Versar INC.
ENVIRONMENTAL RISK MANAGEMENT

Versar INC.

441610

PESTICIDE ANALYSIS
DATA SUMMARY 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.

Pesticide Fraction Analysis Narrative

Client: Versar Div. 31; Camp, Dresser, McGee
Lab Operations Project No. 420.1 B#2; Control 2536 - Soils
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 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.

Pesticide Fraction Analysis Detail
Client: Versar Div. 31; Camp, Dresser, McGee
Lab Operations Project No. 420.1 B#2; Control 2536 - Soils
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 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. The date of extraction was 26 April and 29 April, 1990, for the following low and med soils respectively:

SAMPLES

Field ID#	Lab ID#
*1	*16412
2	16413
3	16414
5	16415
6	16416
7	16417

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

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 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 on a mixed phase, SP2250/SP2401, packed column with a full set of multicomponent standards to allow for quantitation of tentatively identified results. The primary analysis of these extracts was completed in two analytical sequences. Samples requiring further analysis were analyzed on a 3%SP2100 packed column analytical system. The confirmation analyses were completed in two analytical sequences.

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

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 three of the four analytical sequences. Where "ND" is reported, it denoted that the surrogate was not detected. The reagent blank for the

Versar INC.

ORIGINAL (Red)

low soils did not contain DBC though it was recorded as having been spiked. The GPC blank was not spiked with surrogate. Where "DL" is reported, it denotes that the surrogate was effectively diluted out of the sample. The confirmation analysis for the low soils, performed on instrument C on 05/17/90, had DBC exceeding the contract limit of 2.0%. The samples, field numbers 3 and 7, had DBC shifts of 2.12 and 2.22 percent. The sample extracts were not reanalyzed under a new sequence, but the retention time windows for the compounds of interest were adjusted to match the shift of DBC. No compounds confirmed, had there been a possibility of a confirmed identification, the samples would have required reanalysis in a new analytical sequence.

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 for both low and med extracts, matrix spike and matrix spike duplicate recoveries, as well as method blank results. Surrogate recoveries for the case exhibits good extraction efficiency with only one of seven lows and none of three med recoveries outside the QC limit windows. Matrix spike and matrix spike duplicate recoveries exhibit poor extraction efficiency with six of twelve spike recoveries outside of the prescribed QC window limits. Precision for the two spiked extracts, as demonstrated by the relative percent difference (RPD) results, was poor with none of the results within the prescribed 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

Christopher E. Bunker
Data Quality Analyst
Applied Chromatography
Laboratory Operations

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: VERSAR, INC Contract: —

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

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (DBC) f	OTHER DBC
01	PBLK 66	~~DD~~ *	ND *
02	GPC BLANK	~~DD~~ *	NA
03	1 DL	~~D~~ *	43
04	1 MS DL	~~D~~ *	53
05	1 MSD DL	~~D~~ *	57
06	2	~~26~~	51
07	3	~~31~~	64
08	7	~~30~~	72
09			
10		OEB	
11		5/21/90	
12			
13			
14			
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30			

RECOVERIES RECALCULATED DUE TO GPC NOTATION ERROR. SURROGATE RECS FOR DBC OEB 5/21/90

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchlorendate

f Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

ND = None detected

NA - NOT SPIKED

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FORM II PEST-2

1/87 Rev

10003

QA 5/17/90

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: VERSAR, INC Contract: _____

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

Level: (low/med) MED

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PBLK81	82	
02	5	72	
03	6	84	
04			
05			
06			
07			
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09			
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11			
12			
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30			

S1 (DBC) = Dibutylchlorendate ADVISORY QC LIMITS (20-150)

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

FORM II PEST-2 1/87 Rev

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5-9-90

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: R37 SAS No.: _____ SDG No.: 1

Matrix Spike - EPA Sample No.: 1 Level: (low/med) ~~MED~~ LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Lindane	79.04	0	0	0 *	46-127
Heptachlor	79.04	0	0	0 *	35-130
Aldrin	79.04	0	35.79	45	34-132
Dieldrin	197.59	0	0	0 *	31-134
Endrin	197.59	0	0	0 *	42-139
4,4' DDT	197.59	0	0	0 *	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lindane	79.04	51.15	65	200 *	50	46-127
Heptachlor	79.04	63.95	81	200 *	31	35-130
Aldrin	79.04	81.11	103	78 *	43	34-132
Dieldrin	197.59	205.15	104	200 *	38	31-134
Endrin	197.59	238.90	121	200 *	45	42-139
4,4' DDT	197.59	351.28	178 *	200 *	50	23-134

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

* Values outside of QC limits

RPD: 6 out of 6 outside limits
Spike Recovery: 6 out of 12 outside limits

COMMENTS: Calculations based on 325 SP2250/SP2401 quant analysis. Extracts were 1/10 dilutions.

FORM III PEST-2 1/87 Rev

CEB
5/21/90

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 7966 Lab File ID: —

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

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

Date Analyzed (1): 05-16-90 Date Analyzed (2): 05-17-90

Time Analyzed (1): 1850 Time Analyzed (2): 1406

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	GPC BLANK	GPC BLANK	05-16-90	05-17-90
02	1 DL	16412	05-16-90	05-17-90
03	1 MS DL	16412 MS	05-17-90	05-17-90
04	1 MSD DL	16412 MSD	05-17-90	05-17-90
05	2	16413	05-17-90	
06	3	16414	05-17-90	05-17-90
07	7	16424	05-17-90	05-17-90
08				
09				
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25				
26				

COMMENTS:

FORM IV PEST

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5/17/90

ORIGINAL (Red)

PESTICIDE METHOD BLANK SUMMARY

Lab Name: VERSAR, INC Contract: _____

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

Lab Sample ID: ~~RB7981~~ PBLK 81 Lab File ID: _____

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

Date Extracted: 04/29/90 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 05/03/90 Date Analyzed (2): 05/07/90

Time Analyzed (1): 0326 Time Analyzed (2): 0915

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

GC Column ID (1): SP2250/SP2401 GC Column ID (2): 5%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	5	164/5	05/03/90	05/07/90
02	6	164/6	05/03/90	05/07/90
03				
04				
05				
06				
07				
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25				
26				

COMMENTS: _____

FORM IV PEST

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5-9-90

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1DL ORIGINAL

Lab Name: VERSAR, INC. Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 16412

Sample wt/vol: 30.02 (g/ml) G Lab File ID:

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

% Moisture: not dec. 32.7 dec. Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/16/90

GPC Cleanup: (Y/N) Y pH: 6.4 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	120	U
319-85-7	beta-BHC	120	U
319-86-8	delta-BHC	120	U
58-89-9	gamma-BHC (Lindane)	120	U
76-44-8	Heptachlor	120	U
309-00-2	Aldrin	120	U
1024-57-3	Heptachlor Epoxide	120	U
959-98-8	Endosulfan I	120	U
60-57-1	Dieldrin	240	U
72-55-9	4,4'-DDE	240	U
72-20-8	Endrin	240	U
33213-65-9	Endosulfan II	240	U
72-54-8	4,4'-DDD	240	U
1031-07-8	Endosulfan Sulfate	240	U
50-29-3	4,4'-DDT	240	U
72-43-5	Methoxychlor	1200	U
53494-70-5	Endrin Ketone	240	U
5103-71-9	alpha-Chlordane	240	U
5103-74-2	gamma-Chlordane	240	U
8001-35-2	Toxaphene	2400	U
12674-11-2	Aroclor-1016	1200	U
11104-28-2	Aroclor-1221	1200	U
11141-16-5	Aroclor-1232	1200	U
53469-21-9	Aroclor-1242	1200	U
12672-29-6	Aroclor-1248	1200	U
11097-69-1	Aroclor-1254	2400	U
11096-82-5	Aroclor-1260	2400	U

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5/17/90

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2

Lab Versar INC.____VERSAR, INC.___ Contract:_

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

Matrix: (soil/water)SOIL Lab Sample ID: ___16413

Sample wt/vol: 30.08 (g/ml) G Lab File ID: ____

Level: (low/med) LOW Date Received: ___04/19/90

% Moisture: not dec. 30.2 dec._____ Date Extracted:___04/26/90

Extraction: (SepF/Cont/Sonc) ____SONC Date Analyzed: ___05/17/90

GPC Cleanup: (Y/N)Y pH:____8.1 Dilution Factor: _1.0

2288.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)_UG/KG	Q
319-84-6	alpha-BHC	11	U
319-85-7	beta-BHC	11	U
319-86-8	delta-BHC	11	U
58-89-9	gamma-BHC (Lindane)	11	U
76-44-8	Heptachlor	11	U
309-00-2	Aldrin	11	U
1024-57-3	Heptachlor Epoxide	11	U
959-98-8	Endosulfan I	11	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	110	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	110	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3

Lab Versar INC.____VERSAR, INC.___ Contract:_

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

Matrix: (soil/water)SOIL Lab Sample ID: ___16414

Sample wt/vol: 30.73 (g/ml) G Lab File ID: ____

Level: (low/med) LOW Date Received: ___04/19/90

% Moisture: not dec. 24.4 dec._____ Date Extracted:___04/26/90

Extraction: (SepF/Cont/Sonc) ____SONC Date Analyzed: ___05/17/90

GPC Cleanup: (Y/N)Y pH:____8.2 Dilution Factor: _1.0

2067.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)_UG/KG	Q
319-84-6	alpha-BHC	10	U
319-85-7	beta-BHC	10	U
319-86-8	delta-BHC	10	U
58-89-9	gamma-BHC (Lindane)	10	U
76-44-8	Heptachlor	10	U
309-00-2	Aldrin	10	U
1024-57-3	Heptachlor Epoxide	10	U
959-98-8	Endosulfan I	10	U
60-57-1	Dieldrin	21	U
72-55-9	4,4'-DDE	21	U
72-20-8	Endrin	21	U
33213-65-9	Endosulfan II	21	U
72-54-8	4,4'-DDD	21	U
1031-07-8	Endosulfan Sulfate	21	U
50-29-3	4,4'-DDT	21	U
72-43-5	Methoxychlor	100	U
53494-70-5	Endrin Ketone	21	U
5103-71-9	alpha-Chlordane	21	U
5103-74-2	gamma-Chlordane	21	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	100	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

7

Lab ____VERSAR, INC.___ Contract:_

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

Matrix: (soil/water)SOIL Lab Sample ID: ___16424

Sample wt/vol: 30.29 (g/ml) G Lab File ID: ____

Level: (low/med) LOW Date Received: ___04/19/90

% Moisture: not dec. 4.7 dec._____ Date Extracted:___04/26/90

Extraction: (SepF/Cont/Sonc) ____SONC Date Analyzed: ___05/17/90

GPC Cleanup: (Y/N)Y pH:____8.0 Dilution Factor: _1.0

1664.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)_UG/KG	Q
319-84-6	alpha-BHC	8.3	U
319-85-7	beta-BHC	8.3	U
319-86-8	delta-BHC	8.3	U
58-89-9	gamma-BHC (Lindane)	8.3	U
76-44-8	Heptachlor	8.3	U
309-00-2	Aldrin	8.3	U
1024-57-3	Heptachlor Epoxide	8.3	U
959-98-8	Endosulfan I	8.3	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	83	U
53494-70-5	Endrin Ketone	17	U
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	83	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	83	U
53469-21-9	Aroclor-1242	83	U
12672-29-6	Aroclor-1248	83	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GPC BLK

Lab ____VERSAR, INC.___ Contract:_

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

Matrix: (soil/water)SOIL Lab Sample ID: ___GPC BLK

Sample wt/vol: 30.00 (g/ml) G Lab File ID: ____

Level: (low/med) LOW Date Received: ___04/19/90

% Moisture: not dec. 0.0 dec._____ Date Extracted:___04/26/90

Extraction: (SepF/Cont/Sonc) ____SONC Date Analyzed: ___05/16/90

GPC Cleanup: (Y/N)Y pH:____ Dilution Factor: _1.0

1601.

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.

5

Lab Name: VERSAR, INC. Contract: _

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

Matrix: (soil/water) SOIL Lab Sample ID: 16415

Sample wt/vol: 1 (g/ml) G Lab File ID: ____

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

% Moisture: not dec. 50 dec. _____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/03/90

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: _ 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	99	U
319-85-7	beta-BHC	99	U
319-86-8	delta-BHC	99	U
58-89-9	gamma-BHC (Lindane)	99	U
76-44-8	Heptachlor	99	U
309-00-2	Aldrin	99	U
1024-57-3	Heptachlor Epoxide	99	U
959-98-8	Endosulfan I	99	U
60-57-1	Dieldrin	200	U
72-55-9	4,4'-DDE	200	U
72-20-8	Endrin	200	U
33213-65-9	Endosulfan II	200	U
72-54-8	4,4'-DDD	200	U
1031-07-8	Endosulfan Sulfate	200	U
50-29-3	4,4'-DDT	200	U
72-43-5	Methoxychlor	990	U
53494-70-5	Endrin Ketone	200	U
5103-71-9	alpha-Chlordane	200	U
5103-74-2	gamma-Chlordane	200	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	990	U
11104-28-2	Aroclor-1221	990	U
11141-16-5	Aroclor-1232	990	U
53469-21-9	Aroclor-1242	990	U
12672-29-6	Aroclor-1248	990	U
11097-69-1	Aroclor-1254	2000	U
11096-82-5	Aroclor-1260	2000	U

KC 5-8-90

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6

Lab Name: VERSAR, INC. Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 16416

Sample wt/vol: 1 (g/ml) G Lab File ID:

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

% Moisture: not dec. 51 dec. Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/03/90

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	120	U
319-85-7	beta-BHC	120	U
319-86-8	delta-BHC	120	U
58-89-9	gamma-BHC (Lindane)	120	U
76-44-8	Heptachlor	120	U
309-00-2	Aldrin	120	U
1024-57-3	Heptachlor Epoxide	120	U
959-98-8	Endosulfan I	120	U
60-57-1	Dieldrin	240	U
72-55-9	4,4'-DDE	240	U
72-20-8	Endrin	240	U
33213-65-9	Endosulfan II	240	U
72-54-8	4,4'-DDD	240	U
1031-07-8	Endosulfan Sulfate	240	U
50-29-3	4,4'-DDT	240	U
72-43-5	Methoxychlor	1200	U
53494-70-5	Endrin Ketone	240	U
5103-71-9	alpha-Chlordane	240	U
5103-74-2	gamma-Chlordane	240	U
8001-35-2	Toxaphene	2400	U
12674-11-2	Aroclor-1016	1200	U
11104-28-2	Aroclor-1221	1200	U
11141-16-5	Aroclor-1232	1200	U
53469-21-9	Aroclor-1242	1200	U
12672-29-6	Aroclor-1248	1200	U
11097-69-1	Aroclor-1254	2400	U
11096-82-5	Aroclor-1260	2400	U

KC 5-8-90

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK66

Lab Versar INC. VERSAR, INC. Contract:

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

Matrix: (soil/water)SOIL Lab Sample ID: RB7966

Sample wt/vol: 30.00 (g/ml) G Lab File ID:

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

% Moisture: not dec. 0.0 dec. Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/16/90

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

1601.3

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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK81

Lab Name: VERSAR, INC. Contract: _

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

Matrix: (soil/water) SOIL Lab Sample ID: RB7981

Sample wt/vol: 1 (g/ml) G Lab File ID: ____

Level: (low/med) MED Date Received: 4/19/90

% Moisture: not dec. 0 dec. _____ Date Extracted: 04/29/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/03/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: _ 1

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

KC 5-8

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1MSDL

Lab Name: VERSAR, INC. Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 16412MS

Sample wt/vol: 30.08 (g/ml) G Lab File ID:

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

% Moisture: not dec. 32.7 dec. Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 6.4 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	120	U
319-85-7	beta-BHC	120	U
319-86-8	delta-BHC	120	U
58-89-9	gamma-BHC (Lindane)	120	U
76-44-8	Heptachlor	120	U
309-00-2	Aldrin	120	U
1024-57-3	Heptachlor Epoxide	120	U
959-98-8	Endosulfan I	120	U
60-57-1	Dieldrin	240	U
72-55-9	4,4'-DDE	240	U
72-20-8	Endrin	240	U
33213-65-9	Endosulfan II	240	U
72-54-8	4,4'-DDD	240	U
1031-07-8	Endosulfan Sulfate	240	U
50-29-3	4,4'-DDT	240	U
72-43-5	Methoxychlor	1200	U
53494-70-5	Endrin Ketone	240	U
5103-71-9	alpha-Chlordane	240	U
5103-74-2	gamma-Chlordane	240	U
8001-35-2	Toxaphene	2400	U
12674-11-2	Aroclor-1016	1200	U
11104-28-2	Aroclor-1221	1200	U
11141-16-5	Aroclor-1232	1200	U
53469-21-9	Aroclor-1242	1200	U
12672-29-6	Aroclor-1248	1200	U
11097-69-1	Aroclor-1254	2400	U
11096-82-5	Aroclor-1260	2400	U

5/17/90

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1MSDDL

Lab Name: VERSAR, INC. Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 16412MSD

Sample wt/vol: 30.08 (g/ml) G Lab File ID:

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

% Moisture: not dec. 32.7 dec. Date Extracted: 04/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/17/90

GPC Cleanup: (Y/N) Y pH: 6.4 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	120	U
319-85-7	beta-BHC	120	U
319-86-8	delta-BHC	120	U
58-89-9	gamma-BHC (Lindane)	120	U
76-44-8	Heptachlor	120	U
309-00-2	Aldrin	120	U
1024-57-3	Heptachlor Epoxide	120	U
959-98-8	Endosulfan I	120	U
60-57-1	Dieldrin	240	U
72-55-9	4,4'-DDE	240	U
72-20-8	Endrin	240	U
33213-65-9	Endosulfan II	240	U
72-54-8	4,4'-DDD	240	U
1031-07-8	Endosulfan Sulfate	240	U
50-29-3	4,4'-DDT	240	U
72-43-5	Methoxychlor	1200	U
53494-70-5	Endrin Ketone	240	U
5103-71-9	alpha-Chlordane	240	U
5103-74-2	gamma-Chlordane	240	U
8001-35-2	Toxaphene	2400	U
12674-11-2	Aroclor-1016	1200	U
11104-28-2	Aroclor-1221	1200	U
11141-16-5	Aroclor-1232	1200	U
53469-21-9	Aroclor-1242	1200	U
12672-29-6	Aroclor-1248	1200	U
11097-69-1	Aroclor-1254	2400	U
11096-82-5	Aroclor-1260	2400	U

ga
5/17/90

Versar INC.

ORIGINAL
(Red)

PESTICIDE ANALYSIS - TCLP
DATA SUMMARY PACKAGE

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

Versar INC.

Original (Red)

I. NARRATIVE

II. QC SUMMARY

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.

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 (Pad)

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	EXTBLANK2	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 Rev

100095

5/14/90

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: RB8049 Lab File ID: _____

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

Date Extracted: 05-08-90 Extraction: (SepF/~~Cont/Sonc~~) WRIST SHAKER 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~~	[illegible]
04	~~1MS~~	~~16418MS~~	~~05-11-90~~	5/22/90
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 Re

100006

ga
5/14/90

Versar INC.

ORIGINAL
(Red)

III. SAMPLE DATA PACKAGE

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

11

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

PESTICIDE SAMPLE TABLE

EPA SAMPLE NUMBER

11

VERSAR# 16960

MATRIX IS: WATER

Lab Name: VERSAR, INC.

Lab Code: VERSAR

Instrument ID: A

Run Date: 05/11/90

Inject Vol 2.00 (uL)

Case No.: VERSCOM R3-7

Contract:

SAS No.:

GC Column ID: SP2250/SP2401

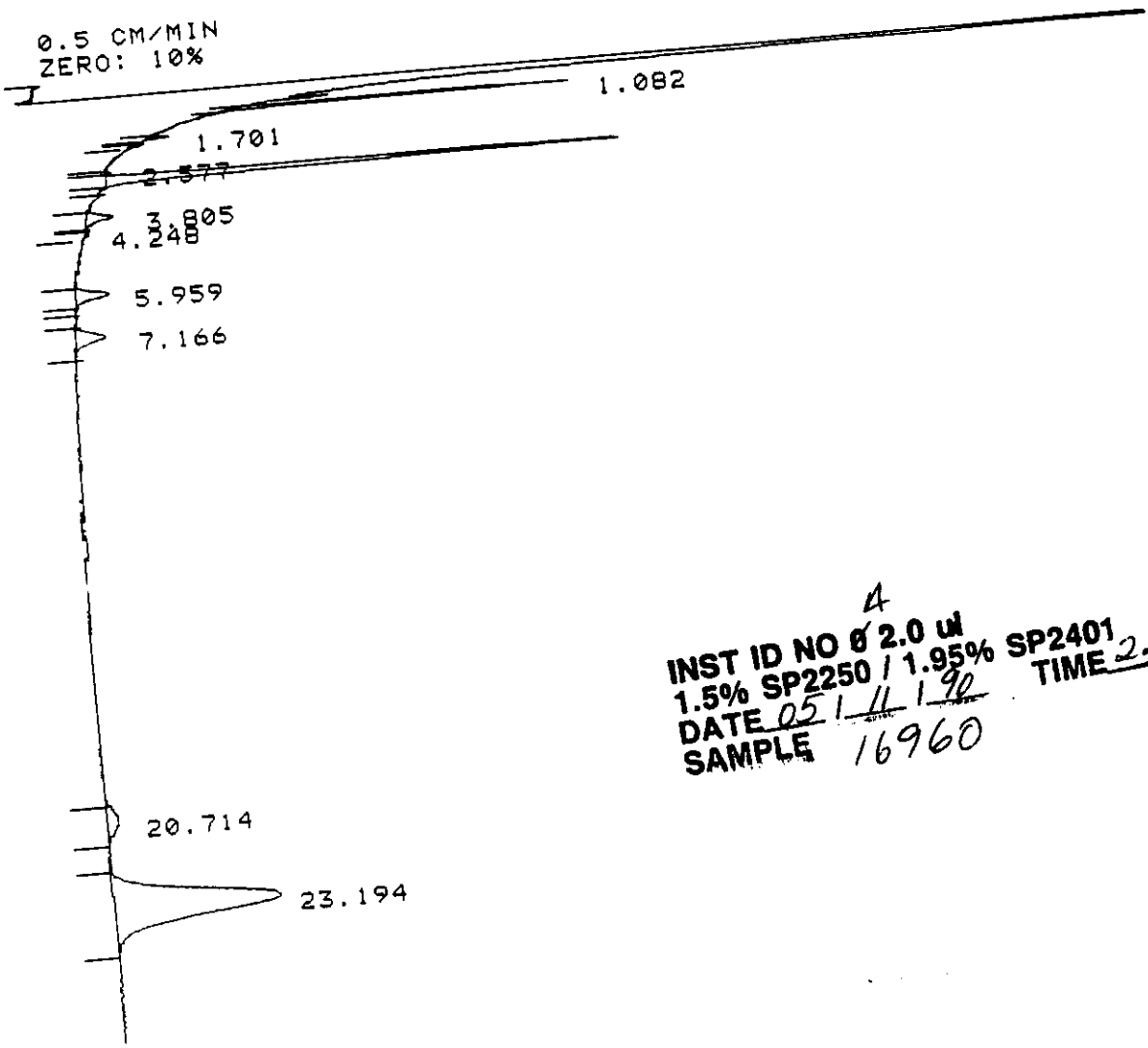
Window Width: 1.0%

COMPOUND	RT WINDOW FROM	RT WINDOW TO	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L)	DETECTION LIMIT (ug/L)	
alpha-BHC	2.03	2.07	0.00	0	992722	0.000	2.00	0.000	500.00	0.00	2.50	
beta-BHC	2.82	2.88	0.00	0	297343	0.000	2.00	0.000	500.00	0.00	2.50	
delta-BHC	3.29	3.35	0.00	0	917492	0.000	2.00	0.000	500.00	0.00	2.50	
gamma-BHC	2.49	2.55	0.00	0	814856	0.000	2.00	0.000	500.00	0.00	2.50	
Heptachlor	3.05	3.11	0.00	0	863854	0.000	2.00	0.000	500.00	0.00	2.50	
Aldrin	3.62	3.70	0.00	0	800269	0.000	2.00	0.000	500.00	0.00	2.50	
Hept. epoxide	5.27	5.37	0.00	0	769525	0.000	2.00	0.000	500.00	0.00	2.50	
Endosulfan I	6.57	6.71	0.00	0	718902	0.000	2.00	0.000	500.00	0.00	2.50	
Dieldrin	7.97	8.13	0.00	0	790896	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDE	7.50	7.66	0.00	0	698639	0.000	2.00	0.000	500.00	0.00	5.00	
Endrin	9.73	9.93	0.00	0	523658	0.000	2.00	0.000	500.00	0.00	5.00	
Endosulfan II	11.57	11.81	0.00	0	713173	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDD	11.26	11.48	0.00	0	572143	0.000	2.00	0.000	500.00	0.00	5.00	
Endo.sulfate	17.82	18.18	0.00	0	514163	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'DDT	13.39	13.67	0.00	0	504926	0.000	2.00	0.000	500.00	0.00	5.00	
Methoxychlor	25.17	25.67	0.00	0	261003	0.000	2.00	0.000	500.00	0.00	25.00	
Endrin ketone	24.26	24.76	0.00	0	723623	0.000	2.00	0.000	500.00	0.00	5.00	
a. Chlordane	6.40	6.52	0.00	0	741797	0.000	2.00	0.000	500.00	0.00	5.00	
g. Chlordane	5.88	6.00	5.96	6736	768348	0.009	2.00	0.004	500.00	2.19	5.00	BDL
Toxaphene	14.36	14.65	0.00	0	282124	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1016	2.75	2.81	0.00	0	64752	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1221	1.57	1.61	0.00	0	18596	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1232	2.39	2.43	0.00	0	30823	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1242	3.74	3.82	0.00	0	51936	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1248	5.17	5.27	0.00	0	107949	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1254	7.77	7.93	0.00	0	151284	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1260	11.91	12.15	0.00	0	271936	0.000	2.00	0.000	500.00	0.00	50.00	
DBC	22.59	23.05	*23.19	112385	674216	0.167	2.00	0.083	500.00	41.67	5.00	HIT

14-May-90

ORIGINAL

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ 4 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 2206
SAMPLE 16960

TITLE: CLP PESTICIDES 22:06 11 MAY 90

CHANNEL NO: 3 SAMPLE: 16960 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		11385	1.082		11385	BB	2.40
2		962	1.701		962	BB	2.80
3		45604	2.772		45604	VB	6.20
4		3867	3.805		3867	BB	9.45
5		530	4.248		530	BB	6.50
6	G-CHLORDAN	6736	5.959	-0.001	6736	BB	13.20
7		7673	7.166		7673	BB	17.30
8		5917	20.714		5917	BB	? 36.10
9	DBC	112385	23.194	0.314	112385	BB	47.20
TOTALS:		195059		0.313	195059		

DETECTED PKS: 11 REJECTED PKS: 2

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 36.4 OFFSET: -20

[illegible]: 3 VIAL: 8 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
VERSELDE 2561 WATER CLP CONF
VERSCDM 2536,2565 WATER M608 QUANT

varian sunnyvale, calif. 13 906362.00

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXTBLANK1

Lab Name: VERSAR, INC. Contract: _

Lab Code: 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

PESTICIDE SAMPLE TABLE

RB-7

EPA SAMPLE NUMBER

EXTBLANK1

Lab Name: VERSAR, INC.

