104	8580		

DETECTED PKS: 8 REJECTED PKS: 5

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -17

RACK: 2 VIAL: 11 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT* OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
VERSCDM 2536,2565 TCLP HERB
IYORK 2597 EPTOX HERB

varian /sunnyvale, calif. p/n 03-906362-00

CLIENT VERSCOM

CASE # R3-7 DATA REDUCTION FORM

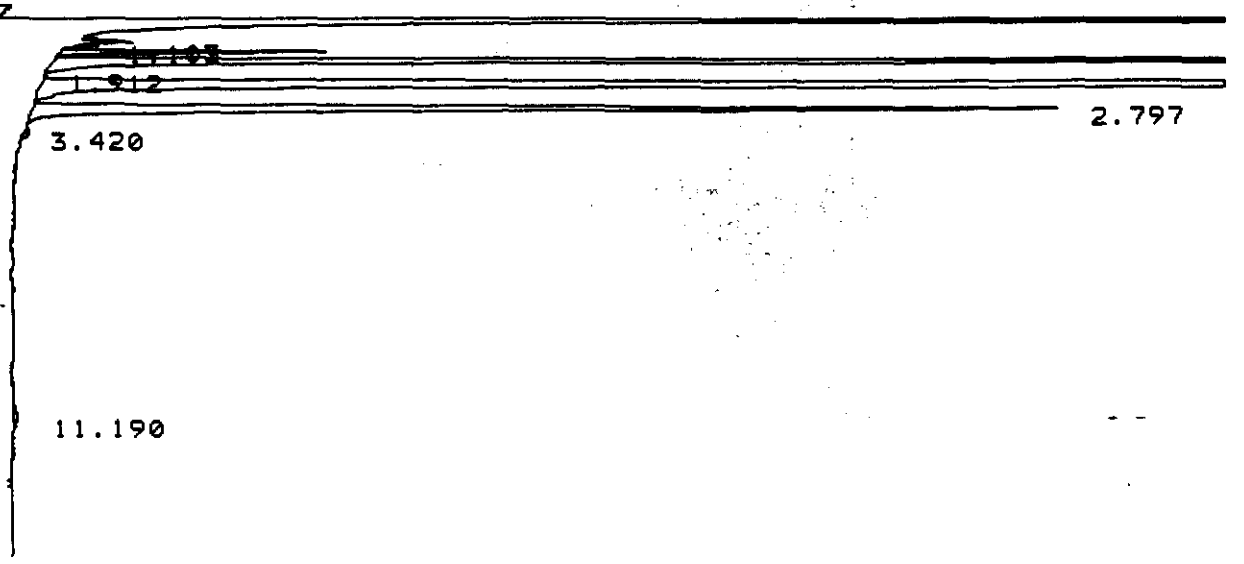
ANALYSIS DATE 05/10/90
SAMPLE # WS1

COMPOUND	RT WINDOW	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L) OR (ug/Kg)	DETECTION LIMIT (ug/L) OR (ug/Kg)	
2,4-D	1.48 - 1.58	1.48	45842.00	23722.22	1.93	2.00	0.97	1000.00	966.22	10.00	97%
SILVEX	2.10 - 2.14	2.12	115575	110782	1.04	2.00	0.52	1000.00	522.01	10.00	52 ~~47~~%
2,4-DB(SSS)	2.78 - 2.84	2.80	28308.00	14925.00	1.90	2.00	0.95	1000.00	948.34	10.00	95% TBH
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	
	0.00 - 0.00	X	NA	0.00	ERR	2.00	ERR	1000.00	ERR	10.00	

JPH 05/16/90

ORIGINAL (Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 4 ZERO: 5%



TITLE: CLP PESTICIDES 11:53 10 MAY 90

CHANNEL NO: 2 SAMPLE: WS VERCDM METHOD: CLP-2A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		3642	1.249		3642	VV	3.80
2	2,4-D	45842	1.482		45842	VB	4.80
3	~~G-BHC~~ Silvex	115575	2.122	-0.038	115575	VV	6.60
4	2,4 DB	28308	2.797		28308	VB	7.85
TOTALS:		193367		-0.038	193367		

DETECTED PKS: 10 REJECTED PKS: 6

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 6.1 OFFSET: -15

RACK: 3 VIAL: 7 INJ: 1

NOTES:
INSTRUMENT ID: C
COLUMN: 3% SP2100
INJECTION VOLUME 2 UL
ORT= OUTSIDE RETENTION TIME WINDOW
GTIYORK 2454 EPTOX HERB
ERSCDM 2536,2565 TCLP HERB
GTIYORK 2597 EPTOX HERB

varian /sunnyvale, calif. p/n 03-906362-00

Office of Enforcement

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania 19106

CHAIN OF CUSTODY RECORD

PROJ. NO.: R3-7
PROJECT NAME: R3-7
SAMPLERS: (Signature) Sharon E. Schaffer, Laurie B. Wyle

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP VOA	TCLP BNA/Metals	VOA	BNA	Pest./PCB	REMARKS
1	4/18/90	1000		X	Location 1 (Sludge)	10	2	2	2	~~2~~	~~2~~	Tag #'s 3-10683352, 53, 54, 55, 56, 57, 58, 60
					~~Location 2~~ SES 4/18/90					SES 4/18/90	SES 4/18/90	
					~~Location 3~~ SES 4/18/90							
					~~Location 5~~ SES 4/18/90							
					~~Location 6~~ SES 4/18/90							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		G. L. Monroe	4/19/90 0900	Shipped via Federal Express Airbill # 2294123705	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

3-18549