Case No.: ~~VERSGDM-2526,2565~~

Lab Code: VERSAR

Contract:

Instrument ID: A

SAS No.:

Run Date: 05/11/90

GC Column ID: SP2250/SP2401

MATRIX IS: WATER

Inject Vol 2.00 (uL)

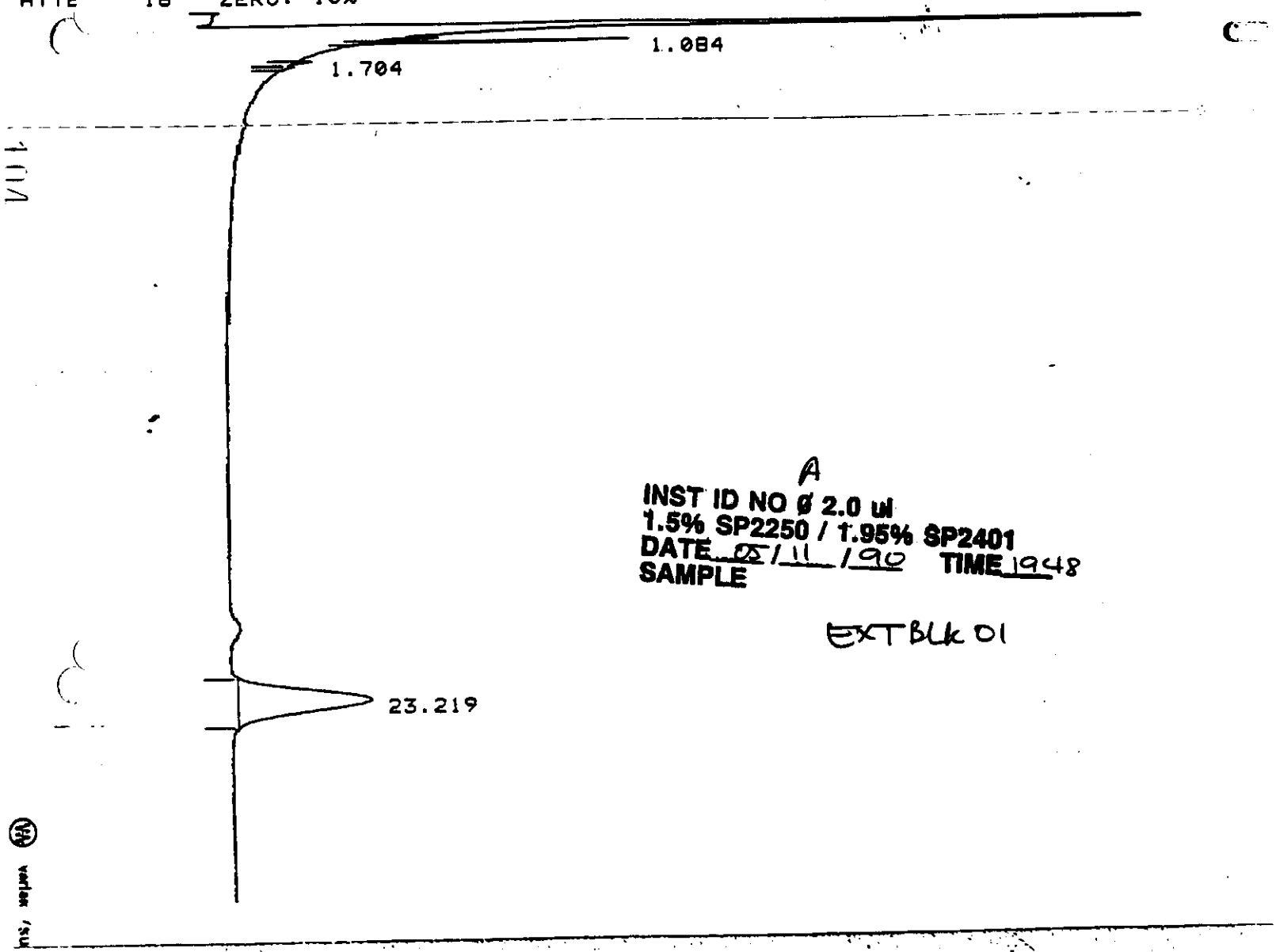
Window Width: 1.0%

COMPOUND	RT WINDOW FROM	RT WINDOW TO	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L)	DETECTION LIMIT (ug/L)	
alpha-BHC	2.03	2.07	0.00	0	992722	0.000	2.00	0.000	500.00	0.00	2.50	
beta-BHC	2.82	2.88	0.00	0	297343	0.000	2.00	0.000	500.00	0.00	2.50	
delta-BHC	3.29	3.35	0.00	0	917492	0.000	2.00	0.000	500.00	0.00	2.50	
gamma-BHC	2.49	2.55	0.00	0	814856	0.000	2.00	0.000	500.00	0.00	2.50	
Heptachlor	3.05	3.11	0.00	0	863854	0.000	2.00	0.000	500.00	0.00	2.50	
Aldrin	3.62	3.70	0.00	0	800269	0.000	2.00	0.000	500.00	0.00	2.50	
Hept. epoxide	5.27	5.37	0.00	0	769525	0.000	2.00	0.000	500.00	0.00	2.50	
Endosulfan I	6.57	6.71	0.00	0	718902	0.000	2.00	0.000	500.00	0.00	2.50	
Dieldrin	7.97	8.13	0.00	0	790896	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDE	7.50	7.66	0.00	0	698639	0.000	2.00	0.000	500.00	0.00	5.00	
Endrin	9.73	9.93	0.00	0	523658	0.000	2.00	0.000	500.00	0.00	5.00	
Endosulfan II	11.57	11.81	0.00	0	713173	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDD	11.26	11.48	0.00	0	572143	0.000	2.00	0.000	500.00	0.00	5.00	
Endo. sulfate	17.82	18.18	0.00	0	514163	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'DDT	13.39	13.67	0.00	0	504926	0.000	2.00	0.000	500.00	0.00	5.00	
Methoxychlor	25.17	25.67	0.00	0	261003	0.000	2.00	0.000	500.00	0.00	25.00	
Endrin ketone	24.26	24.76	0.00	0	723623	0.000	2.00	0.000	500.00	0.00	5.00	
a. Chlordane	6.40	6.52	0.00	0	741797	0.000	2.00	0.000	500.00	0.00	5.00	
g. Chlordane	5.88	6.00	0.00	0	768348	0.000	2.00	0.000	500.00	0.00	5.00	
Toxaphene	14.36	14.65	0.00	0	282124	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1016	2.75	2.81	0.00	0	64752	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1221	1.57	1.61	0.00	0	18596	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1232	2.39	2.43	0.00	0	30823	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1242	3.74	3.82	0.00	0	51936	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1248	5.17	5.27	0.00	0	107949	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1254	7.77	7.93	0.00	0	151284	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1260	11.91	12.15	0.00	0	271936	0.000	2.00	0.000	500.00	0.00	50.00	
DBC	22.59	23.05	*23.22	101106	674216	0.150	2.00	0.075	500.00	37.49	5.00	HIT

11-May-90

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTE'' 16 ZERO: 10%



A
INST ID NO Ø 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 1948
SAMPLE

EXT BLK 01

ORIGINAL
(Red)

TI: CLP PESTICIDES 19:48 11 MAY 90

CHANNEL NO: 3 SAMPLE: EXTBLK 01 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		10564	1.084		10564	BB	2.35
2		870	1.704		870	BB	2.80
3	DBC	101106	23.219	0.339	101106	BB	? 58.65
TOTALS:		112540		0.339	112540		

DETECTED PKS: 4 REJECTED PKS: 1

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 43.7 OFFSET: -23

R : 3 VIAL: 4 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

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

ORIGINAL (Red)

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

ORIGINAL (Red)

PESTICIDE SAMPLE TABLE

EPA SAMPLE NUMBER

EXTBLANK2

MATRIX IS: WATER

Lab Name: VERSAR, INC.

Lab Code: VERSAR

Instrument ID: A

Run Date: 05/11/90

Inject Vol 2.00 (uL)

Case No.: VERSCBM- R3-7

Contract:

SAS No.:

GC Column ID: SP2250/SP2401

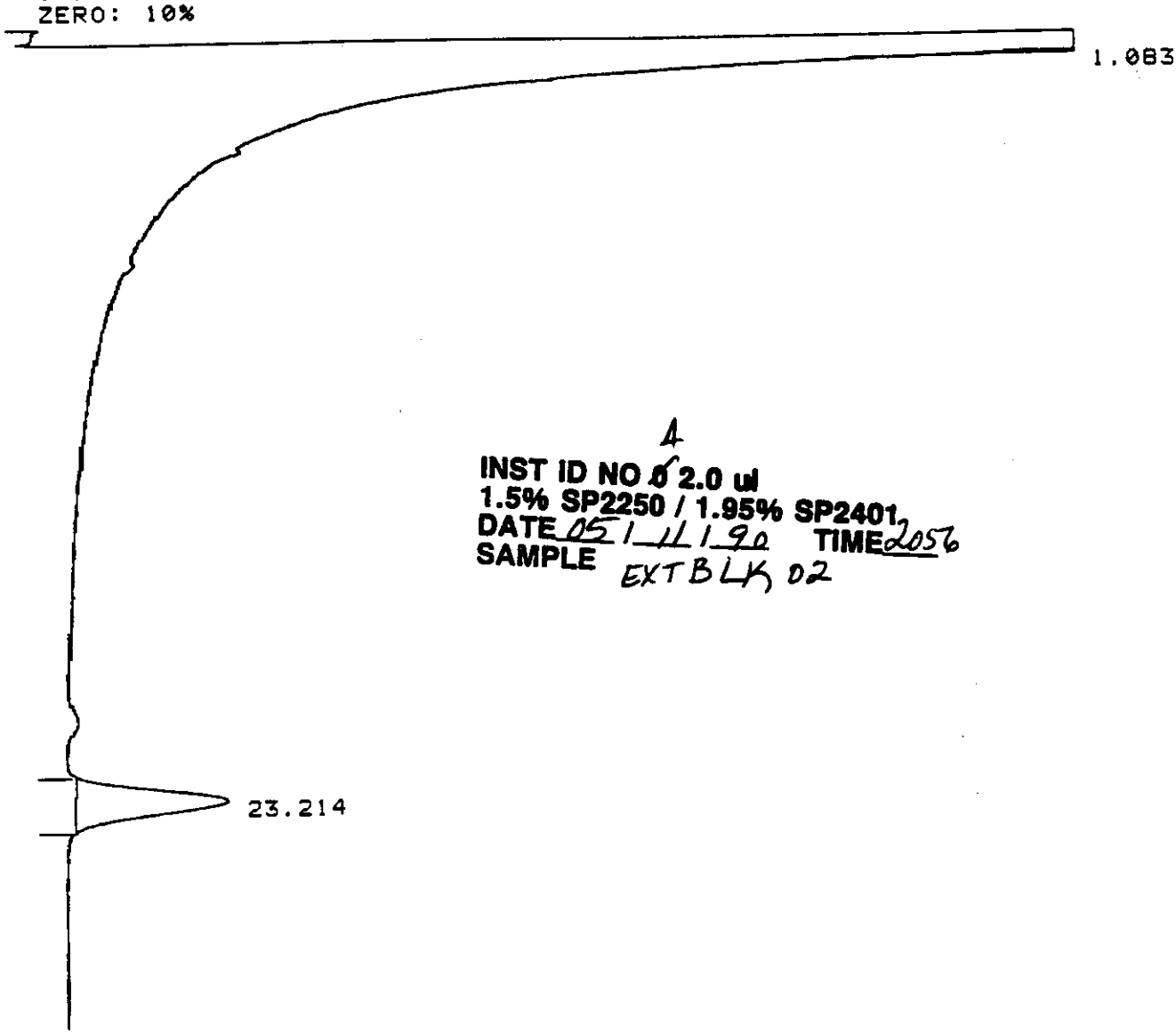
Window Width: 1.0%

COMPOUND	RT WINDOW FROM	RT WINDOW TO	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L)	DETECTION LIMIT (ug/L)	
alpha-BHC	2.03	2.07	0.00	0	992722	0.000	2.00	0.000	500.00	0.00	2.50	
beta-BHC	2.82	2.88	0.00	0	297343	0.000	2.00	0.000	500.00	0.00	2.50	
delta-BHC	3.29	3.35	0.00	0	917492	0.000	2.00	0.000	500.00	0.00	2.50	
gamma-BHC	2.49	2.55	0.00	0	814856	0.000	2.00	0.000	500.00	0.00	2.50	
Heptachlor	3.05	3.11	0.00	0	863854	0.000	2.00	0.000	500.00	0.00	2.50	
Aldrin	3.62	3.70	0.00	0	800269	0.000	2.00	0.000	500.00	0.00	2.50	
Hept. epoxide	5.27	5.37	0.00	0	769525	0.000	2.00	0.000	500.00	0.00	2.50	
Endosulfan I	6.57	6.71	0.00	0	718902	0.000	2.00	0.000	500.00	0.00	2.50	
Dieldrin	7.97	8.13	0.00	0	790896	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDE	7.50	7.66	0.00	0	698639	0.000	2.00	0.000	500.00	0.00	5.00	
Endrin	9.73	9.93	0.00	0	523658	0.000	2.00	0.000	500.00	0.00	5.00	
Endosulfan II	11.57	11.81	0.00	0	713173	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDD	11.26	11.48	0.00	0	572143	0.000	2.00	0.000	500.00	0.00	5.00	
Endo.sulfate	17.82	18.18	0.00	0	514163	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'DDT	13.39	13.67	0.00	0	504926	0.000	2.00	0.000	500.00	0.00	5.00	
Methoxychlor	25.17	25.67	0.00	0	261003	0.000	2.00	0.000	500.00	0.00	25.00	
Endrin ketone	24.26	24.76	0.00	0	723623	0.000	2.00	0.000	500.00	0.00	5.00	
a. Chlordane	6.40	6.52	0.00	0	741797	0.000	2.00	0.000	500.00	0.00	5.00	
g. Chlordane	5.88	6.00	0.00	0	768348	0.000	2.00	0.000	500.00	0.00	5.00	
Toxaphene	14.36	14.65	0.00	0	282124	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1016	2.75	2.81	0.00	0	64752	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1221	1.57	1.61	0.00	0	18596	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1232	2.39	2.43	0.00	0	30823	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1242	3.74	3.82	0.00	0	51936	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1248	5.17	5.27	0.00	0	107949	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1254	7.77	7.93	0.00	0	151284	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1260	11.91	12.15	0.00	0	271936	0.000	2.00	0.000	500.00	0.00	50.00	
DBC	22.59	23.05	*23.21	101130	674216	0.150	2.00	0.075	500.00	37.50	5.00	HIT

SPH
14-May-90

ORIGINAL
(Red)

CH 1 SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO 4 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 2056
SAMPLE EXT BLK 02

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

TITLE: CLP PESTICIDES 20:56 11 MAY 90

C EL NO: 3 SAMPLE: EXTBLK 02 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		11795	1.083		11795	BB	2.10
2	DBC	101130	23.214	0.334	101130	BB	?130.50
TOTALS:		112925		0.334	112925		

DETECTED PKS: 2 REJECTED PKS: 0

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 43.7 OFFSET: 12

RACK: 3 VIAL: 5 INJ: 1

NOTES:
^OL: ?1.5% SP2250/1.95% SP2401
IT INJ.2UL/INSTRUMENT LETTER A
ORT• OUTSIDE RETENTION TIME WINDOW
VERSELDE 2561 WATER CLP CONF
VERSCDM 2536,2565 WATER M608 QUANT

Versar INC.

IV. STANDARDS DATA

8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: VERSAR Contract: _____

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

Instrument ID: A GC Column ID: SP2250/SP2401

Dates of Analyses: 05/11/90 to 05/12/90

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
ALDRIN	759310	759310	759310	0.0	
ENDRIN	505670	505670	505670	0.0	(1)
4,4'-DDT	485890	485890	485890	0.0	
DBC	626270	626270	626270	0.0	

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

		DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)	
	INITIAL						
01	EVAL MIX B	05/11/90	0202	0.0	0.0		
02	EVAL MIX B	05/11/90	2133	0.0	3.3		LEB 5/21/90
03	EVAL MIX B						
04	EVAL MIX B						
05	EVAL MIX B						
06	EVAL MIX B						
07	EVAL MIX B						
08	EVAL MIX B						
09	EVAL MIX B						
10	EVAL MIX B						
11	EVAL MIX B						
12	EVAL MIX B						
13	EVAL MIX B						
14	EVAL MIX B						

(2) See Form instructions.

8E
PESTICIDE EVALUATION STANDARDS SUMMARY

ORIGINAL (Red)

Lab Name: VERSAR Contract: _____

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

Instrument ID: A GC Column ID: SP2250/SP2401

Dates of Analyses: 05/11/90 to 05/12/90

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	B789	05/11/90	0202	0.000	
02	EVALB	B789	05/11/90	0202	0.000	
03	EVALC	B789	05/11/90	0202	0.000	
04	INDA	B989	05/11/90	0236	0.101	
05	INDA	B990	05/11/90	0310	0.232	
06	INDA	B991	05/11/90	0343	0.315	
07	INDA	B992	05/11/90	0417	0.206	
08	INDA	B993	05/11/90	0451	0.096	
09	INDB	B994	05/11/90	0524	0.280	
10	INDB	B995	05/11/90	0558	0.481	
11	INDB	B996	05/11/90	0632	0.809	
12	INDB	B997	05/11/90	0714	1.041	
13	INDB	B998	05/11/90	0748	1.072	
14	TCHL	A910	05/11/90	1239	1.509	
15	TOXAPH	B767	05/11/90	1312	1.553	
16	AR1660	B699	05/11/90	1348	1.544	
17	AR1221	A321	05/11/90	1435	1.636	
18	AR1232	B684	05/11/90	1509	1.641	
19	AR1242	B762	05/11/90	1543	1.601	
20	AR1248	B948	05/11/90	1616	1.584	
21	AR1254	B761	05/11/90	1727	1.671	
22	ZZZZZ	ZZZZZ	05/11/90	1801	1.658	
23	ZZZZZ	ZZZZZ	05/11/90	1837	1.514	
24	PBLK49	RB8049	05/11/90	1911	1.553	
25	EXTBLK01	EXTBLK01	05/11/90	1948	1.584	
26	EXTBLK02	EXTBLK02	05/11/90	2056	1.562	
27	EVALB	B789	05/11/90	2133	1.488	
28	11	16960	05/11/90	2206	1.474	
29	1	16418	05/11/90	2240	1.431	
30	1MS	16418MS	05/11/90	2314	1.282	
31	1MSD	16418MSD	05/11/90	2348	1.089	
32	INDA	B991	05/12/90	0056	1.072	
33	INDB	B996	05/12/90	0129	1.033	
34						
35						
36						
37						
38						

* Values outside of QC limits (2.0% for packed columns, 0.3% for capillary columns)

100022

FORM VIII PEST-2

	EPA SAMPLE NO.	ALDRIN AREA	ENDRIN AREA	ENDRIN A AREA	ENDRIN K AREA	DDT AREA	DDE AREA	DDD AREA	DBC RT	DBC AREA	CONC (ug/ml)
01	EVALA	75931	50567	0	0	48589	0	0	22.857	62627	0.05
02	EVALB	75931	50567	0	0	48589	0	0	22.857	62627	0.05
03	EVALC	75931	50567	0	0	48589	0	0	22.857	62627	0.05
04	INDA								22.834		
05	INDA								22.804		
06	INDA								22.785		
07	INDA								22.81		
08	INDA								22.879		
09	INDB								22.921		
10	INDB								22.967		
11	INDB								23.042		
12	INDB								23.095		
13	INDB								23.102		
14	TCHL								23.202		
15	TOXAPH								23.212		
16	AR1660								23.21		
17	AR1221								23.231		
18	AR1232								23.232		
19	AR1242								23.223		
20	AR1248								23.219		
21	AR1254								23.239		
22	ZZZZZ								23.236		
23	ZZZZZ								23.203		
24	PBLK49								23.212		
25	EXTBLK01								23.219		
26	EXTBLK02								23.214		
27	EVALB	79363	49646	0	0	51377	0	1726	23.197	66506	0.05
28	11								23.194		
29	1								23.184		
30	1MS								23.15		
31	1MSD								23.106		
32	INDA								23.102		
33	INDB								23.093		
34											
35											
36											
37											
38											

JPH 05 14-90

ORIGINAL (Red)

PESTICIDE/PCB STANDARDS ENTRY FORM

Lab Name:_____VERSAR, INC. Case No.:_____R3-7

Lab Code:_____VERSAR Contract:_____

Instrument ID:_____A SAS No.: _____

Run Date:_____05/11,12/90 GC Column ID: _____SP2250/SP2401

Inject Vol:___ 2.00 (uL) Window Width:_____1.0%

COMPOUND	CONC. IN STD (uG/ML)	WINDOW WIDTH	FIRST STD RT	FIRST STD RAW AREA	SECOND STD RT	SECOND STD RAW AREA	THIRD STD RT	THIRD STD RAW AREA
lpha-BHC	0.08	0.02	2.05	158836	0.00	0	2.05	159700
beta-BHC	0.08	0.03	2.85	47575	0.00	0	2.86	47672
delta-BHC	0.08	0.03	3.32	146799	0.00	0	3.33	146624
gamma-BHC	0.08	0.03	2.52	130377	2.55	133643	0.00	0
Heptachlor	0.08	0.03	3.08	138217	0.00	0	3.09	137849
Aldrin	0.08	0.04	3.66	128043	3.70	129953	0.00	0
Hept. epoxide	0.08	0.05	5.32	123124	5.38	124631	0.00	0
Endosulfan I	0.08	0.07	6.64	115024	6.72	115761	0.00	0
Dieldrin	0.08	0.08	8.05	126543	8.14	127502	0.00	0
4'-DDE	0.08	0.08	7.58	111782	0.00	0	7.61	112876
Endrin	0.08	0.10	9.83	83785	0.00	0	9.86	80742
Endosulfan II	0.08	0.12	11.69	114108	11.83	116043	0.00	0
4,4'-DDD	0.08	0.11	11.37	91543	0.00	0	11.41	92058
Endo. sulfate	0.08	0.18	18.00	82266	0.00	0	18.05	81186
4,4'DDT	0.08	0.14	13.53	80788	13.68	85068	0.00	0
Methoxychlor	0.08	0.25	25.42	41761	0.00	0	25.49	39982
Endrin ketone	0.08	0.25	24.51	115780	24.80	116801	0.00	0
. Chlordane	0.08	0.06	6.46	118687	0.00	0	6.48	119507
g. Chlordane	0.08	0.06	5.94	122936	0.00	0	5.96	122336
Toxaphene	2.50	0.15	14.50	1410620	0.00	0	0.00	0
Aroclor-1016	1.00	0.03	2.78	129504	0.00	0	0.00	0
Aroclor-1221	5.00	0.02	1.59	185960	0.00	0	0.00	0
Aroclor-1232	2.50	0.02	2.41	154115	0.00	0	0.00	0
Aroclor-1242	2.50	0.04	3.78	259680	0.00	0	0.00	0
Aroclor-1248	1.00	0.05	5.22	215898	0.00	0	0.00	0
Aroclor-1254	1.00	0.08	7.85	302568	0.00	0	0.00	0
Aroclor-1260	1.00	0.12	12.03	543872	0.00	0	0.00	0
DBC	0.10	0.23	22.82	134843	23.10	109519	23.09	110326

CAL FACTORS DETERMINED FROM SPT CURVE.
CEB
5/22/90

100024

14-May-90

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name:_____VERSAR, INC. Contract:_____

Lab Code: ____VERSAR Case No.:R3-7 SAS No.:___ SDG NO.: _4

Instrument ID:_____A GC Column ID: ___SP2250/SP2401

DATE(S) OF ANALYSIS	FROM:____05/11/90 TO:____05/11/90	DATE OF ANALYSIS _05/12/90
TIME(S) OF ANALYSIS	FROM:____0236 TO:____1727	TIME OF ANALYSIS _0056 EPA SAMPLE NO. B991 (STANDARD) ___INDA

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC	2.05	2.03	2.07	992722	0.00	0	Y	0
beta-BHC	2.85	2.82	2.88	297343	0.00	0	Y	0
delta-BHC	3.32	3.29	3.35	917492	0.00	0	Y	0
gamma-BHC	2.52	2.49	2.55	814856	2.55	835269	Y	-3
Heptachlor	3.08	3.05	3.11	863854	0.00	0	Y	0
Aldrin	3.66	3.62	3.70	800269	3.70	812206	Y	-1
Hept. epoxide	5.32	5.27	5.37	769525	5.38	778944	Y	-1
Endosulfan I	6.64	6.57	6.71	718902	6.72	723506	Y	-1
Dieldrin	8.05	7.97	8.13	790896	8.14	796888	Y	-1
4,4'-DDE	7.58	7.50	7.66	698639	0.00	0	Y	0
Endrin	9.83	9.73	9.93	523658	0.00	0	Y	0
Endosulfan II	11.69	11.57	11.81	713173	11.83	725269	Y	-2
4,4'-DDD	11.37	11.26	11.48	572143	0.00	0	Y	0
Endo.sulfate	18.00	17.82	18.18	514163	0.00	0	Y	0
4,4'DDT	13.53	13.39	13.67	504926	13.68	531675	Y	-5
Methoxychlor	25.42	25.17	25.67	261003	0.00	0	Y	0
Endrin ketone	24.51	24.26	24.76	723623	24.80	730006	Y	-1
a. Chlordane	6.46	6.40	6.52	741797	0.00	0	Y	0
g. Chlordane	5.94	5.88	6.00	768348	0.00	0	Y	0
Toxaphene	14.50	14.36	14.65	282124	0.00	0	Y	0
Aroclor-1016	2.78	2.75	2.81	64752	0.00	0	Y	0
Aroclor-1221	1.59	1.57	1.61	18596	0.00	0	Y	0
Aroclor-1232	2.41	2.39	2.43	30823	0.00	0	Y	0
Aroclor-1242	3.78	3.74	3.82	51936	0.00	0	Y	0
Aroclor-1248	5.22	5.17	5.27	107949	0.00	0	Y	0
Aroclor-1254	7.85	7.77	7.93	151284	0.00	0	Y	0
Aroclor-1260	12.03	11.91	12.15	271936	0.00	0	Y	0

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

page_2_of_2_

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name:_____VERSAR, INC. Contract:_____

Lab Code: ____VERSAR Case No.:R3-7 SAS No.:___ SDG NO.: _4

Instrument ID:_____A GC Column ID: ___SP2250/SP2401

DATE(S) OF ANALYSIS	FROM:____05/11/90	DATE OF ANALYSIS	_05/12/90
	TO:____05/11/90	TIME OF ANALYSIS	_0129
TIME(S) OF ANALYSIS	FROM:____0236	EPA SAMPLE NO.	B996
	TO:____1727	(STANDARD)	___INDB

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC	2.05	2.03	2.07	992722	2.05	998125	Y	-1
beta-BHC	2.85	2.82	2.88	297343	2.86	297950	Y	-0
delta-BHC	3.32	3.29	3.35	917492	3.33	916400	Y	0
gamma-BHC	2.52	2.49	2.55	814856	0.00	0	Y	0
Heptachlor	3.08	3.05	3.11	863854	3.09	861556	Y	0
Aldrin	3.66	3.62	3.70	800269	0.00	0	Y	0
Hept. epoxide	5.32	5.27	5.37	769525	0.00	0	Y	0
Endosulfan I	6.64	6.57	6.71	718902	0.00	0	Y	0
Dieldrin	8.05	7.97	8.13	790896	0.00	0	Y	0
4,4'-DDE	7.58	7.50	7.66	698639	7.61	705475	Y	-1
Endrin	9.83	9.73	9.93	523658	9.86	504638	Y	4
Endosulfan II	11.69	11.57	11.81	713173	0.00	0	Y	0
4,4'-DDD	11.37	11.26	11.48	572143	11.41	575363	Y	-1
Endo.sulfate	18.00	17.82	18.18	514163	18.05	507413	Y	1
4,4'DDT	13.53	13.39	13.67	504926	0.00	0	Y	0
Methoxychlor	25.42	25.17	25.67	261003	25.49	249888	Y	4
Endrin ketone	24.51	24.26	24.76	723623	0.00	0	Y	0
a. Chlordane	6.46	6.40	6.52	741797	6.48	746919	Y	-1
g. Chlordane	5.94	5.88	6.00	768348	5.96	764600	Y	0
Toxaphene	14.50	14.36	14.65	282124	0.00	0	Y	0
Aroclor-1016	2.78	2.75	2.81	64752	0.00	0	Y	0
Aroclor-1221	1.59	1.57	1.61	18596	0.00	0	Y	0
Aroclor-1232	2.41	2.39	2.43	30823	0.00	0	Y	0
Aroclor-1242	3.78	3.74	3.82	51936	0.00	0	Y	0
Aroclor-1248	5.22	5.17	5.27	107949	0.00	0	Y	0
Aroclor-1254	7.85	7.77	7.93	151284	0.00	0	Y	0
Aroclor-1260	12.03	11.91	12.15	271936	0.00	0	Y	0

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

PCB STANDARD TABLE

Lab Name: VERSAR, INC. Case No.: R3-7

Lab Code: VERSAR Contract:

Instrument ID: A SAS No.:

Run Date: 05/11,12/90 GC Column ID: SP2250/SP2401

Inject Vol: 2.00 (uL) Window Width: 1.0% PCBSTDA

MULTI-COMPONENT ANALYTE	STAND CONC (ug/ml)	PEAK #	BEGINNING STANDARD RT	BEGINNING STANDARD AREA	CAL. FACTOR	FINAL STANDARD RT	FINAL STANDARD AREA	CAL. FACTOR	%D RT	%D CAL FACTOR
	2.50	1	8.08	161719		X	0		100	
		2	12.09	287014		X	0		100	
Toxaphene		3	14.50	483072	282124	X	0	0	100	100
		4	16.42	171329		X	0		100	
		5	20.66	307485		X	0		100	
	1.00	1	2.85	66334		X	0		100	
		2	3.10	86309		X	0		100	
T Chl		3	4.20	51809	345583	X	0	0	100	100
		4	6.00	270891		X	0		100	
		5	6.50	215822		X	0		100	
	5.00	1	1.18	21803		X	0		100	
		2	1.42	5169		X	0		100	
Aroclor-1221		3	1.59	8981	18596	X	0	0	100	100
		4	1.71	33376		X	0		100	
		5	1.92	116631		X	0		100	
	2.50	1	1.71	9217		X	0		100	
		2	1.92	41347		X	0		100	
Aroclor-1232		3	2.41	27342	30823	X	0	0	100	100
		4	2.79	19486		X	0		100	
		5	3.06	56725		X	0		100	
	1.00	1	X	0		X	0		0	
		2	X	0		X	0		0	
		3	X	0	0	X	0	0	0	0
		4	X	0		X	0		0	
		5	X	0		X	0		0	

PCB STANDARD TABLE

Lab Name: VERSAR, INC. Case No.: R3-7

Lab Code: VERSAR Contract:

Instrument ID: A SAS No.:

Run Date: 05/11,12/90 GC Column ID: SP2250/SP2401

Inject Vol: 2.00 (uL) Window Width: 1.0% PCBSTDB

MULTI-COMPONENT ANALYTE	STAND CONC (ug/ml)	PEAK #	BEGINNING STANDARD RT	BEGINNING STANDARD AREA	CAL. FACTOR	FINAL STANDARD RT	FINAL STANDARD AREA	CAL. FACTOR	%D RT	%D CAL FACTOR
	1.00	1	1.92	13947		X	0		100	
		2	2.41	20783		X	0		100	
Aroclor-1016		3	2.78	18215	64752	X	0	0	100	100
		4	3.05	54119		X	0		100	
		5	3.32	22440		X	0		100	
	2.50	1	3.33	51070		X	0		100	
		2	3.55	39031		X	0		100	
Aroclor-1242		3	3.78	65025	51936	X	0	0	100	100
		4	4.44	54965		X	0		100	
		5	4.75	49588		X	0		100	
	1.00	1	3.78	38831		X	0		100	
		2	4.44	27294		X	0		100	
Aroclor-1248		3	5.22	23920	107949	X	0	0	100	100
		4	5.51	70958		X	0		100	
		5	6.46	54894		X	0		100	
	1.00	1	6.25	69819		X	0		100	
		2	7.55	12912		X	0		100	
Aroclor-1254		3	7.85	38017	151284	X	0	0	100	100
		4	8.43	70229		X	0		100	
		5	9.54	111591		X	0		100	
	1.00	1	9.51	62102		X	0		100	
		2	10.66	137634		X	0		100	
Aroclor-1260		3	12.03	79333	271936	X	0	0	100	100
		4	13.56	150083		X	0		100	
		5	14.48	114720		X	0		100	

100028

14-May-90

CURVE #_____1 INSTRUMENT ID _____A

CASE # _____R3-7 COLUMN _____SP2250/SP2401

ANALYSIS DATE _____05/11,12/90 ANALYST _____EDZ

CONTRACT #_____

INJECTION VOLUME = 2.00 ul

ANALYTE	STD #1 CONC = 0.02 ug/ml		STD #2 CONC = 0.05 ug/ml		STD #3 CONC = 0.08 ug/ml		STD #4 CONC = 0.10 ug/ml		STD #5 CONC = 0.15 ug/ml	
	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA
ALPHA-BHC	2.04	35354	2.04	94832	2.05	159747	2.06	219390	2.06	310822
BETA-BHC	2.84	11564	2.84	29602	2.85	47765	2.86	63136	2.86	86215
DELTA-BHC	3.31	33162	3.31	90675	3.32	147418	3.33	200250	3.33	278714
GAMMA-BHC	2.53	31341	2.52	79131	2.52	129847	2.52	167222	2.53	255538
HEPTACHLOR	3.07	31790	3.07	84265	3.08	138900	3.09	187486	3.09	262894
ALDRIN	3.67	31498	3.66	78213	3.66	127188	3.66	163285	3.67	246124
HEPTACHLOR EPOXIDE	5.33	30320	5.32	76634	5.32	121841	5.32	156819	5.33	233305
ENDOSULFAN I	6.66	28651	6.64	71713	6.64	114599	6.63	146358	6.65	213921
DIELDRIN	8.07	31368	8.05	78680	8.04	126399	8.04	160060	8.06	237956
4,4'-DDE	7.55	26586	7.57	69768	7.58	113312	7.61	150703	7.61	200745
ENDRIN	9.79	20186	9.80	53081	9.83	84487	9.86	110807	9.86	150225
ENDOSULFAN II	11.71	28811	11.69	71543	11.67	114308	11.68	143240	11.71	209860
4,4'-DDD	11.32	21792	11.34	57697	11.37	92231	11.41	121887	11.41	165920
ENDOSULFAN SULFATE	17.93	19551	17.95	51586	18.00	82656	18.05	109736	18.05	150270
4,4'-DDT	13.55	18683	13.53	48076	13.50	82467	13.51	106263	13.55	159019
METHOXYCHLOR	25.32	10334	25.35	25725	25.45	41568	25.50	56208	25.50	74573
ENDRIN KETONE (NR)	24.53	29176	24.50	71693	24.47	116665	24.49	144911	24.57	215422
ENDRIN ALDEHYDE	14.95	17348	14.93	43623	14.90	78798	14.91	99000	14.95	146860
ALPHA-CHLORDANE (NR)	6.43	28508	6.44	73393	6.46	120158	6.48	158637	6.48	215454
GAMMA-CHLORDANE (NR)	5.92	29661	5.93	76201	5.94	123372	5.96	163633	5.96	224689
T.CHLORDANE	X	X	X	X	X	X	X	X	X	X
TOXAPHENE	X	X	X	X	X	X	X	X	X	X
AROCLOR-1016	X	X	X	X	X	X	X	X	X	X
AROCLOR-1221	X	X	X	X	X	X	X	X	X	X
AROCLOR-1232	X	X	X	X	X	X	X	X	X	X
AROCLOR-1242	X	X	X	X	X	X	X	X	X	X
AROCLOR-1248	X	X	X	X	X	X	X	X	X	X
AROCLOR-1254	X	X	X	X	X	X	X	X	X	X
AROCLOR-1260	X	X	X	X	X	X	X	X	X	X
DIBUTYLCHLORENDATE	22.83	27886	22.80	67165	22.79	106874	22.81	134822	22.88	190062

CURVE # 1 INSTRUMENT ID A

CASE # R3-7 COLUMN SP2250/SP240

ANALYSIS DATE 05/11,12/90 ANALYST EDZ

CONTRACT #

INJECTION VOLUME = 2.00 ul

ANALYTE	STD #1 CALIBRATION FACTOR	STD #2 CALIBRATION FACTOR	STD #3 CALIBRATION FACTOR	STD #4 CALIBRATION FACTOR	STD #5 CALIBRATION FACTOR
ALPHA-BHC	883850	948320	998419	1096950	1036073
BETA-BHC	289100	296020	298531	315680	287383
DELTA-BHC	829050	906750	921363	1001250	929047
GAMMA-BHC	783525	791310	811544	836110	851793
HEPTACHLOR	794750	842650	868125	937430	876313
ALDRIN	787450	782130	794925	816425	820413
HEPTACHLOR EPOXIDE	758000	766340	761506	784095	777683
ENDOSULFAN I	716275	717130	716244	731790	713070
DIELDRIN	784200	786800	789994	800300	793187
4,4'-DDE	664650	697680	708200	753515	669150
ENDRIN	504650	530810	528044	554035	500750
ENDOSULFAN II	720275	715430	714425	716200	699533
4,4'-DDD	544800	576970	576444	609435	553067
ENDOSULFAN SULFATE	488775	515860	516600	548680	500900
4,4'-DDT	467075	480760	515419	531315	530063
METHOXYCHLOR	258350	257250	259800	281040	248577
ENDRIN KETONE (NR)	729400	716930	729156	724555	718073
ENDRIN ALDEHYDE	433700	436230	492488	495000	489533
ALPHA-CHLORDANE (NR)	712700	733930	750988	793185	718180
GAMMA-CHLORDANE (NR)	741525	762010	771075	818165	748963
T.CHLORDANE	0	0	0	0	0
TOXAPHENE	0	0	0	0	0
AROCLOR-1016	0	0	0	0	0
AROCLOR-1221	0	0	0	0	0
AROCLOR-1232	0	0	0	0	0
AROCLOR-1242	0	0	0	0	0
AROCLOR-1248	0	0	0	0	0
AROCLOR-1254	0	0	0	0	0
AROCLOR-1260	0	0	0	0	0
DIBUTYLCHLORENDATE	697150	671650	667963	674110	660207

CURVE # 1 INSTRUMENT ID A

CASE # R3-7 COLUMN SP2250/SP2401

ANALYSIS DATE 05/11,12/90 ANALYST EDZ

CONTRACT #

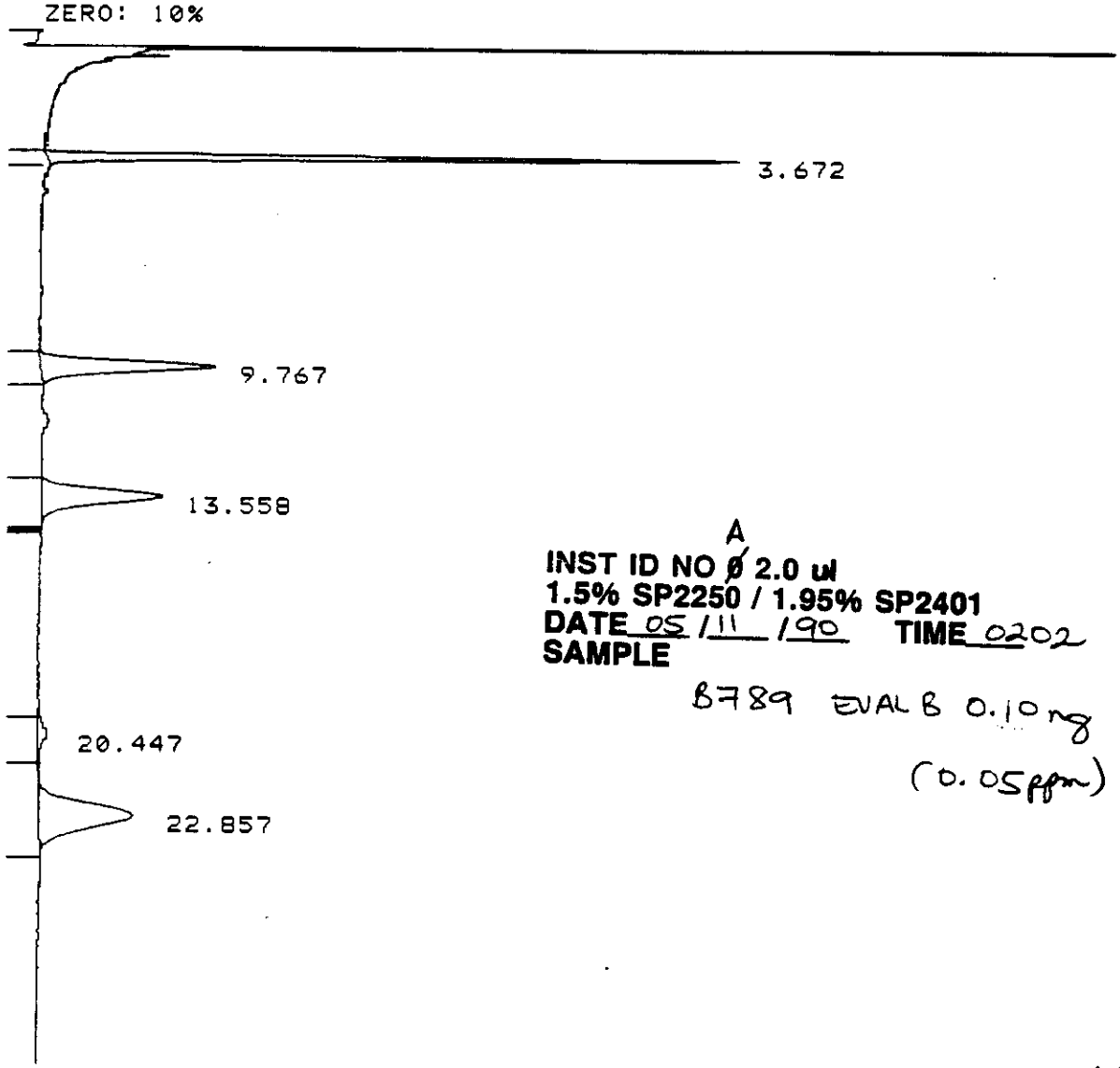
INJECTION VOLUME = 2.00 ul

ANALYTE	AVERAGE CALIBRATION FACTOR	%RSD	RETENTION TIME WINDOW (min)	AVERAGE RT	CURVE ADJUSTED AREA FOR MID STANDARD
ALPHA-BHC	992722	8	0.02	2.05	158835.59
BETA-BHC	297343	4	0.03	2.85	47574.87
DELTA-BHC	917492	7	0.03	3.32	146798.69
GAMMA-BHC	814856	4	0.03	2.52	130377.03
HEPTACHLOR	863854	6	0.03	3.08	138216.59
ALDRIN	800269	2	0.04	3.66	128042.99
HEPTACHLOR EPOXIDE	769525	1	0.05	5.32	123123.99
ENDOSULFAN I	718902	1	0.07	6.64	115024.28
DIELDRIN	790896	1	0.08	8.05	126543.37
4,4'-DDE	698639	5	0.08	7.58	111782.24
ENDRIN	523658	4	0.10	9.83	83785.24
ENDOSULFAN II	713173	1	0.12	11.69	114107.63
4,4'-DDD	572143	4	0.11	11.37	91542.89
ENDOSULFAN SULFATE	514163	4	0.18	18.00	82266.08
4,4'-DDT	504926	6	0.14	13.53	80788.23
METHOXYCHLOR	261003	5	0.25	25.42	41760.53
ENDRIN KETONE (NR)	723623	1	0.25	24.51	115779.67
ENDRIN ALDEHYDE	469390	7	0.15	14.93	75102.43
ALPHA-CHLORDANE (NR)	741797	4	0.06	6.46	118687.44
GAMMA-CHLORDANE (NR)	768348	4	0.06	5.94	122935.63
T.CHLORDANE	0	0	0.01	0.00	0.00
TOXAPHENE	0	0	0.01	0.00	0.00
AROCLOR-1016	0	0	0.01	0.00	0.00
AROCLOR-1221	0	0	0.01	0.00	0.00
AROCLOR-1232	0	0	0.01	0.00	0.00
AROCLOR-1242	0	0	0.01	0.00	0.00
AROCLOR-1248	0	0	0.01	0.00	0.00
AROCLOR-1254	0	0	0.01	0.00	0.00
AROCLOR-1260	0	0	0.01	0.00	0.00
DIBUTYLCHLORENDATE	674216	2	0.23	22.82	~~107874.53~~

134843.2 - adjusted area for conc. 0.10 ug/ml

ga 5/14/90

C...RT SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0202
SAMPLE
B789 EVAL B 0.10 ng
(0.05 ppm)

TITLE: CLP PESTICIDES 2:02 11 MAY 90

CHANNEL NO: 3 SAMPLE: B789 EVAL.05 METHOD: CLP-3A

PEA NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
	ALDRIN	75931	3.672	-0.068	75931	BB	?	7.60
2	ENDRIN	50567	9.767	-0.193	50567	BB	?	20.30
3	DDT	48589	13.558	-0.262	48589	BB		27.65
4		4584	20.447		4584	BV		42.45
5	DBC	62627	22.857	-0.483	62627	VB		46.65
TOTALS:		242298		-1.006	242298			

. ECTED PKS: 5 REJECTED PKS: 0

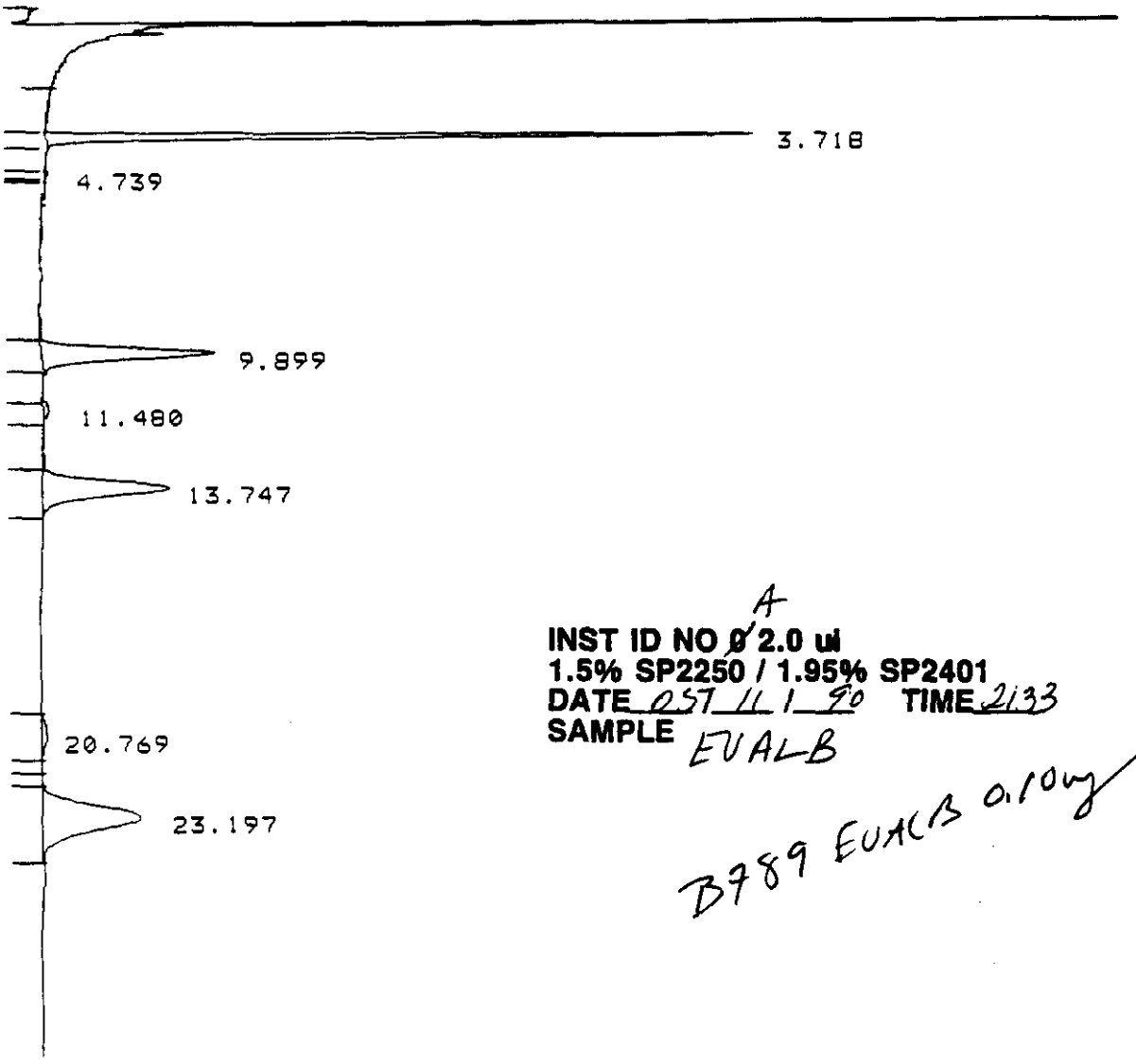
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -13

RACK: 1 VIAL: 1 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE OST 11 / 90 TIME 2133
SAMPLE EVALB

B789 EVALB 0.10ug

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

TITLE: CLP PESTICIDES 21:33 11 MAY 90

CHANNEL NO: 3 SAMPLE: EVAL B METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	ALDRIN	79363	3.718	0.048	79363	BB	? 7.70
2	ENDRIN	49646	9.899	0.039	49646	BB	? 20.50
3	DDD	1726	11.480	0.070	1726	BB	? 22.40
4	DDT	51377	13.747	0.197	51377	BB	28.05
5		4790	20.769		4790	BB	42.65
6	DBC	66506	23.197	0.317	66506	BB	47.00
TOTALS:		253408		0.671	253408		

DETECTED PKS: 7 REJECTED PKS: 1

DIVISOR: 1.00000 MULTIPLIER: 10000.0

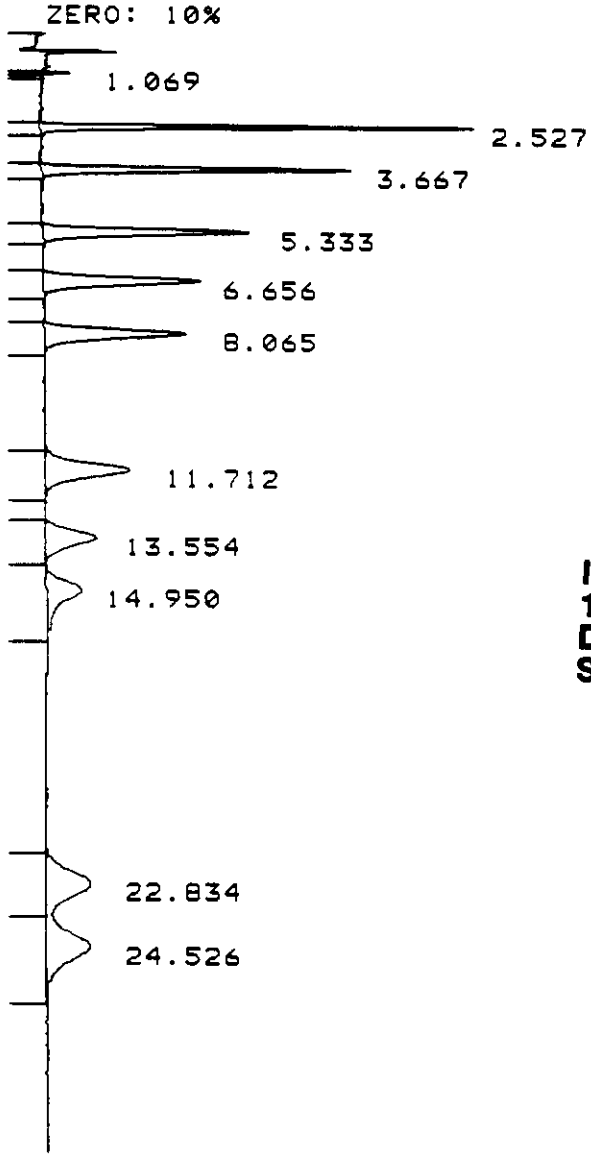
NOISE: 36.4 OFFSET: -24

CK: 3 VIAL: 7 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
VERSELDE 2561 WATER CLP CONF
VERSCDM 2536,2565 WATER M608 QUANT

varian, sunnyv.

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 0236
SAMPLE

B989 INDA 0.04 ng
(0.02 ppm)

100036

TITLE: CLP PESTICIDES 2:36 11 MAY 90

CHANNEL NO: 3 SAMPLE: B989 INDA.02 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		873	1.069		873	BB	2.35
	G-BHC	31341	2.527	-0.053	31341	BB	5.30
	LDRIN	31498	3.667	-0.073	31498	BB	? 7.55
	HEPT EPOX	30320	5.333	-0.107	30320	BB	11.15
R 5/90 5	~~A-CHLORDANE-ENDOS~~	28651	6.656	0.116	28651	BB	13.80
6	DIELDRIN	31368	8.065	-0.155	31368	BB	16.60
R 5/11/90 7	~~DDD~~B-ENDOS	28811	11.712	0.192	28811	BB	24.50
8	DDT	18683	13.554	-0.266	18683	BV	27.70
9	ENDRIN ALD	17348	14.950	-0.320	17348	VB	34.00
10	DBC	27886	22.834	-0.506	27886	BV	47.45
11	ENDRIN KET	29176	24.526	-0.534	29176	VB	51.10
TOTALS:		275955		-1.706	275955		

DETECTED PKS: 11 REJECTED PKS: 0

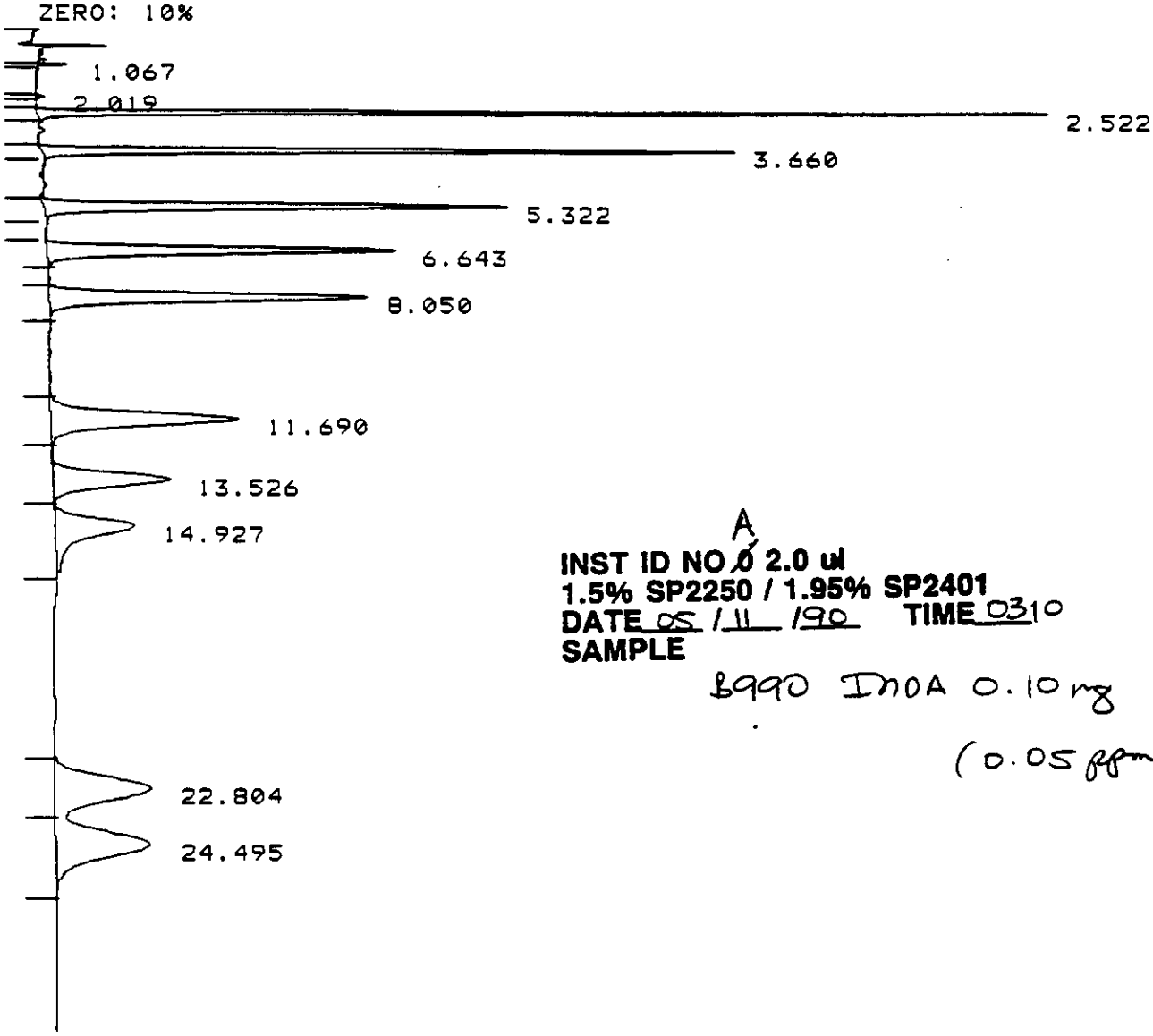
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -24

RACK: 1 VIAL: 2 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0310
SAMPLE
B990 IMOA 0.10 mg
(0.05 ppm)

100038

TITLE: CLP PESTICIDES 3:10 11 MAY 90

CHANNEL NO: 3 SAMPLE: B990 INDA.05 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
		1020	1.067		1020	BB	2.35
	;-BHC	79131	2.522	-0.058	79131	BB	5.20
3	ALDRIN	78213	3.660	-0.080	78213	BB	7.60
4	HEPT EPOX	76634	5.322	-0.118	76634	BB	11.00
5	~~A-CHLORDANA~~ ENDOS	71713	6.643	0.103	71713	BB	13.60
6	DIELDRIN	78680	8.050	-0.170	78680	BB	16.45
7	~~DDD~~ B-ENDOS	71543	11.690	0.170	71543	BV	24.60
8	DDT	48076	13.526	-0.294	48076	VV	27.90
9	ENDRIN ALD	43623	14.927	-0.343	43623	VB	35.30
	DBC	67165	22.804	-0.536	67165	BV	46.85
11	ENDRIN KET	71693	24.495	-0.565	71693	VB	51.10
TOTALS:		687491		-1.891	687491		

DETECTED PKS: 12 REJECTED PKS: 1

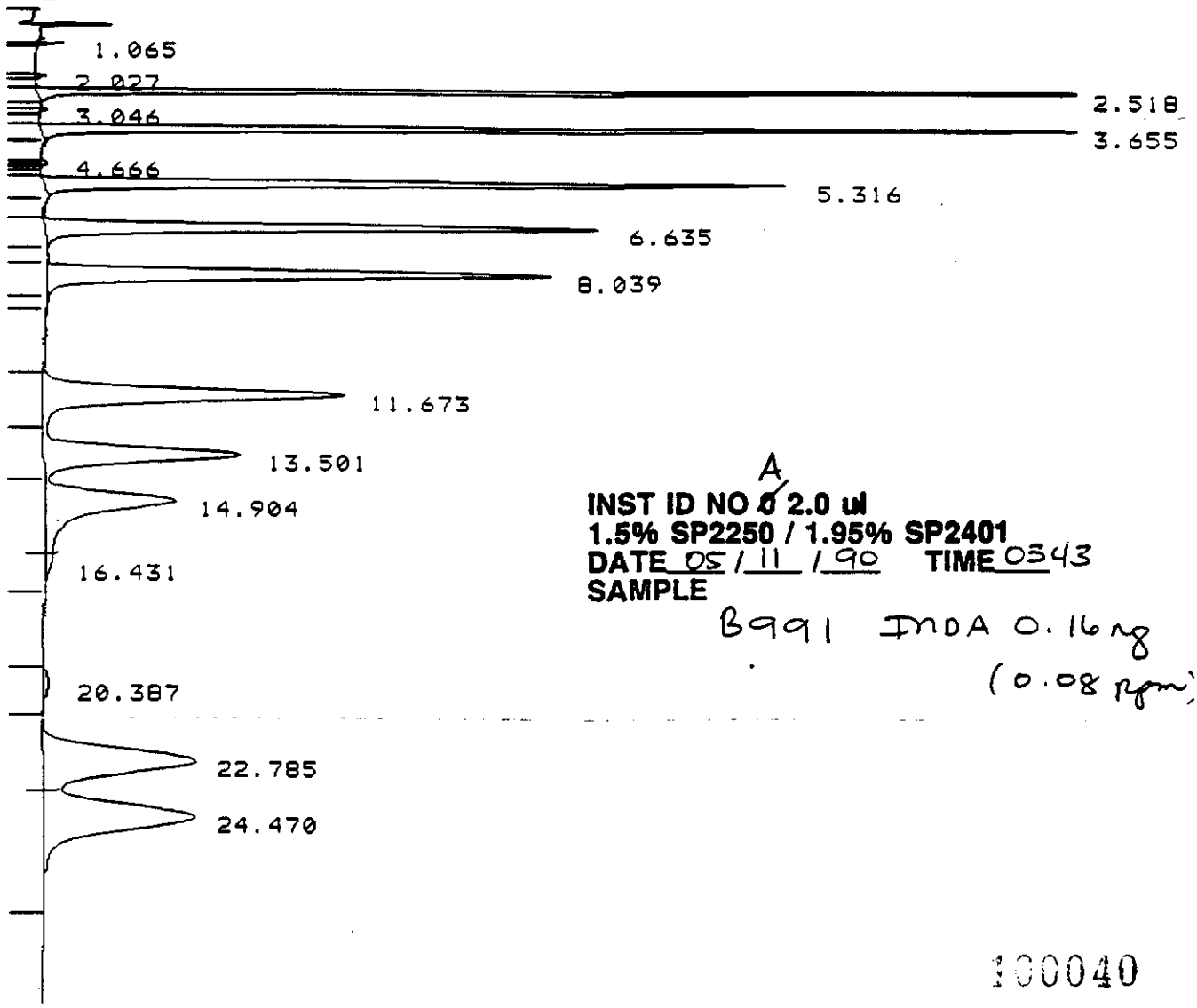
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -9

RACK: 1 VIAL: 4 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0343
SAMPLE
B991 INDA 0.16 ng
(0.08 ppm)

100040

TITLE: CLP PESTICIDES 3:43 11 MAY 90

CHA 'EL NO: 3 SAMPLE: B991 INDA.08 METHOD: CLP-3A

PEA NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		1002	1.065		1002	BB	2.45
2	A-BHC	754	2.027	-0.053	754	BB	4.50
3	G-BHC	129847	2.518	-0.062	129847	BB	5.15
4	ALDRIN	127188	3.655	-0.085	127188	BV	7.45
5	HEPT EPOX	121841	5.316	-0.124	121841	BB	10.90
KR 1/11/90 6	~~A-CHLORDAN~~ A-ENDOS	114599	6.635	0.095	114599	BB	13.65
	DIELDRIN	126399	8.039	-0.181	126399	BB	16.55
KR 1/11/90	~~DDD~~ B-ENDOS	114308	11.673	0.153	114308	BV	24.30
9	DDT	82467	13.501	-0.319	82467	VV	27.65
10	ENDRIN ALD	78798	14.904	-0.366	78798	VV	34.40
11		4078	16.431		4078	VB	? 75.40
12		3286	20.387		3286	BV	44.80
13	DBC	106874	22.785	-0.555	106874	VV	46.70
14	ENDRIN KET	116665	24.470	-0.590	116665	VB	50.75
TOTALS:		1128110		-2.087	1128110		

DETECTED PKS: 18 REJECTED PKS: 4

DIVISOR: 1.00000 MULTIPLIER: 10000.0

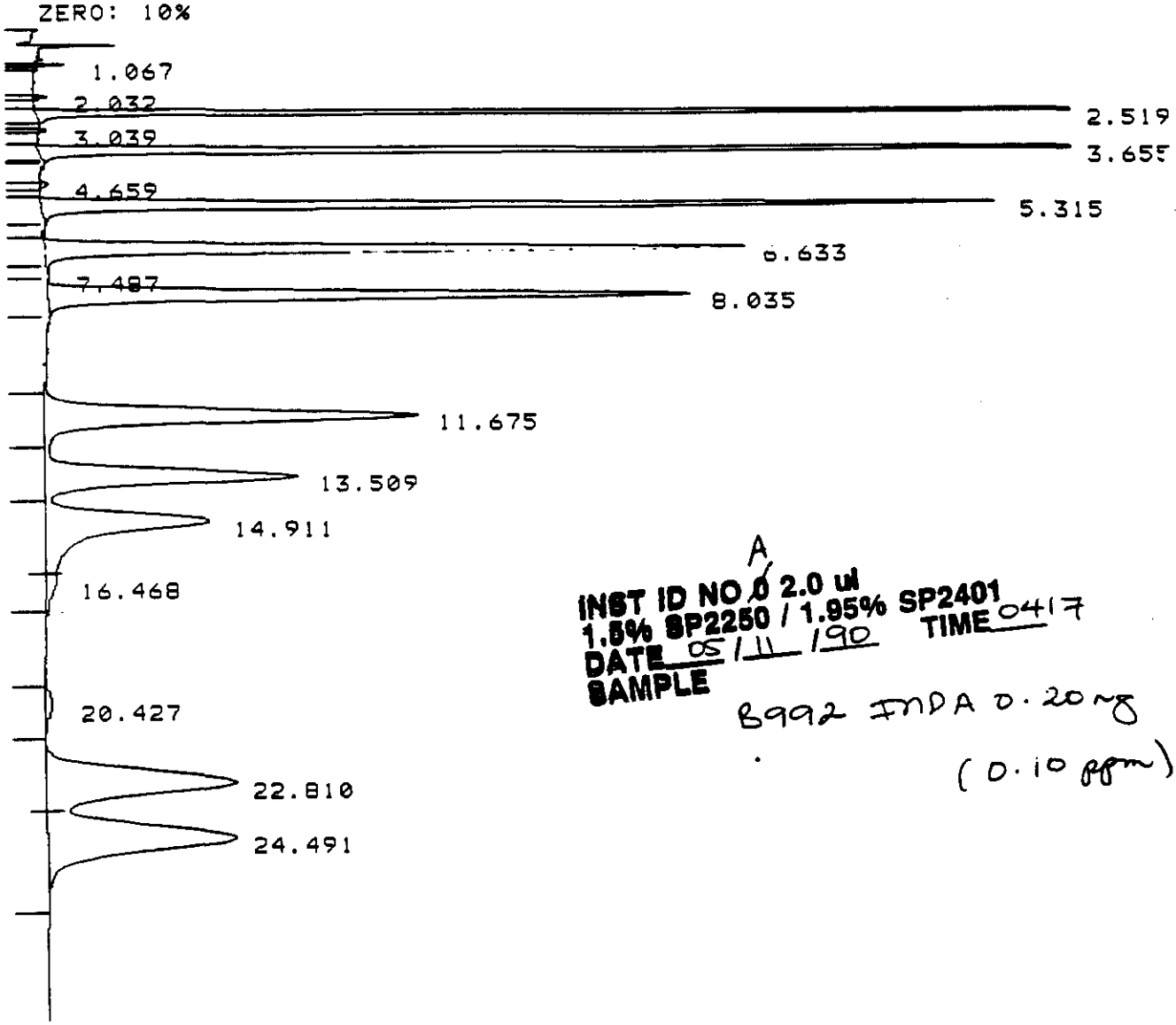
NOISE: 41.3 OFFSET: -16

RACK: 1 VIAL: 5 INJ: 1

NO :
: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
O · OUTSIDE RETENTION TIME WINDOW
8 0 STANDARDS

100041

CH ?T SPEED 0.5 CM/MIN
A: .N: 16 ZERO: 10%



INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 0417
SAMPLE
B992 IMDA 0.20 ng
(0.10 ppm)

100042

TITLE: CLP PESTICIDES 4:17 11 MAY 90

CHANNEL NO: 3 SAMPLE: B992 INDA.10 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		1122	1.067		1122	BB		2.40
2	A-BHC	866	2.032	-0.048	866	BB		4.20
3	G-BHC	167222	2.519	-0.061	167222	BB		5.05
	LDRIN	163285	3.655	-0.085	163285	BV		7.40
		885	4.659		885	BB	?	6.65
	HEPT EPOX	156819	5.315	-0.125	156819	BB		10.75
7	~~A CHLORDANE~~ ENDO	146358	6.633	0.093	146358	BV		13.55
8	DIELDRIN	160060	8.035	-0.185	160060	VB	?	15.00
9	~~DDD~~ B-ENDOS	143240	11.675	0.155	143240	BV		24.30
10	DDT	106263	13.509	-0.311	106263	VV		27.35
11	ENDRIN ALD	99000	14.911	-0.359	99000	VV		34.25
12		4866	16.468		4866	VB	?	76.20
3		3991	20.427		3991	BV		44.30
	DBC	134822	22.810	-0.530	134822	VV		46.65
15	ENDRIN KET	144911	24.491	-0.569	144911	VB		50.70
TOTALS:		1433710		-2.025	1433710			

DETECTED PKS: 18 REJECTED PKS: 3

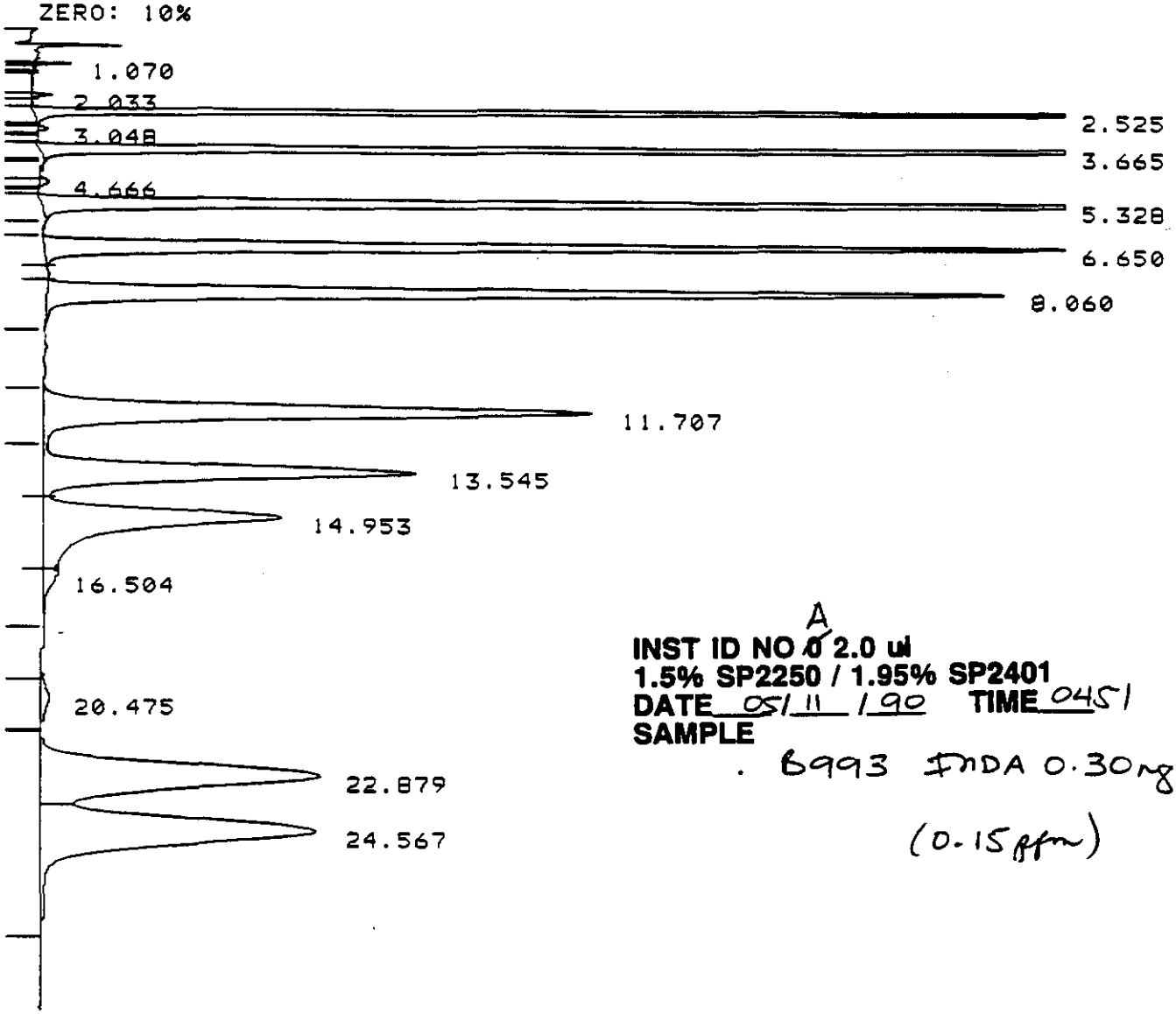
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -12

RACK: 1 VIAL: 7 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
OPT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 0451
SAMPLE
. B993 FNDA 0.30ng
(0.15ppm)

100044

TITLE: CLP PESTICIDES

CHANNEL NO: 3 SAMPLE: B993 INDA.15 4:51 11 MAY 90 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		1414	1.070		1414	BV		2.50
2	A-BHC	1491	2.033	-0.047	1491	BB		4.45
3	G-BHC	255538	2.525	-0.055	255538	BB		4.95
4	HEPTACHLOR	1013	3.048	-0.072	1013	BB		5.70
5	ALDRIN	246124	3.665	-0.075	246124	BV		7.25
	HEPT EPOX	1387	4.666		1387	BB	?	9.00
	~~A-CHLORDANE~~	233305	5.328	-0.112	233305	BB		10.60
9	DIELDRIN	213921	6.650	0.110	213921	BB		13.40
10	~~DDD~~ B-ENDS	237956	8.060	-0.160	237956	BB		16.10
11	DDT	209860	11.707	0.187	209860	BV		24.30
12	ENDRIN ALD	159019	13.545	-0.275	159019	VV		27.35
13		146860	14.953	-0.317	146860	VV		34.30
14		9063	16.504		9063	VB	?	75.60
15	DBC	5288	20.475		5288	BV		41.05
6	ENDRIN KET	198062	22.879	-0.461	198062	VV		46.45
		215422	24.567	-0.493	215422	VB		50.30
TOTALS:		2135720		-1.770	2135720			

DETECTED PKS: 18 REJECTED PKS: 2

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -19

RACK: 1 VIAL: 8 INJ: 1

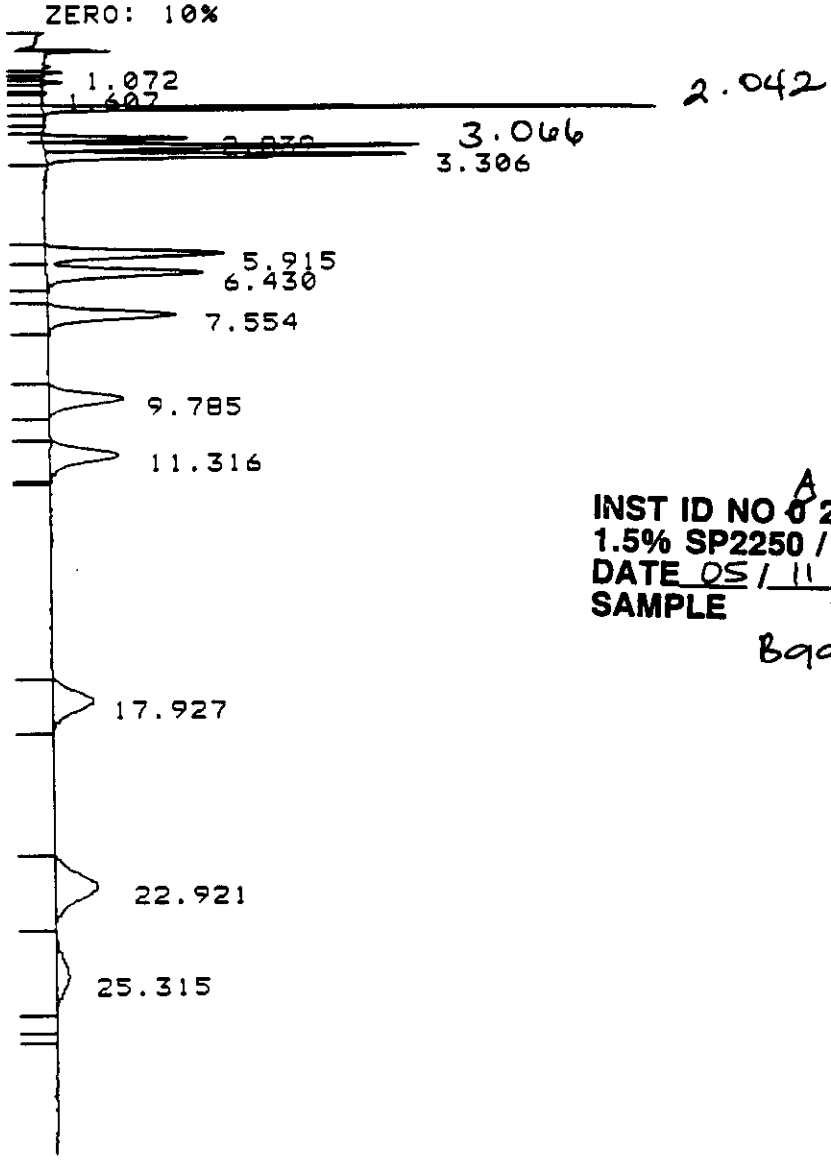
NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

TCR 7/11/90

TCR 7/11/90

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0524
SAMPLE
B994 INDB 0.04 ng
(0.02 ppm)

100046

ORIGINAL
(Red)

TI ' CLP PESTICIDES 5:24 11 MAY 90

CHA EL NO: 3 SAMPLE: B994 INDB ~~.20~~ .02 JKZ 07/11/90 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		699	1.072		699	BB	2.45
2		998	1.338		998	BB	3.25
3	A-BHC	35354	2.042	-0.038	35354	BB	4.30
4	B-BHC	11564	2.839	-0.051	11564	BV	6.05
5	HEPTACHLOR	31790	3.066	-0.054	31790	VV	6.40
6	D-BHC	33162	3.306	-0.054	33162	VB	6.95
7	G-CHLORDAN	29661	5.915	-0.105	29661	BV	12.30
8	A-CHLORDAN	28508	6.430	-0.110	28508	VB	13.60
9	DDE	26586	7.554	-0.126	26586	BB	15.60
10	ENDRIN	20186	9.785	-0.175	20186	BB	20.45
11	DDD	21792	11.316	-0.204	21792	BB	23.15
12	ESS	19551	17.927	-0.323	19551	BB	? 36.95
13	DBC	27914	22.921	-0.419	27914	BV	47.40
14	~~ENDRIN KET~~ Methoxychlor	10334	25.315	0.255	10334	VB	? 56.50
TOTALS:		298099		-1.404	298099		

ZR 7/11/90

DETECTED PKS: 15 REJECTED PKS: 1

DIVISOR: 1.00000 MULTIPLIER: 10000.0

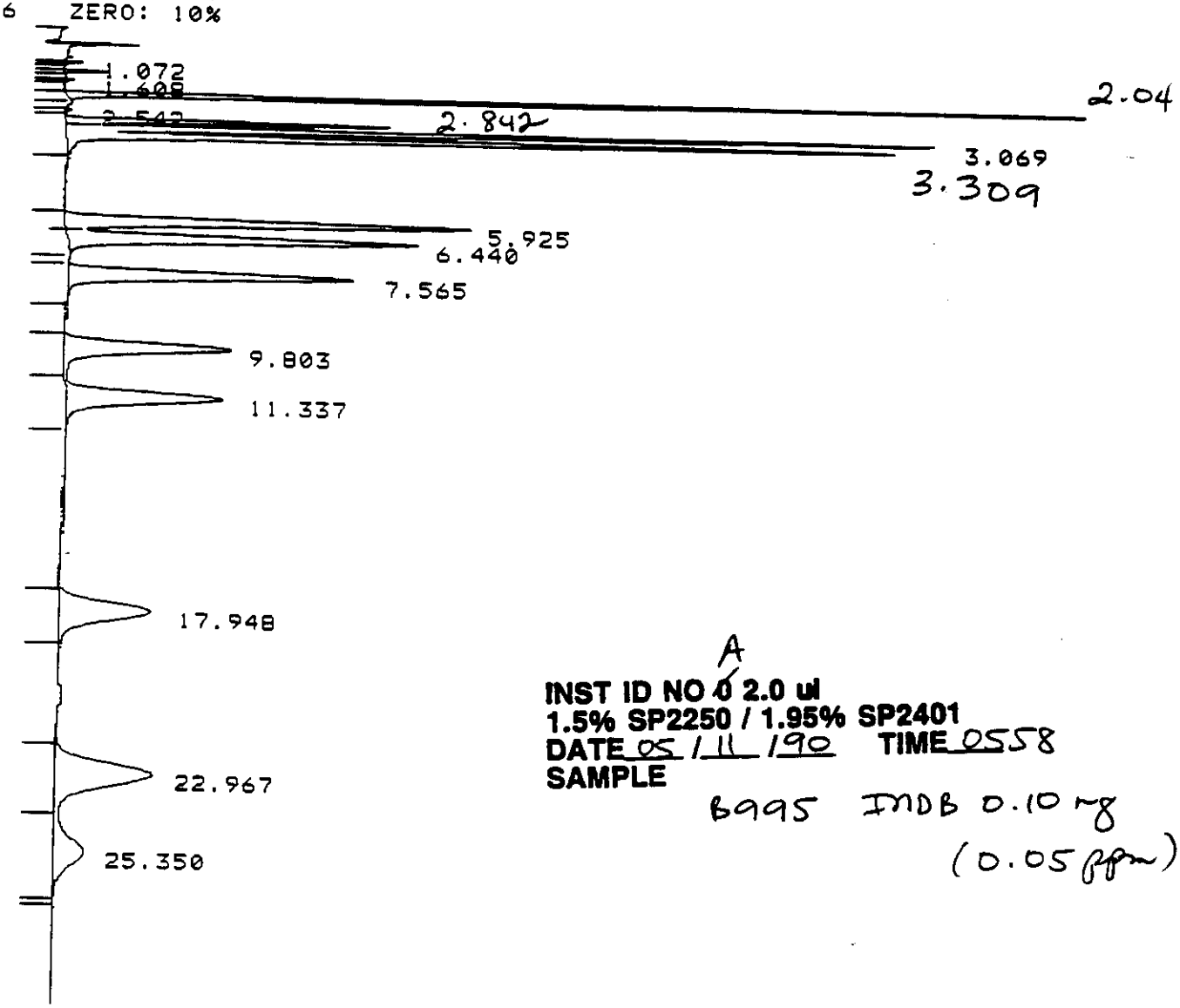
NOISE: 41.3 OFFSET: -22

RA 1 VIAL: 10 INJ: 1

NOTE:
C : 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

906362 00

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0558
SAMPLE
B995 IMDB 0.10 mg
(0.05 ppm)

100048

ORIGINAL
(Red)

TIT E: CLP PESTICIDES 5:58 11 MAY 90

CHANNEL NO: 3 SAMPLE: B995 INDB.~~50~~ .05 JKR 05/14/90 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		740	1.072		740	BB	2.50
2		2047	1.337		2047	BB	3.05
3	A-BHC	94832	2.042	-0.038	94832	BB	4.20
4	B-BHC	29602	2.842	-0.048	29602	VV	6.00
5	HEPTACHLOR	84265	3.069	-0.051	84265	VV	6.35
6	BHC	90675	3.309	-0.051	90675	VB	6.90
7	-CHLORDAN	76201	5.925	-0.095	76201	BV	12.20
8	A-CHLORDAN	73393	6.440	-0.100	73393	VB	13.45
9	DDE	69768	7.565	-0.115	69768	BB	15.55
10	ENDRIN	53081	9.803	-0.157	53081	BV	20.25
11	DDD	57697	11.337	-0.183	57697	VB	23.45
12	ESS	51586	17.948	-0.302	51586	BB	? 36.65
13	DBC	69610	22.967	-0.373	69610	BV	46.95
14	~~ENDRIN KET~~ methoxychlor	25725	25.350	0.290	25725	VB	54.20
	S:	779222		-1.223	779222		

ETECTED PKS: 16 REJECTED PKS: 2

IVISOR: 1.00000 MULTIPLIER: 10000.0

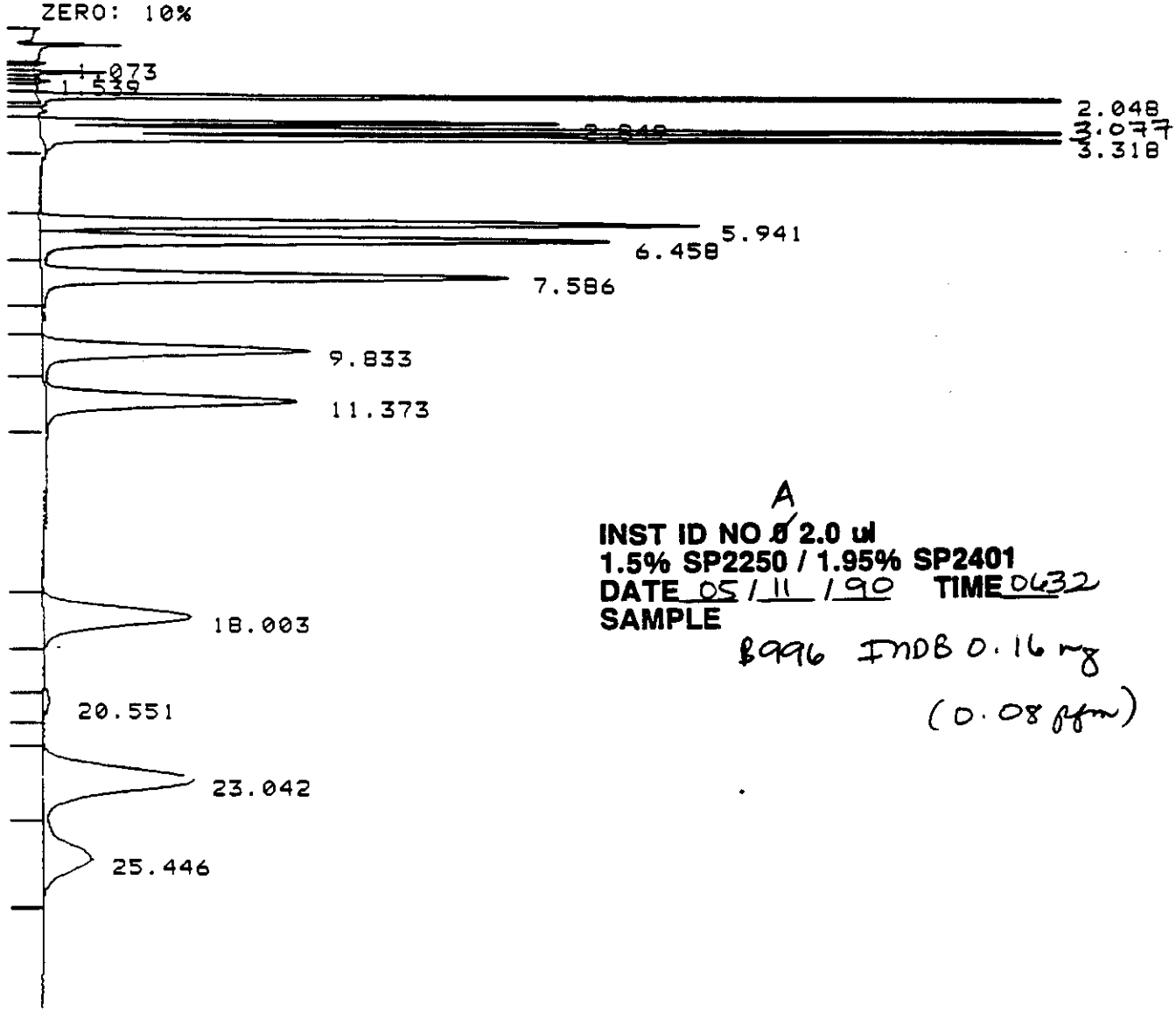
OISE: 41.3 OFFSET: -19

ACK: 1 VIAL: 11 INJ: 1

OTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

ORIGINAL
(Red)

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



A
INST ID NO ~~0~~ 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0632
SAMPLE
8996 IMDB 0.16 mg
(0.08 ppm)

100030

ORIGINAL PAGE

TITLE: CLP PESTICIDES 6:32 11 MAY 90

CHANNEL NO: 3 SAMPLE: B996 INDB.08 METHOD: CLP-3A

PEAK N	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		3430	1.342		3430	BV	3.10
2		753	1.612		753	VB	? 2.35
3	A-BHC	159747	2.048	-0.032	159747	BV	4.10
4	B-BHC	47765	2.849	-0.041	47765	BV	6.05
5	HEPTACHLOR	138900	3.077	-0.043	138900	VV	6.25
6	D-BHC	147418	3.318	-0.042	147418	VB	6.75
7	G-CHLORDAN	123372	5.941	-0.079	123372	BV	12.20
8	A-CHLORDAN	120158	6.458	-0.082	120158	VV	13.45
9	DDE	113312	7.586	-0.094	113312	VB	15.65
	NDRIN	84487	9.833	-0.127	84487	BV	20.20
1	DD	92231	11.373	-0.147	92231	VB	23.35
1	ESS	82656	18.003	-0.247	82656	BB	? 36.65
13		2537	20.551		2537	BB	? 19.00
14	DBC	110057	23.042	-0.298	110057	BV	? 67.10
15	METHOXYCHL	41568	25.446	-0.264	41568	VB	53.30
TOTALS:		1268390		-1.496	1268390		

DETECTED PKS: 18 REJECTED PKS: 3

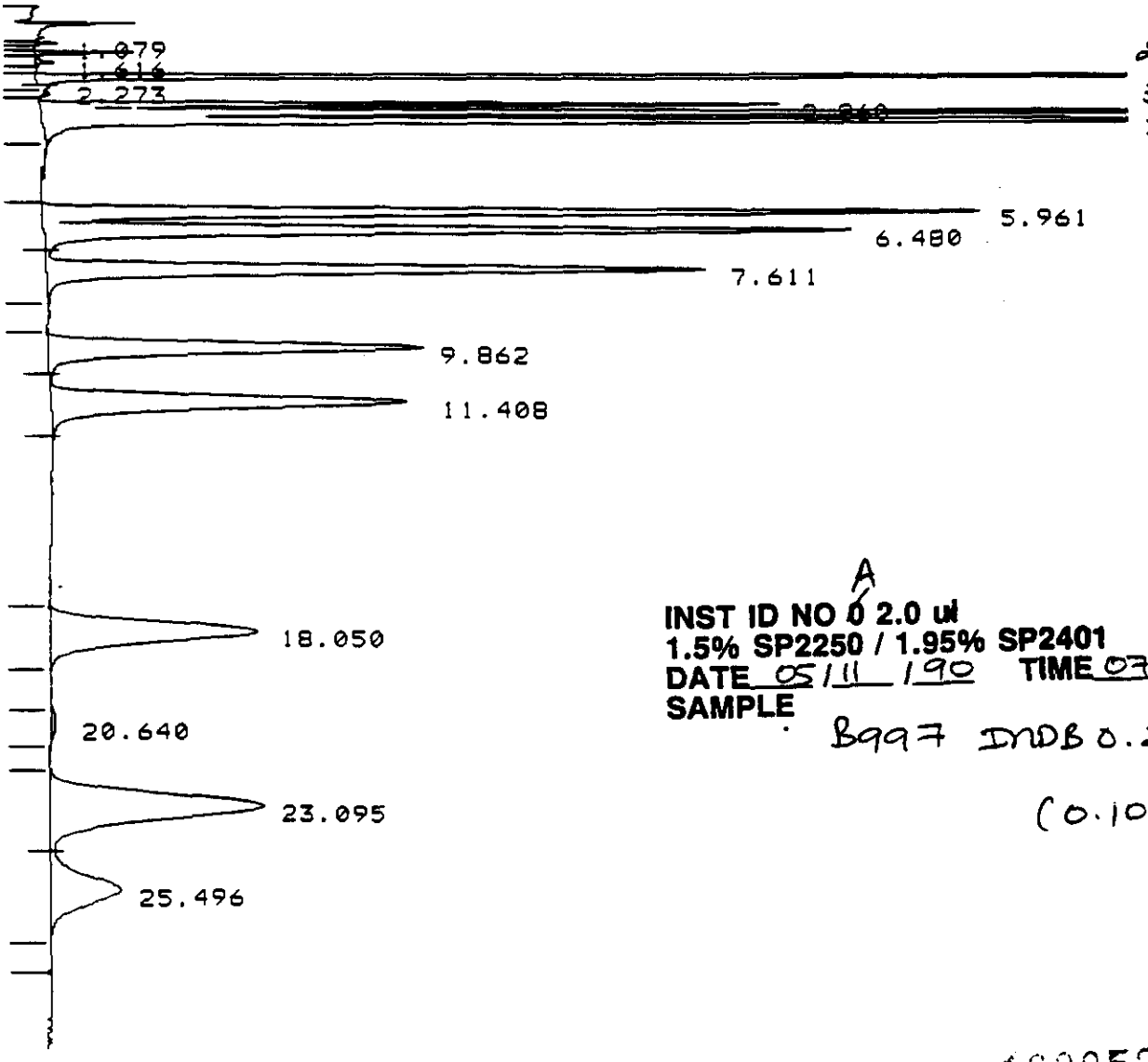
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -16

RACK: 1 VIAL: 13 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 0714
SAMPLE B997 INDB 0.20 ng
(0.10 ppm)

100052

TITLE: CLP PESTICIDES 7:14 11 MAY 90

CHANNEL NO: 3 SAMPLE: B997 INDB.10 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		803	1.079		803	BB	2.35
2		4315	1.347		4315	BV	3.05
		1408	1.616		1408	VB	3.85
	A-BHC	219390	2.057	-0.023	219390	BV	4.10
	~~G-BHC~~	623	2.542	-0.038	623	T	3.95
6	B-BHC	63136	2.860	-0.030	63136	VV	6.05
7	HEPTACHLOR	187486	3.089	-0.031	187486	VV	6.25
8	D-BHC	200250	3.331	-0.029	200250	VB	6.75
9	G-CHLORDAN	163633	5.961	-0.059	163633	BV	12.10
10	A-CHLORDAN	158637	6.480	-0.060	158637	VV	13.35
11	DDE	150703	7.611	-0.069	150703	VB	15.65
12	ENDRIN	110807	9.862	-0.098	110807	BV	20.20
	DDD	121887	11.408	-0.112	121887	VB	23.55
14	ESS	109736	18.050	-0.200	109736	BB	? 36.90
15		3402	20.640	[illegible]	3402	BB	? 42.95
16	DBC	145657	23.095	-0.245	145657	BV	47.15
17	METHOXYCHL	56208	25.496	-0.214	56208	VB	53.35
TOTALS:		1698080		-1.208	1698080		

DETECTED PKS: 18 REJECTED PKS: 1

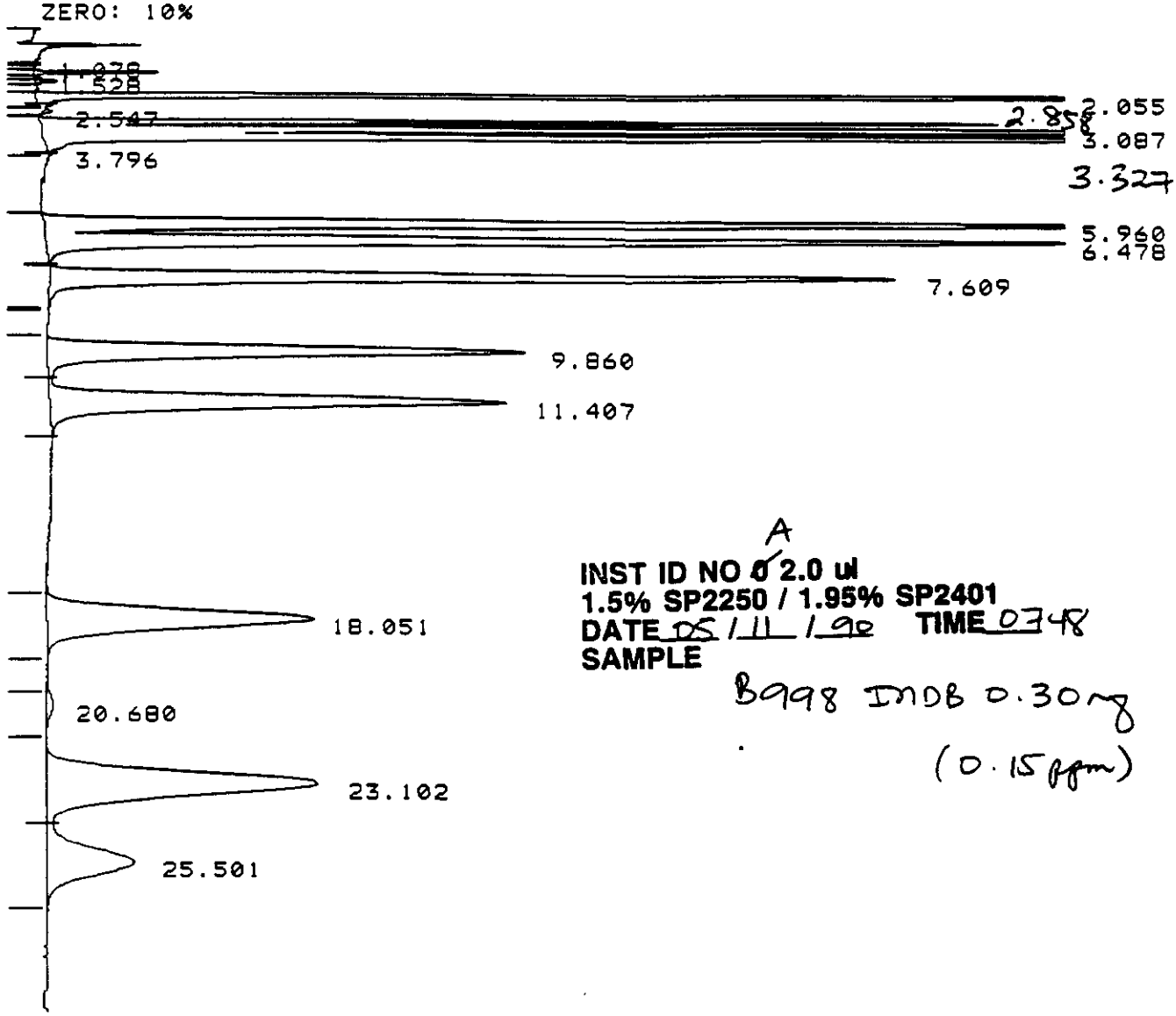
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -16

RACK: 1 VIAL: 14 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
(* OUTSIDE RETENTION TIME WINDOW
( ) STANDARDS

C' 'T SPEED 0.5 CM/MIN
A. _N: 16 ZERO: 10%



INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 0748
SAMPLE
B998 INDB 0.30 mg
(0.15 ppm)

TITLE: CLP PESTICIDES 7:48 11 MAY 90

CH NEL NO: 3 SAMPLE: B998 INDB.15 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		5870	1.345		5870	VV	3.05
2		1332	1.614		1332	VB	4.20
3	A-BHC	310822	2.055	-0.025	310822	BV	4.00
4	~~G-BHC~~	862	2.547	-0.033	862	T	3.80
5	B-BHC	86215	2.858	-0.032	86215	VV	5.95
6	HEPTACHLOR	262894	3.087	-0.033	262894	VV	6.10
7	D-BHC	278714	3.327	-0.033	278714	VV	6.65
	-CHLORDAN	224689	5.960	-0.060	224689	BV	12.00
	-CHLORDAN	215454	6.478	-0.062	215454	VB	13.20
10	DDE	200745	7.609	-0.071	200745	BB	15.35
11	ENDRIN	150225	9.860	-0.100	150225	BV	20.35
12	DDD	165920	11.407	-0.113	165920	VB	23.55
13	ESS	150270	18.051	-0.199	150270	BB	? 36.85
14		4854	20.680		4854	BV	39.65
15	DBC	197320	23.102	-0.238	197320	VV	46.90
16	METHOXYCHL	74573	25.501	-0.209	74573	VB	54.00
TO LS:		2330760		-1.208	2330760		

DETECTED PKS: 21 REJECTED PKS: 5

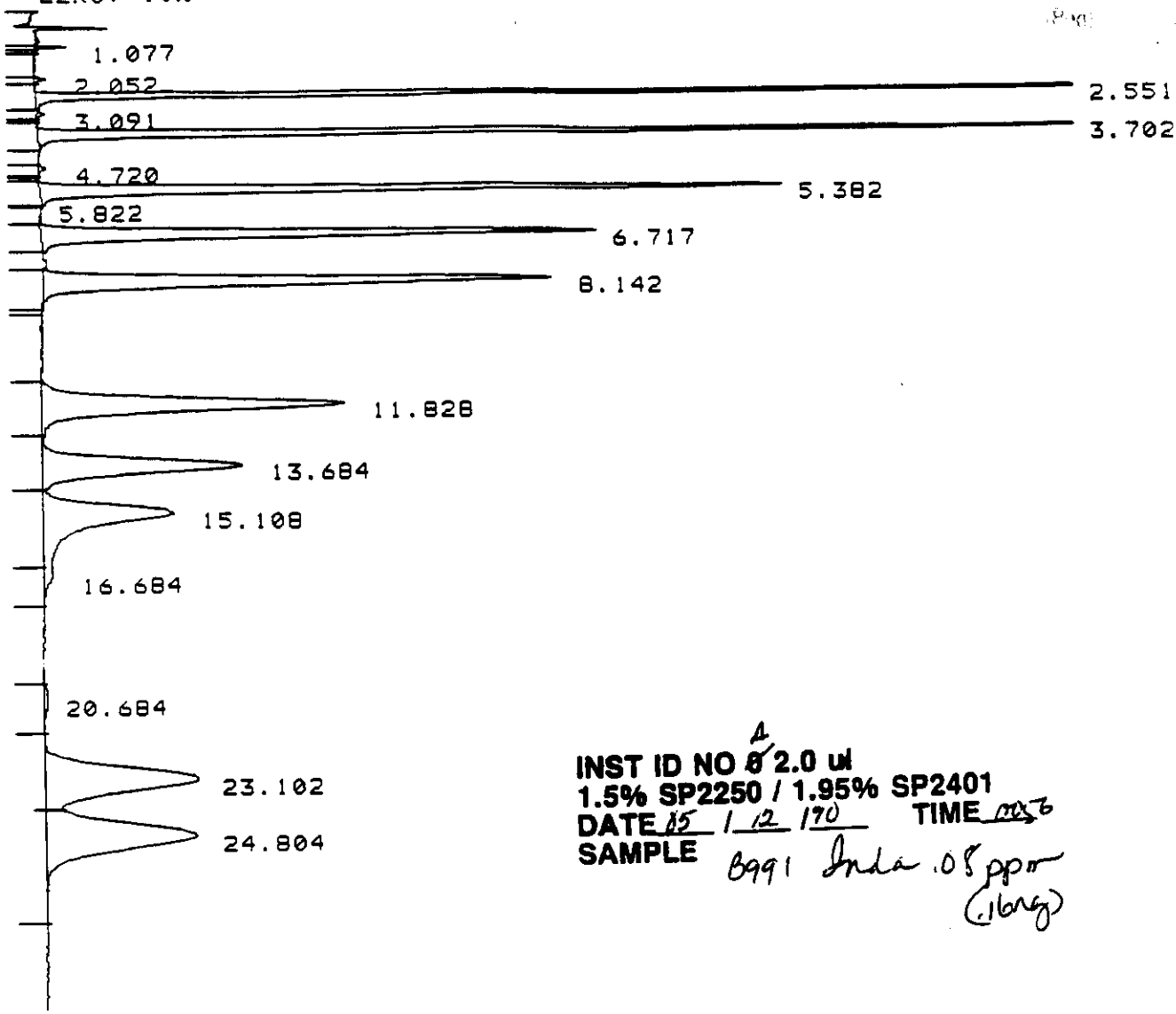
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -18

RACK: 2 VIAL: 1 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ 4 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 12 / 90 TIME 0056
SAMPLE B991 Inda .08 ppm (.16ng)

TITLE: CLP PESTICIDES 0:56 12 MAY 90

CHANNEL NO: 3 SAMPLE: B991 INDA.08 METHOD: CLP-3A

PI NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		1170	1.077		1170	BV		2.35
2	A-BHC	758	2.052	-0.008	758	BV		4.30
3	G-BHC	133643	2.551	0.021	133643	VV		5.20
4	HEPTACHLOR	585	3.091	0.001	585	T	?	10.00
5	ALDRIN	129953	3.702	0.032	129953	VB	?	4.95
6		958	4.720		958	BB		10.60
7	HEPT EPOX	124631	5.382	0.052	124631	BV		11.05
8	A-ENDOSULF	115761	6.717	0.067	115761	BB		13.90
9	DIELDRIN	127502	8.142	0.082	127502	BB		16.70
10	B-ENDOSULF	116043	11.828	0.118	116043	BV		24.55
11	DDT	85068	13.684	0.134	85068	VV		27.85
12	ENDRIN ALD	80108	15.108	0.158	80108	VV		35.15
13		3893	16.684		3893	VB	?	67.80
14		3298	20.684		3298	BV		40.85
15	DBC	109519	23.102	0.222	109519	VV		47.20
16	ENDRIN KET	116801	24.804	0.234	116801	VB		50.95
T ILS:		1149690		1.113	1149690			

DETECTED PKS: 19 REJECTED PKS: 3

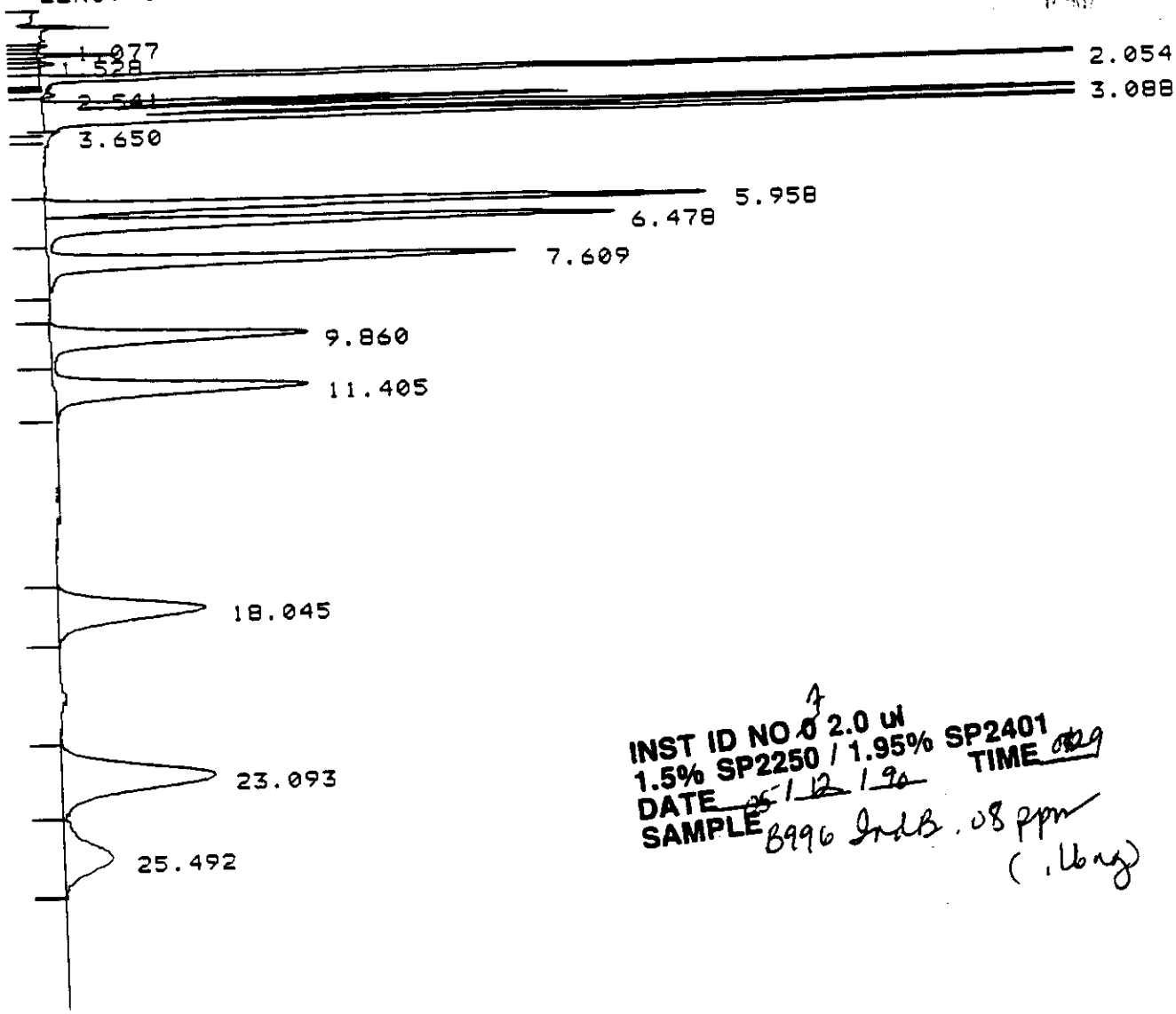
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 36.4 OFFSET: -24

RACK: 4 VIAL: 1 INJ: 1

NC
_: 1.5% SP2250/1.95% SP2401
HMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
VERSELDE 2561 WATER CLP CONF
VERSCDM 2536,2565 WATER M608 QUANT

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO 7 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/12/90 TIME 0029
SAMPLE B996 IndB .08 ppm
(.16 ng)

varian Sunnyvale, Calif p/n 13-906362-00

TITLE: CLP PESTICIDES 1:29 12 MAY 90

CHANNEL NO: 3 SAMPLE: B996 INDB.08 METHOD: CLP-3A

P N	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		3787	1.344		3787	BV		3.05
2		892	1.613		892	VB		4.00
3	A-BHC	159700	2.054	-0.006	159700	BV		4.15
4	G-BHC	1034	2.541	0.011	1034	T	?	6.85
5	B-BHC	47672	2.857	-0.003	47672	VV		6.05
6	HEPTACHLOR	137849	3.088	-0.002	137849	VV		6.25
7	D-BHC	146624	3.329	-0.001	146624	VV		6.80
8	G-CHLORDAN	122336	5.958	-0.002	122336	BV		12.25
9	A-CHLORDAN	119507	6.478	-0.002	119507	VV		13.55
10	DDE	112876	7.609	-0.001	112876	VB		15.70
11	ENDRIN	80742	9.860	0.000	80742	BV		20.30
12	DDD	92058	11.405	-0.005	92058	VB		23.60
13	ESS	81186	18.045	-0.005	81186	BB	?	36.75
14	DBC	110326	23.093	0.213	110326	BV		47.30
15	METHOXYCHL	39982	25.492	-0.008	39982	VB		54.00
TOTALS:		1256570		0.189	1256570			

DETECTED PKS: 20 REJECTED PKS: 5

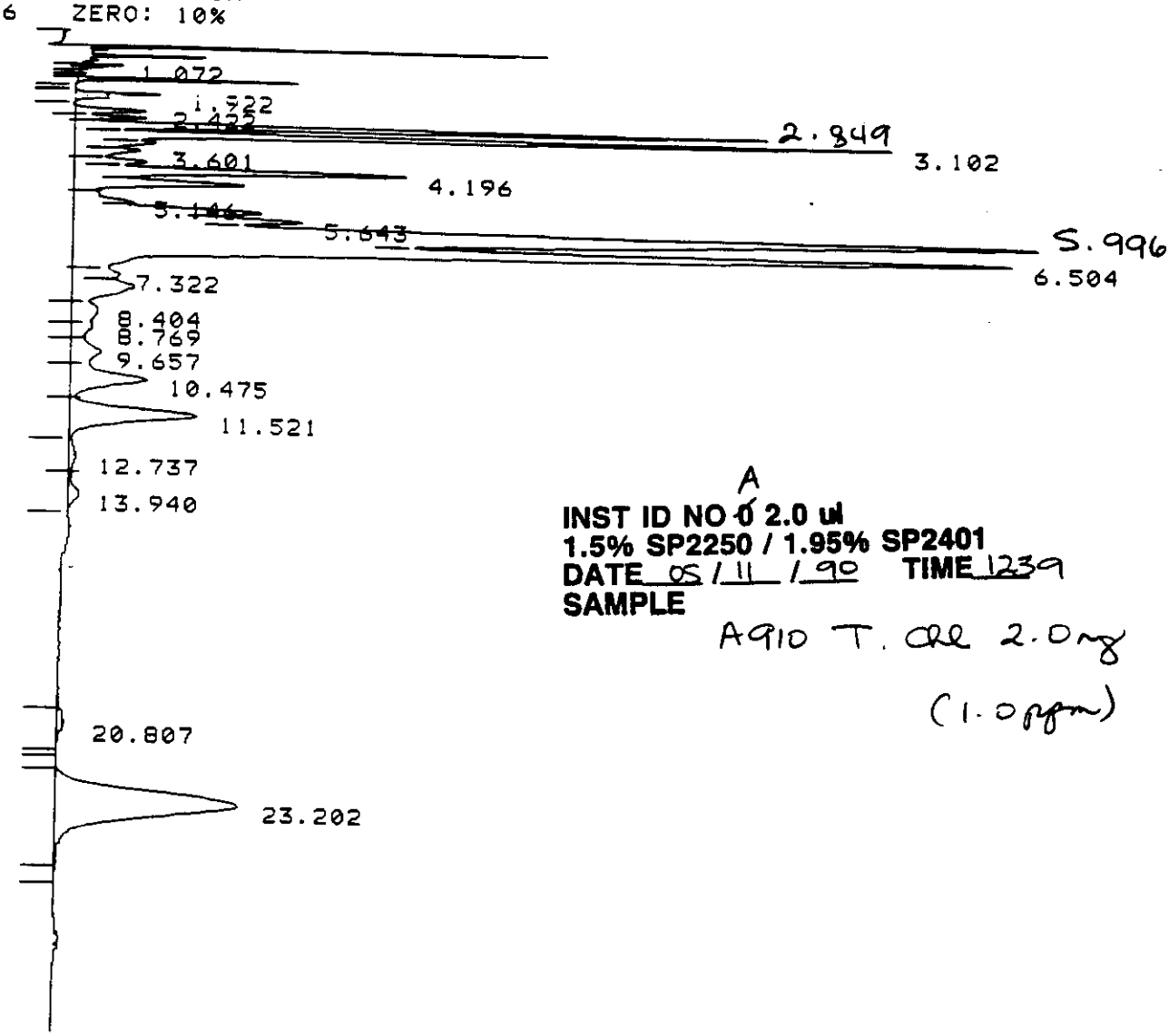
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 36.4 OFFSET: -19

RACK: 4 VIAL: 2 INJ: 1

N TS:
.: 1.5% SP2250/1.95% SP2401
INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
VERSELDE 2561 WATER CLP CONF
VERSCDM 2536,2565 WATER M608 QUANT

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 1239
SAMPLE
A910 T. Chl 2.0 ng
(1.0 ppm)

100060

TITLE: CLP PESTICIDES 12:39 11 MAY 90

CHANNEL NO: 3 SAMPLE: A910 T.CHL METHOD: CLP-3A

F	K	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
		1	1611	1.072		1611	BV		2.70
		2	678	1.120		678	VB	?	2.55
		3	10869	1.477		10869	VB		3.15
		4	5632	1.922		5632	BV		4.40
		5 A-BHC	2662	2.014	-0.046	2662	VV	?	5.05
		6	8091	2.422		8091	VV	?	7.75
		7	6519	2.619		6519	VV		6.10
		8 B-BHC	66334	2.849	-0.011	66334	VV		6.20
		HEPTACHLOR	86309	3.102	0.012	86309	VV		6.65
		D-BHC	12434	3.358	0.028	12434	VV	?	7.80
		11 ALDRIN	12069	3.601	-0.069	12069	VV	?	10.50
		12	11592	3.939		11592	VV	?	13.10
		13	51809	4.196		51809	VV		9.50
		14	32736	4.578		32736	VV		12.50
		15	12138	5.146		12138	VV	?	14.40
		16 HEPT EPOX	35224	5.393	0.063	35224	VV	?	13.50
		17	42651	5.643		42651	VV	?	14.80
		18 G-CHLORDAN	270891	5.996	0.036	270891	VV		20.80
		9 A-CHLORDAN	215822	6.504	0.024	215822	VV		14.65
		20	12247	7.322		12247	VV	?	21.10
		21 DDE	26091	7.662	0.052	26091	VV	?	34.25
		22	13151	8.404		13151	VV	?	26.10
		23	6795	8.769		6795	VV	?	
		24 ENDRIN	14367	9.657	-0.203	14367	VV	?	38.90
		25	31373	10.475		31373	VV		25.05
		26 DDD	49796	11.521	0.111	49796	VV		25.20
		27	4251	12.737		4251	VV	?	42.80
		28 DDT	5573	13.940	0.390	5573	VB		28.25
		29	3142	20.807		3142	BB		40.45
		30 DBC	132380	23.202	0.322	132380	BB		47.65
TOTALS:			1185240		0.709	1185240			

DETECTED PKS: 31 REJECTED PKS: 1

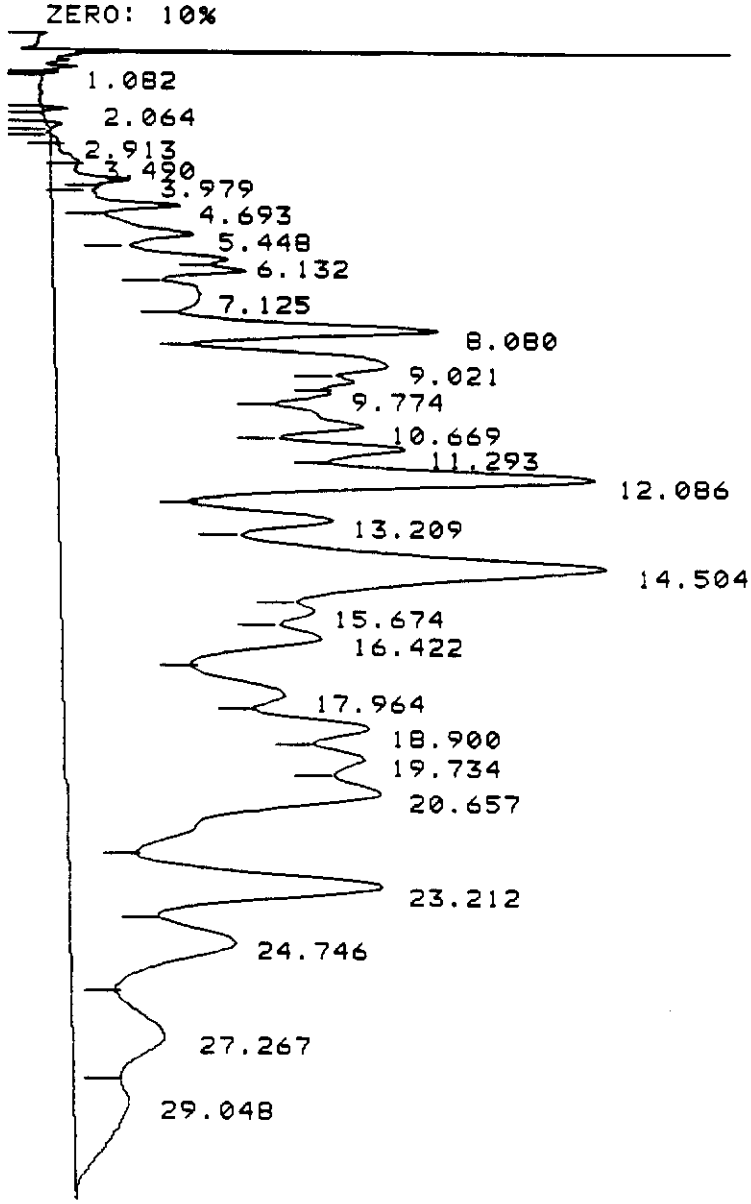
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -19

RAL 2 VIAL: 2 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 1312
SAMPLE
6767 TOXAPH 5.0 ng
(2.5 ppm)

100062

TITLE: CLP PESTICIDES 13:12 11 MAY 90

CHANNEL NO: 3 SAMPLE: B767 TOXAPH METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	A-BHC	1470	2.064	0.004	1470	BB	4.45
2	G-BHC	1360	2.482	-0.048	1360	BB	7.05
3	B-BHC	1242	2.913	0.053	1242	BV	? 10.70
4		7388	3.490		7388	VV	? 14.00
5		19078	3.979		19078	VV	? 14.30
6		5125	4.132		5125	VV	?
7		35106	4.693		35106	VV	16.50
8	HEPT EPOX	61160	5.448	0.118	61160	VV	? 29.80
9	G-CHLORDAN	51395	6.132	0.172	51395	VV	? 28.70
10	A-CHLORDAN	50600	6.444	-0.036	50600	VV	? 14.05
11		94124	7.125		94124	VV	? 47.00
?	DIELDRIN	161719	8.080	0.020	161719	VV	32.10
		177785	9.021		177785	VV	? 55.50
14		79831	9.449		79831	VV	? 12.30
15	ENDRIN	74963	9.774	-0.086	74963	VV	? 6.75
16		180462	10.669		180462	VV	? 59.50
17	DDD	148351	11.293	-0.117	148351	VV	? 35.20
18		287014	12.086		287014	VV	? 45.95
19	DDT	144136	13.209	-0.341	144136	VV	? 54.00
20	ENDRIN ALD	483072	14.504	-0.446	483072	VV	? 74.25
21		114364	15.674		114364	VV	? 23.40
22		171329	16.422		171329	VV	? 32.00
23	ESS	164716	17.964	-0.086	164716	VV	? 87.00
24		188932	18.900		188932	VV	? 58.50
25		182451	19.734		182451	VV	? 43.40
26		307485	20.657		307485	VV	?102.75
27	DBC	238055	23.212	0.332	238055	VV	57.40
28	ENDRIN KET	164552	24.746	0.176	164552	VV	? 95.50
29		125662	27.267		125662	VV	?115.40
30		74818	29.048		74818	VB	? 58.15
TOTALS:		3797740		-0.285	3797740		

DETECTED PKS: 31 REJECTED PKS: 1

DIVISOR: 1.00000 MULTIPLIER: 10000.0

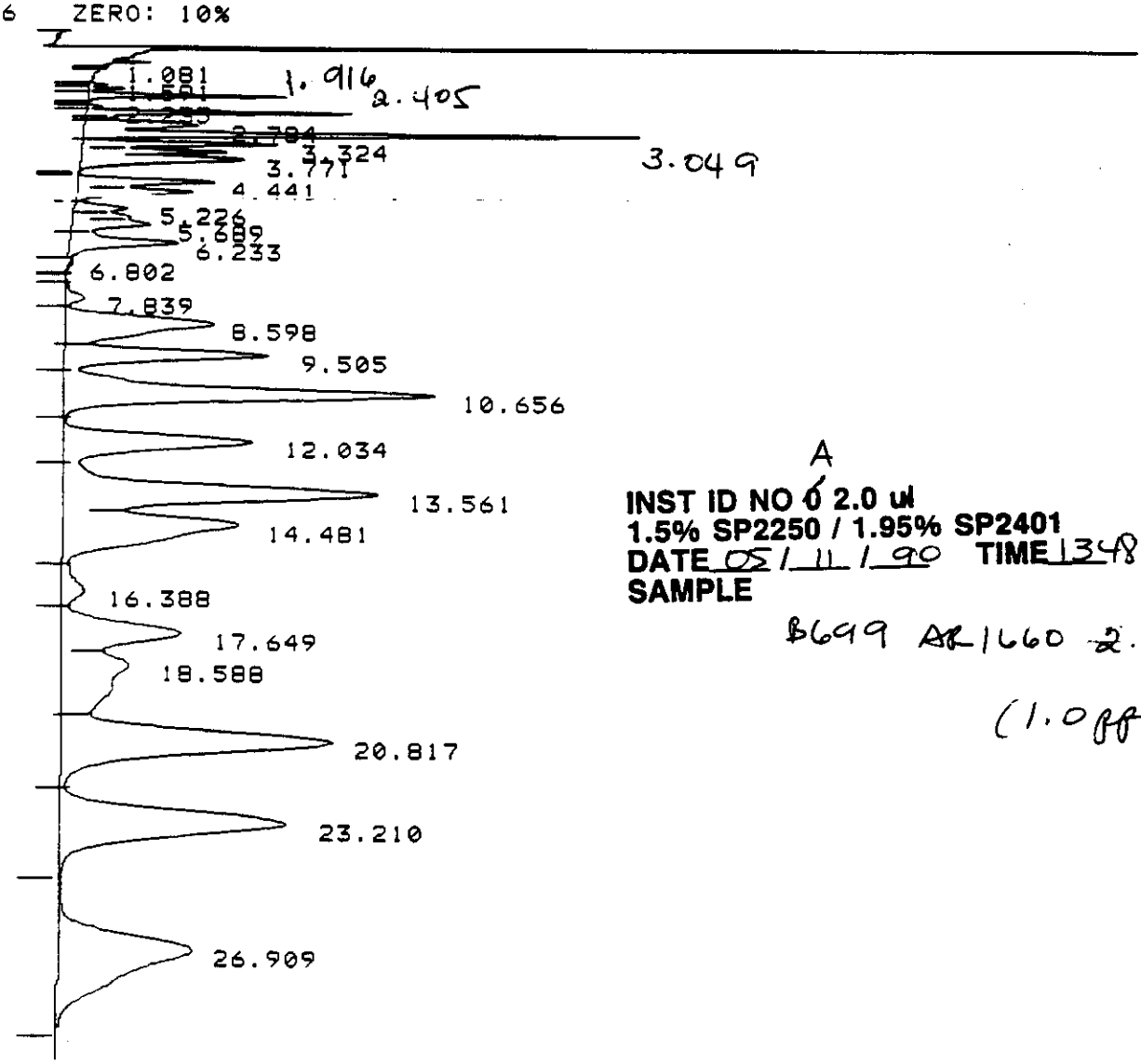
NOISE: 41.3 OFFSET: -14

RACK: 2 VIAL: 4 INJ: 1

N ES:
'L: 1.5% SP2250/1.95% SP2401
..MT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

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

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



A

INST ID NO 6 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 **TIME** 1348
SAMPLE

B699 AR1660 2.0ng
(1.0ppm)

TITLE: CLP PESTICIDES 13:48 11 MAY 90

CHANNEL NO: 3 SAMPLE: B699 AR1660 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		970	1.591		970	BV		3.85
2		1784	1.710		1784	VV		3.70
3		13947	1.916		13947	VB		4.55
4		1017	2.235		1017	BV		4.55
5		20783	2.405		20783	VV		5.15
6	G-BHC	2142	2.552	0.022	2142	VV	?	2.70
7		18215	2.784		18215	VV	?	5.55
8	B-BHC	3177	2.877	0.017	3177	VV	?	
9	HEPTACHLOR	54119	3.049	-0.041	54119	VV		6.45
10	D-BHC	22440	3.324	-0.006	22440	VV	?	7.75
11		16538	3.552		16538	VV		9.05
12	ALDRIN	32025	3.771	0.101	32025	VB		13.90
13		22566	4.441		22566	BV		11.65
14		21159	4.746		21159	VV		13.45
15	HEPT EPOX	9252	5.226	-0.104	9252	VV	?	11.70
16		8274	5.493		8274	VV	?	14.80
17		16511	5.689		16511	VV	?	17.20
18		26884	6.233		26884	VV		13.35
19	A-ENDOSULF	694	6.802	0.152	694	T	?	7.60
20	DIELDRIN	5720	7.839	-0.221	5720	BV		17.20
21		68305	8.598		68305	VV		33.05
22		62102	9.505		62102	VV		20.50
23		137634	10.656		137634	VV		22.65
24	B-ENDOSULF	79333	12.034	0.324	79333	VV		28.00
25	DDT	150083	13.561	0.011	150083	VV	?	30.35
26		114720	14.481		114720	VV		49.15
27		13740	16.388		13740	VV		34.80
[illegible]	ESS	69894	17.649	-0.401	69894	VV		39.40
[illegible]		75440	18.588		75440	VV	?	97.25
30		180656	20.817		180656	VV		43.15
31	DBC	161291	23.210	0.330	161291	VV		47.05
32		148751	26.909		148751	VB		69.75
TOTALS:		1560170		0.184	1560170			

DETECTED PKS: 33 REJECTED PKS: 1

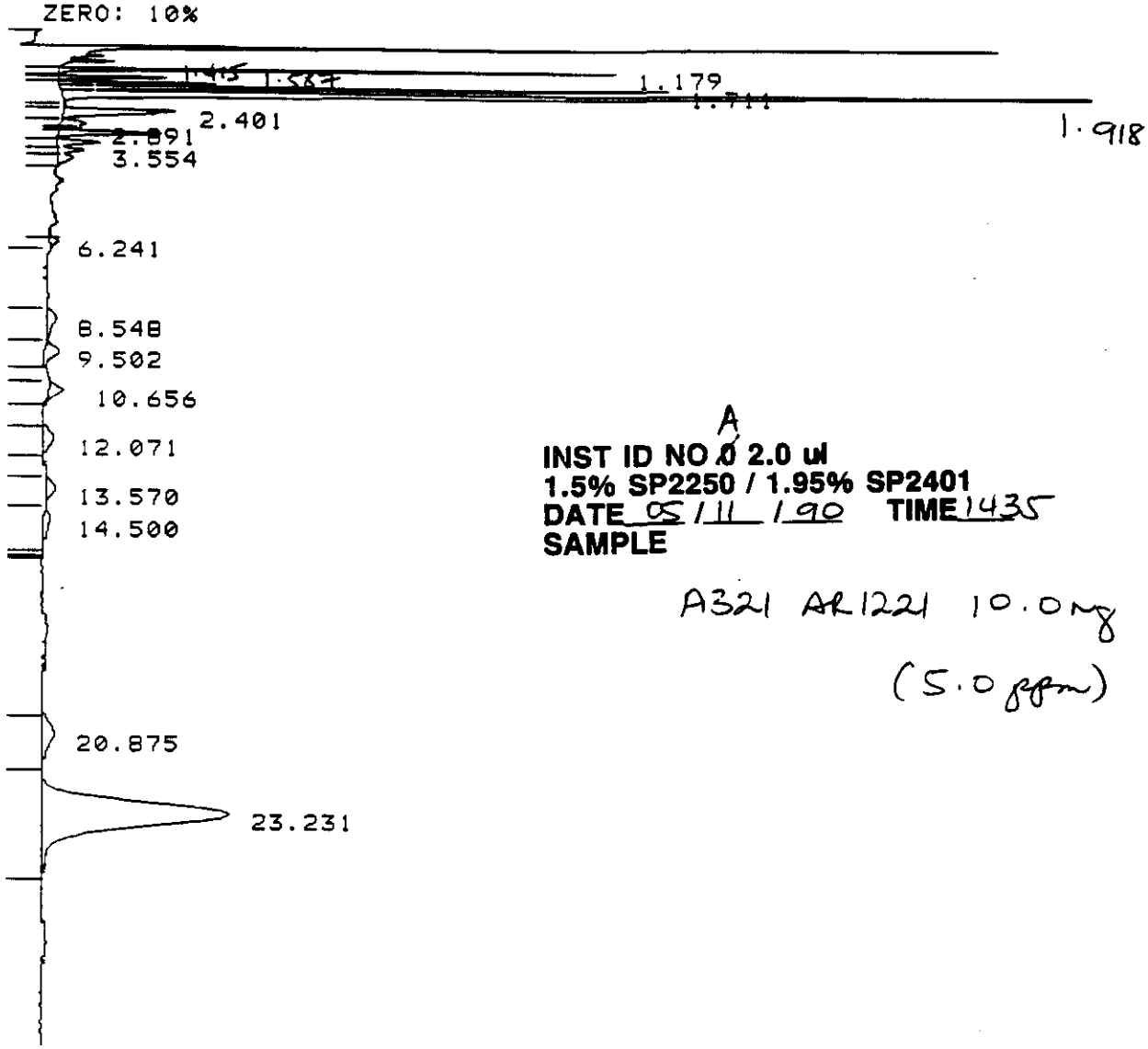
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 41.3 OFFSET: -41

RACK: 2 VIAL: 5 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

C RT SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO. A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 1435
SAMPLE

A321 AR1221 10.0 ng
(5.0 ppm)

TITLE: CLP PESTICIDES 14:35 11 MAY 90

CHANNEL NO: 3 SAMPLE: A321 AR1221 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		21803	1.179		21803	BB		2.65
2		5169	1.415		5169	BV		3.20
3		8981	1.587		8981	VV		4.00
4		33376	1.711		33376	VV		3.70
5		116631	1.918		116631	VB		4.85
		15357	2.401		15357	BV		9.80
		3367	2.785		3367	VV	?	6.60
8	B-BHC	1667	2.891	0.031	1667	VV	?	1.90
9	HEPTACHLOR	9625	3.052	-0.038	9625	VV		6.10
10	D-BHC	4482	3.328	-0.002	4482	VV		7.30
11		2764	3.554		2764	VV		7.15
12	ALDRIN	2521	3.767	0.097	2521	VB	?	11.90
13		1637	6.241		1637	BB		12.75
14		5495	8.548		5495	BV	?	30.80
15		4816	9.502		4816	VB		19.80
16		4004	10.656		4004	BB		17.65
17		4315	12.071		4315	BB	?	30.75
18	DDT	4152	13.570	0.020	4152	BV		26.25
19		2678	14.500		2678	VB		28.10
20		7950	20.875		7950	BV		43.20
21	DBC	132891	23.231	0.351	132891	VB		47.60
TOTALS:		393681		0.459	393681			

DETECTED PKS: 21 REJECTED PKS: 0

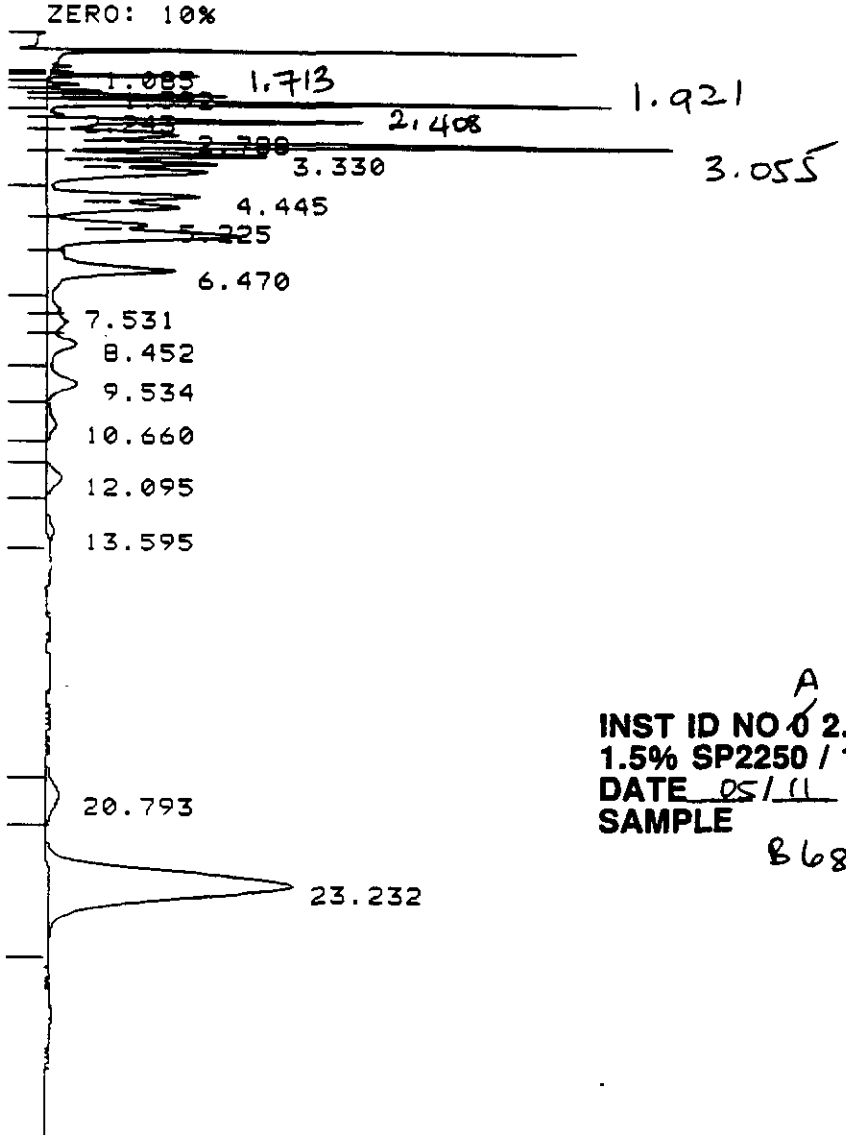
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 51.0 OFFSET: -16

RACK: 2 VIAL: 7 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
[illegible] INJ.2UL/INSTRUMENT LETTER A
[illegible] OUTSIDE RETENTION TIME WINDOW
8 [illegible] STANDARDS

CHART SPEED 0.5 CM/MIN
F EN: 16 ZERO: 10%



INST ID NO 0 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 1509
SAMPLE
B684 AR1232 5.0mg
(2.5 ppm)

100068

TITLE: CLP PESTICIDES 15:09 11 MAY 90

CHANNEL NO: 3 SAMPLE: B684 AR1232 METHOD: CLP-3A

PEAK	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		761	1.085		761	BV		2.30
2		5487	1.181		5487	VV		2.60
3		1491	1.417		1491	VV		3.20
4		2852	1.592		2852	VV		3.95
5		9217	1.713		9217	VV		3.75
6		41347	1.921		41347	VV		4.85
7		27342	2.408		27342	VV		5.50
8		19486	2.788		19486	VV	?	7.00
9	B-BHC	3961	2.877	0.017	3961	VV	?	
[illegible]	HEPTACHLOR	56725	3.055	-0.035	56725	VV	?	4.10
[illegible]	D-BHC	23822	3.330	0.000	23822	VV	?	7.95
12		18192	3.556		18192	VV	?	9.60
13	ALDRIN	29909	3.779	0.109	29909	VV	?	15.40
14		25054	4.445		25054	VV	?	10.70
15		24734	4.739		24734	VV	?	16.40
16	HEPT EPOX	15295	5.225	-0.105	15295	VV	?	12.30
17		42992	5.505		42992	VV		17.45
18	A-CHLORDAN	34534	6.470	-0.010	34534	VV		15.25
19	DDE	3023	7.531	-0.079	3023	VV	?	18.50
0	DIELDRIN	6038	7.862	-0.198	6038	VV	?	31.70
21		9191	8.452		9191	VV		22.10
22		9665	9.534		9665	VV		23.40
23		2936	10.660		2936	VB	?	28.00
24		5437	12.095		5437	BV		25.65
25	DDT	2131	13.595	0.045	2131	VB	?	31.85
26		6872	20.793		6872	BV		42.95
27	DBC	158315	23.232	0.352	158315	VB		47.00
TOTALS:		586809		0.096	586809			

DETECTED PKS: 28 REJECTED PKS: 1

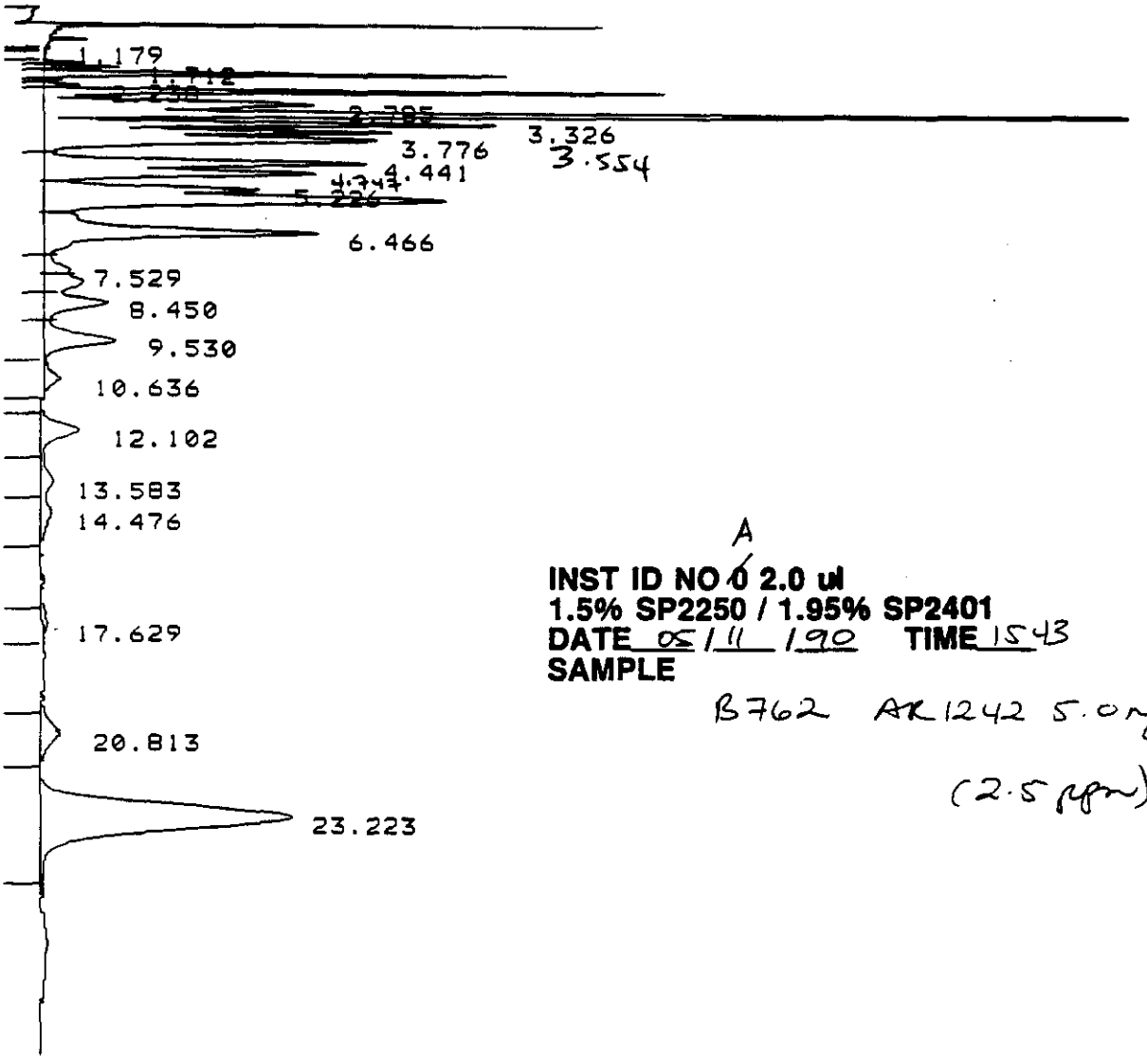
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 51.0 OFFSET: -22

RACK: 2 VIAL: 8 INJ: 1

NOTES:
[illegible]: 1.5% SP2250/1.95% SP2401
[illegible] INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 11 / 90 TIME 1543
SAMPLE
B762 AR1242 5.0ng
(2.5 ppm)

TITLE: CLP PESTICIDES 15:43 11 MAY 90

CHANNEL NO: 3 SAMPLE: B762 AR1242 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		2232	1.592		2232	BV		3.95
2		4124	1.712		4124	VV		3.75
3		33990	1.917		33990	VV		4.60
4		2651	2.238		2651	VV		5.20
5		47863	2.406		47863	VV		5.20
6	G-BHC	5076	2.555	0.025	5076	VV	?	3.40
	B-BHC	49897	2.785	-0.075	49897	VV	?	5.75
8	HEPTACHLOR	124750	3.051	-0.039	124750	VV		6.30
9	D-BHC	51070	3.326	-0.004	51070	VV		7.90
10		39031	3.554		39031	VV		9.00
11	ALDRIN	65025	3.776	0.106	65025	VV	?	15.15
12		54965	4.441		54965	VV		12.55
13		49588	4.747		49588	VV	?	14.40
14	HEPT EPOX	34175	5.226	-0.104	34175	VV	?	12.50
15		95557	5.501		95557	VV		17.10
16	A-CHLORDAN	77570	6.466	-0.014	77570	VV		15.10
17	DDE	7493	7.529	-0.081	7493	VV	?	22.30
18	DIELDRIN	14367	7.865	-0.195	14367	VV	?	31.45
19		21272	8.450		21272	VV		22.00
20		26843	9.530		26843	VV		24.05
21		6474	10.636		6474	VB	?	26.00
22		14912	12.102		14912	BV		26.25
23	DDT	5943	13.583	0.033	5943	VV		32.20
24		6377	14.476		6377	VB		40.60
25	ESS	2361	17.629	-0.421	2361	BB		38.10
26		10296	20.813		10296	BV		40.45
27	DBC	169224	23.223	0.343	169224	VB		47.00
TOTALS:		1023130		-0.426	1023130			

DETECTED PKS: 29 REJECTED PKS: 2

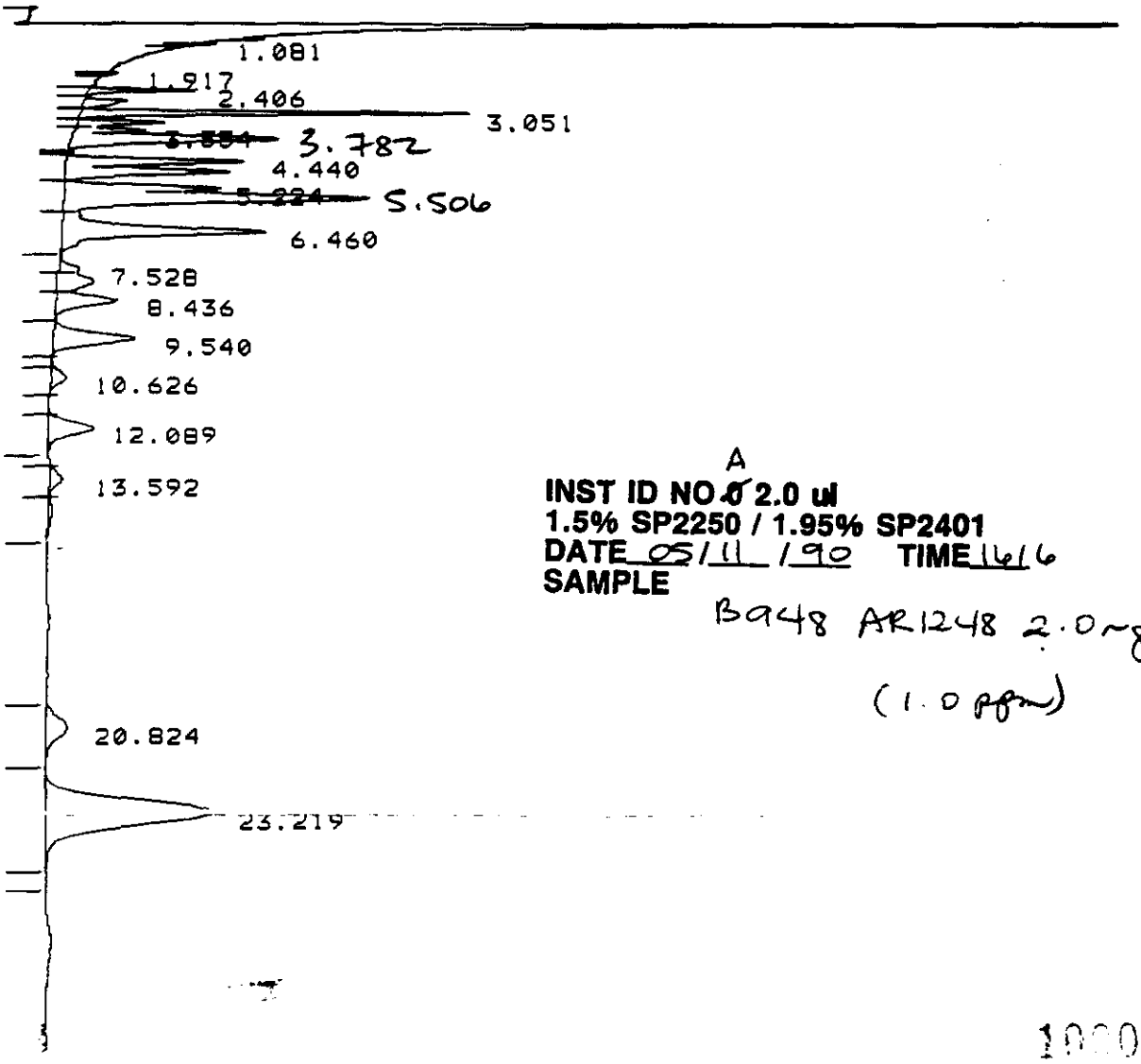
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 51.0 OFFSET: -10

RAC 2 VIAL: 10 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO. A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 1616
SAMPLE
B948 AR1248 2.0ng
(1.0 ppm)

TITLE: CLP PESTICIDES 16:16 11 MAY 90

CHANNEL NO: 3 SAMPLE: B948 AR1248 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		611	1.081		611	BB		1.75
2		619	1.917		619	BB		3.05
		7909	2.406		7909	BV		5.00
		6115	2.707		6115	VV		9.60
5	HEPTACHLOR	35997	3.051	-0.039	35997	VV		6.30
6	D-BHC	9745	3.327	-0.003	9745	VV		7.10
7		7163	3.554		7163	VV	?	7.00
8		38831	3.782		38831	VB		12.60
9		27294	4.440		27294	BV		10.95
10		28100	4.742		28100	VV		12.50
11	HEPT EPOX	23920	5.224	-0.106	23920	VV	?	11.80
12		70958	5.506		70958	VV		16.55
13	A-CHLORDAN	54894	6.460	-0.020	54894	VV		14.70
14	DDE	4341	7.528	-0.082	4341	VV	?	15.80
15	DIELDRIN	12248	7.888	-0.172	12248	VV	?	25.45
16		17021	8.436		17021	VV		18.40
17		26055	9.540		26055	VB		21.00
18		5397	10.626		5397	BB		22.65
19		17047	12.089		17047	BB		25.55
20	DDT	7040	13.592	0.042	7040	BB		25.90
21		13379	20.824		13379	BV		41.70
22	DBC	118005	23.219	0.339	118005	VB		47.55
TOTALS:		532689		-0.041	532689			

DETECTED PKS: 22 REJECTED PKS: 0

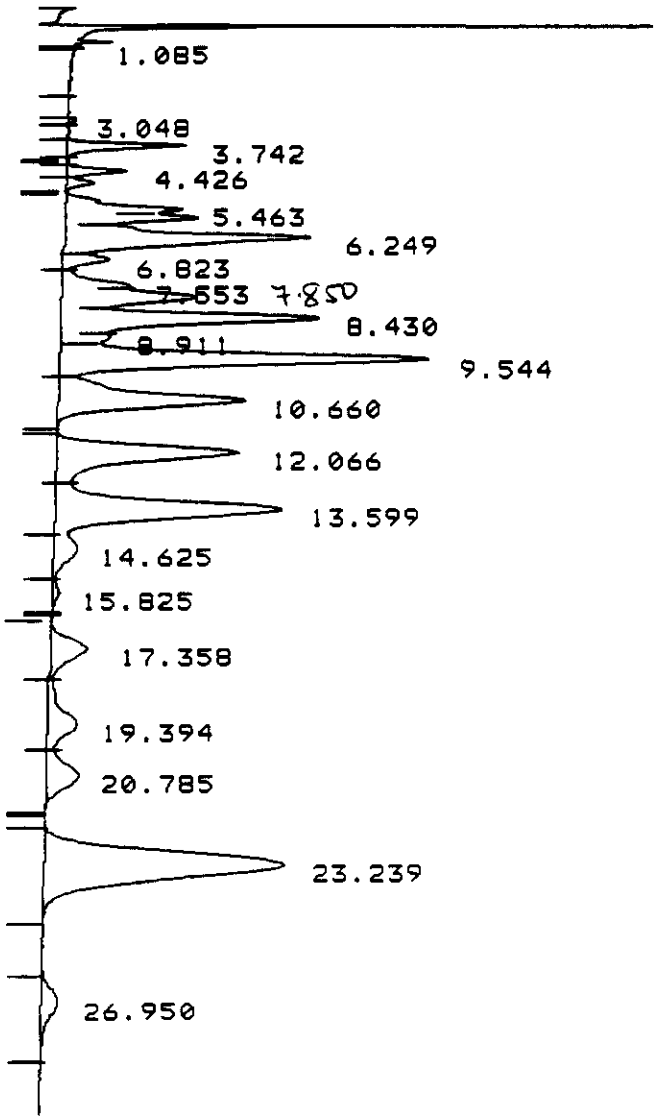
DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 51.0 OFFSET: -24

RA: 2 VIAL: 11 INJ: 1

NOT :
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%



INST ID NO. A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 1727
SAMPLE
B761 AR1254 2.0 ng
(1.0 ppm)

varian /sunnyvale, calif. p/n 03-9... 62-00

TITLE: CLP PESTICIDES 17:27 11 MAY 90

'EL NO: 3 SAMPLE: B761 AR1254 METHOD: CLP-3A

PEAK NO	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1	HEPTACHLOR	649	3.048	-0.042	649	BB		5.90
2	ALDRIN	15512	3.742	0.072	15512	BV	?	9.70
3		7570	4.426		7570	BV		9.45
4		3968	4.737		3968	VB		10.20
5	HEPT EPOX	22802	5.463	0.133	22802	BV	?	13.20
6		22985	5.698		22985	VV	?	17.15
7		69819	6.249		69819	VV		18.90
8	A-ENDOSULF	9015	6.823	0.173	9015	VV	?	15.70
9	DDE	12912	7.553	-0.057	12912	VV	?	19.40
10	DIELDRIN	38017	7.850	-0.210	38017	VV		23.80
11		70229	8.430		70229	VV		18.95
12		9470	8.911		9470	VV	?	3.00
13		111591	9.544		111591	VV	?	19.05
14		68524	10.660		68524	VB		23.10
15		69241	12.066		69241	BV		26.05
16	DDT	97446	13.599	0.049	97446	VV	?	30.00
17	ENDRIN ALD	13485	14.625	-0.325	13485	VV	?	43.05
18		2957	15.825		2957	VV		16.80
19		19726	17.358		19726	VV		39.85
20		19495	19.394		19495	VV		40.65
21		19312	20.785		19312	VB		39.40
22	DBC	153572	23.239	0.359	153572	BB		46.95
23		12687	26.950		12687	BB		52.80
TOTALS:		870984		0.152	870984			

CTED PKS: 25 REJECTED PKS: 2

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 43.7 OFFSET: -42

RACK: 2 VIAL: 13 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

Versar INC.

REAGENT BLANK DATA

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

PESTICIDE SAMPLE TABLE

EPA SAMPLE NUMBER

PBLK49

VERSAR# RB0049

MATRIX IS: WATER

Lab Name: VERSAR, INC.

Lab Code: VERSAR

Instrument ID: A

Run Date: 05/11/90

Inject Vol 2.00 (uL)

Case No.: ~~VERSCBM-2336,2367~~ R3-7

Contract:

SAS No.:

GC Column ID: SP2250/SP2401

Window Width: 1.0%

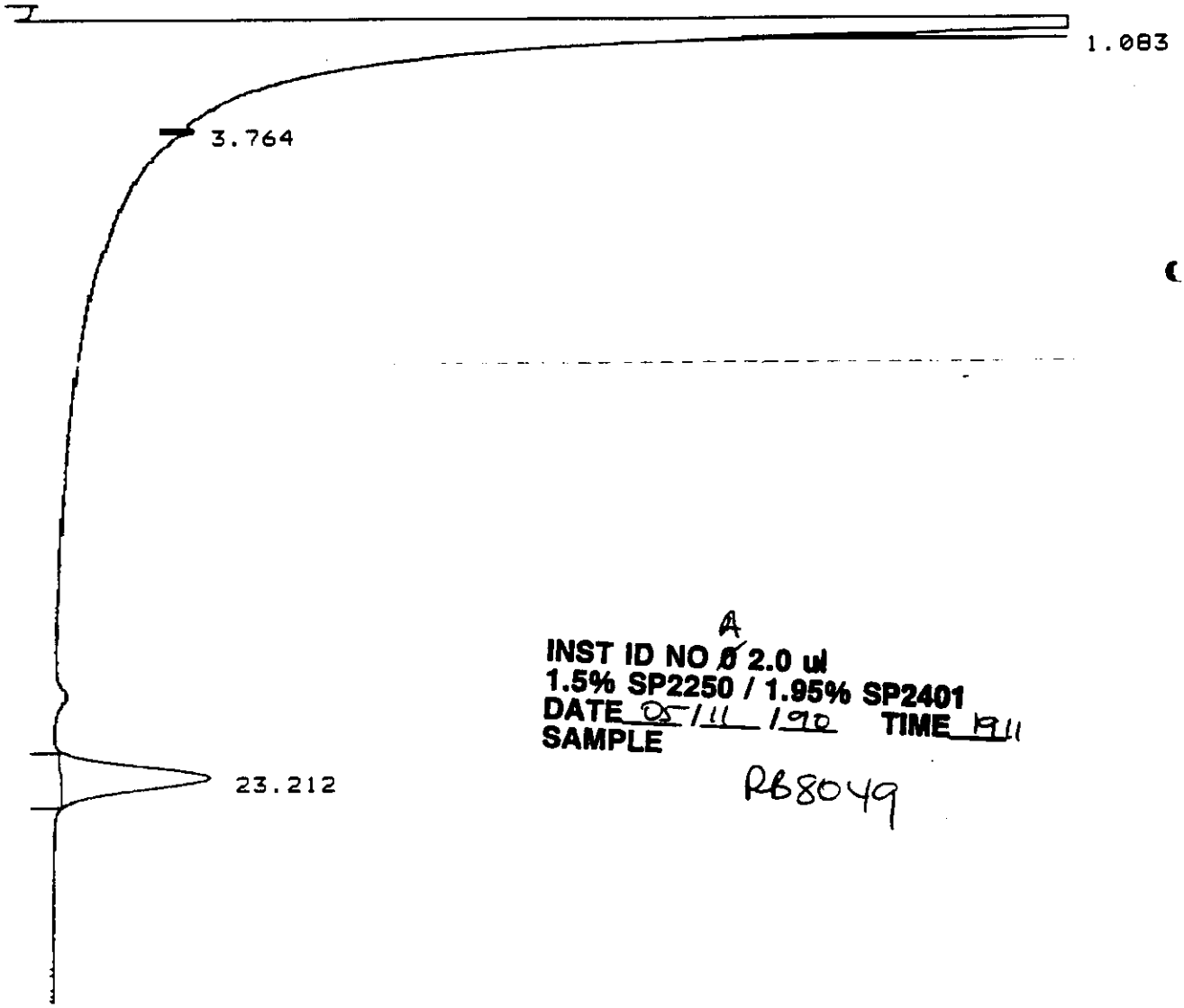
COMPOUND	RT WINDOW FROM	RT WINDOW TO	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L)	DETECTION LIMIT (ug/L)	
alpha-BHC	2.83	2.87	0.00	0	992722	0.000	2.00	0.000	500.00	0.00	2.50	
beta-BHC	2.82	2.88	0.00	0	297343	0.000	2.00	0.000	500.00	0.00	2.50	
delta-BHC	3.29	3.35	0.00	0	917492	0.000	2.00	0.000	500.00	0.00	2.50	
gamma-BHC	2.49	2.55	0.00	0	814856	0.000	2.00	0.000	500.00	0.00	2.50	
Heptachlor	3.05	3.11	0.00	0	863854	0.000	2.00	0.000	500.00	0.00	2.50	
Aldrin	3.62	3.70	0.00	0	800269	0.000	2.00	0.000	500.00	0.00	2.50	
Hept. epoxide	5.27	5.37	0.00	0	769525	0.000	2.00	0.000	500.00	0.00	2.50	
Endosulfan I	6.57	6.71	0.00	0	718902	0.000	2.00	0.000	500.00	0.00	2.50	
Dieldrin	7.97	8.13	0.00	0	790896	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDE	7.50	7.66	0.00	0	698639	0.000	2.00	0.000	500.00	0.00	5.00	
Endrin	9.73	9.93	0.00	0	523658	0.000	2.00	0.000	500.00	0.00	5.00	
Endosulfan II	11.57	11.81	0.00	0	713173	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'-DDD	11.26	11.48	0.00	0	572143	0.000	2.00	0.000	500.00	0.00	5.00	
Endo. sulfate	17.82	18.18	0.00	0	514163	0.000	2.00	0.000	500.00	0.00	5.00	
4,4'DDT	13.39	13.67	0.00	0	504926	0.000	2.00	0.000	500.00	0.00	5.00	
Methoxychlor	25.17	25.67	0.00	0	261003	0.000	2.00	0.000	500.00	0.00	25.00	
Endrin ketone	24.26	24.76	0.00	0	723623	0.000	2.00	0.000	500.00	0.00	5.00	
a. Chlordane	6.40	6.52	0.00	0	741797	0.000	2.00	0.000	500.00	0.00	5.00	
g. Chlordane	5.88	6.00	0.00	0	768348	0.000	2.00	0.000	500.00	0.00	5.00	
Toxaphene	14.36	14.65	0.00	0	282124	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1016	2.75	2.81	0.00	0	64752	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1221	1.57	1.61	0.00	0	18596	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1232	2.39	2.43	0.00	0	30823	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1242	3.74	3.82	0.00	0	51936	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1248	5.17	5.27	0.00	0	107949	0.000	2.00	0.000	500.00	0.00	25.00	
Aroclor-1254	7.77	7.93	0.00	0	151284	0.000	2.00	0.000	500.00	0.00	50.00	
Aroclor-1260	11.91	12.15	0.00	0	271936	0.000	2.00	0.000	500.00	0.00	50.00	
DBC	22.59	23.05	23.21	99337	674216	0.147	2.00	0.074	500.00	36.83	5.00	HIT

100078

11-May-90

ORIGINAL (Red)

C RT SPEED 0.5 CM/MIN
A N: 16 ZERO: 10%



INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME 1911
SAMPLE
RB8049

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

TITLE: CLP PESTICIDES 19:11 11 MAY 90

ORIGINAL (Red)

CHANNEL NO: 3 SAMPLE: RB8049 METHOD: CLP-3A

PK N	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		11715	1.083		11715	BB	2.20
2	ALDRIN ORT	517	3.764	0.094	517	BV	? 4.90
3	DBC	99337	23.212	0.332	99337	BB	? 37.70
TOTALS:		111569		0.426	111569		

DETECTED PKS: 4 REJECTED PKS: 1

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 43.7 OFFSET: -15

RACK: 3 VIAL: 2 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
8080 STANDARDS

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

VERSAR LABORATORY OPERATIONS
PARAMETER REQUEST SHEET

Deliver To: 47

Control: 2565
Code: VERSCDM
Batch: 4
Job Number: 420.1.0

Case: R3-7
SDG: 4
Quote: 9000194 - 90
Charge:

Manager: BECKMAN
Company: VERSAR DIV 31

Site: CDM

Received: 23-APR-90
Due: 21-MAY-90

Sampled: 19-APR-90
Report: 21-MAY-90
Disposal: 30-AUG-90

QC Level:
Deliver:

Rep Type:
Required: 1 Full, 1 Summary

Comments: Protocols - See VERSCDM-2(2536); Do 1 set of water QC for METALS ONLY. No sample QC for soils.

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests
BNAL - 48							
	16909	A	4	LINDANE	SOIL	A-34	XBNA
	16910	A	8	HEPT.	SOIL	A-34	XBNA
	16911	A	9	HEPT. EPOX	SOIL	A-34	XBNA
	16912	A	10	END.	SOIL	A-34	XBNA
	16913	A	11	METHOX	SOIL	A-34	XBNA
	16914	A	12	CHLOR	SOIL	A-34	XBNA
	16915	A	13	TOX.	SOIL	A-34	XBNA
	16916	A	14		SOIL	A-34	XBNA
	16917	A	15		SOIL	A-34	XBNA
	16918	A	GW-1		HOH	A-34	XACD XBN PEST XPES
CLPM - 43							
	16928	A	4		SOIL	A-34	
	16929	A	8		SOIL	A-34	
	16930	A	9		SOIL	A-34	
	16931	A	10		SOIL	A-34	
	16932	A	11		SOIL	A-34	
	16933	A	12		SOIL	A-34	
	16934	A	13		SOIL	A-34	
	16935	A	14		SOIL	A-34	
	16936	A	15		SOIL	A-34	
	16937	A	GW-1		HOH	A-34	
	16948	A	GW-1		DHOH	A-34	
CNM - 44							
	16938	A	4		SOIL	A-34	TS
	16939	A	8		SOIL	A-34	TS
	16940	A	9		SOIL	A-34	TS
	16941	A	10		SOIL	A-34	TS
	16942	A	11		SOIL	A-34	TS
	16943	A	12		SOIL	A-34	TS
	16944	A	13		SOIL	A-34	TS
	16945	A	14		SOIL	A-34	TS
	16946	A	15		SOIL	A-34	TS

Continued ->

Control #: 2565

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests		
	16947	A		GW-1	HOH	A-34			
PEST - 47									
	16918	A		GW-1	HOH	A-34	XACD	XBN	XPES
							BNAL		
	16919	A		4	SOIL	A-34	XPES		
	16920	A		8	SOIL	A-34	XPES		
	16921	A		9	SOIL	A-34	XPES		
	16922	A		10	SOIL	A-34	XPES		
	16923	A		11	SOIL	A-34	XPES		
	16924	A		12	SOIL	A-34	XPES		
	16925	A		13	SOIL	A-34	XPES		
	16926	A		14	SOIL	A-34	XPES		
	16927	A		15	SOIL	A-34	XPES		
TCBN - 48									
	16960	B		11	SOIL	A-34	TCLX	TCLM	XTCB
							TCPS	XTCP	TCHB
							XTCH		
TCHB - 47									
	16960	B		11	SOIL	A-34	TCLX	TCLM	TCBN
							XTCB	TCPS	XTCP
							XTCH		
TCLM - 43									
	16960	B		11	SOIL	A-34	TCLX	TCBN	XTCB
							TCPS	XTCP	TCHB
							XTCH		
TCLV - 48									
	16961	B		11	SOIL	GC/MS	ZHE		
TCLX - 43									
	16960	B		11	SOIL	A-34	TCLM	TCBN	XTCB
							TCPS	XTCP	TCHB
							XTCH		
TCPS - 47									
	16960	B		11	SOIL	A-34	TCLX	TCLM	TCBN
							XTCB	XTCP	TCHB
							XTCH		
TS - 44									
	16938	A		4	SOIL	A-34	CNM		
	16939	A		8	SOIL	A-34	CNM		
	16940	A		9	SOIL	A-34	CNM		
	16941	A		10	SOIL	A-34	CNM		
	16942	A		11	SOIL	A-34	CNM		
	16943	A		12	SOIL	A-34	CNM		
	16944	A		13	SOIL	A-34	CNM		
	16945	A		14	SOIL	A-34	CNM		
	16946	A		15	SOIL	A-34	CNM		
	16949	B		4	SOIL	GC/MS	VOAL		
	16950	B		8	SOIL	GC/MS	VOAL		
	16951	B		9	SOIL	GC/MS	VOAL		
	16952	B		10	SOIL	GC/MS	VOAL		
	16953	B		11	SOIL	GC/MS	VOAL		
	16954	B		12	SOIL	GC/MS	VOAL		
	16955	B		13	SOIL	GC/MS	VOAL		
	16956	B		14	SOIL	GC/MS	VOAL		
	16957	B		15	SOIL	GC/MS	VOAL		
VOAL - 48									
	16949	B		4	SOIL	GC/MS	TS		

Continued ->

Control #: 2565

Test	Sample	X	C	Field Number	Matrix	Location	Other Tests		
	16950	B		8	SOIL	GC/MS	TS		
	16951	B		9	SOIL	GC/MS	TS		
	16952	B		10	SOIL	GC/MS	TS		
	16953	B		11	SOIL	GC/MS	TS		
	16954	B		12	SOIL	GC/MS	TS		
	16955	B		13	SOIL	GC/MS	TS		
	16956	B		14	SOIL	GC/MS	TS		
	16957	B		15	SOIL	GC/MS	TS		
	16958	B		GW-1	HOH	GC/MS			
	16959	B		TB-2	HOH	GC/MS			
XACD - 46									
	16918	A		GW-1	HOH	A-34	XBN	PEST	XPES
							BNAL		
XBN - 46									
	16918	A		GW-1	HOH	A-34	XACD	PEST	XPES
							BNAL		
XBNA - 46									
	16909	A		4	SOIL	A-34	BNAL		
	16910	A		8	SOIL	A-34	BNAL		
	16911	A		9	SOIL	A-34	BNAL		
	16912	A		10	SOIL	A-34	BNAL		
	16913	A		11	SOIL	A-34	BNAL		
	16914	A		12	SOIL	A-34	BNAL		
	16915	A		13	SOIL	A-34	BNAL		
	16916	A		14	SOIL	A-34	BNAL		
	16917	A		15	SOIL	A-34	BNAL		
XPES - 46									
	16918	A		GW-1	HOH	A-34	XACD	XBN	PEST
							BNAL		
	16919	A		4	SOIL	A-34	PEST		
	16920	A		8	SOIL	A-34	PEST		
	16921	A		9	SOIL	A-34	PEST		
	16922	A		10	SOIL	A-34	PEST		
	16923	A		11	SOIL	A-34	PEST		
	16924	A		12	SOIL	A-34	PEST		
	16925	A		13	SOIL	A-34	PEST		
	16926	A		14	SOIL	A-34	PEST		
	16927	A		15	SOIL	A-34	PEST		
XTCB - 46									
	16960	B		11	SOIL	A-34	TCLX	TCLM	TCBN
							TCPS	XTCP	TCHB
							XTCH		
XTCH - 46									
	16960	B		11	SOIL	A-34	TCLX	TCLM	TCBN
							XTCB	TCPS	XTCP
							TCHB		
XTCP - 46									
	16960	B		11	SOIL	A-34	TCLX	TCLM	TCBN
							XTCB	TCPS	TCHB
							XTCH		
ZHE - 43									
	16961	B		11	SOIL	GC/MS	TCLV		

100084

5/17

ORIGINAL
(Red)

EXTRACTS READY FOR ANALYSIS

DATE 05-08-90

CODE ~~6-11 YORK~~ VERSCAN BATCH ~~$~~ 2,4 CONTROL # 5/17 2536, 5/21 2565

DATE RECEIVED 04-19 04-23-90 DATE EXTRACTED 05-08-90

OF EXTRACT 9' # OF SAMPLES 2

MATRIX Lech PARAMETER TCPS (608) LOCATION Fridge 5

IS THIS A RE-EXTRACTION? NO

COMMENTS

TECHNICIAN SIGNATURE [signature]

==========

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 H2O leach
Are dry weights correct?	☐ YES	☑ NO

What clean-up procedure was used? None

SUPERVISOR _____ SECTION CHIEF [signature]

100085

Office of Enforcement

REGION 3
Curtis Bldg., 6th Walnut Sts.
Philadelphia, Pe ivania 19106

CHAIN OF CUS DY RECORD

PROJ. NO.: R3-7
PROJECT NAME: R3-7

SAMPLERS: (Signature) Sharon E. Schaeffer Laurie B. Wyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP VOA	TCLP BNA/Metals	VOA	BNA	Pest./PCB		REMARKS Tag #'S.
1	4/18/90	1000		X	Location 1 (Sludge)	10	2	2	2	1 ~~2~~	1 ~~2~~		3-1068362, 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. Schaeffer	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) J. L. Morrison	Date / Time 4/19/90 0900	Remarks Shipped via Federal Express Airbill # 2294123705	

ORIGINAL (RED)

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ENVIRONMENTAL PROTECTION AGENCY
Office ' Enforcement

REGION 3
Curtis Bldg., 6th Walnut Sts.
Philadelphia, Pe ylvania 19106

CHAIN OF CUS DY RECORD

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

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TAL Metals	Cyanide					REMARKS Tag #'s.
1	4/18/90	1000		X	Location 1 (Sludge)	2	1	1					3-1068361, 62.

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E Schaeffer	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) J. L. Monson	4/19/90	Date / Time 0900	Remarks Shipped via Federal Express Airbill # 2294123705

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ORIGINAL (Red)

00087

...MENTAL PROTECTION AGENCY
Office Enforcement

REGION 3
Curtis Bldg., 6th Walnut Sts.
Philadelphia, Pe... ...vania 19106

CHAIN OF CUS... ...Y RECORD

PROJ. NO.: R3-7
PROJECT NAME: R3-7

SAMPLERS: (Signature) Sharon E. Schaeffer. Lauri B. Weyl

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA	BNA	PCB/Pest.	TAL Metals	Cyanide		REMARKS Tag #'s
2	4/18/90	1135		X	Location 2	6	2	1	1	1	1		3-1068359, 63, 64, 65, 66, 67
3	4/18/90	1145		X	Location 3	6	2	1	1	1	1		3-1068368, 69, 70, 71, 72, 73
5	4/18/90	1430		X	Location 5	6	2	1	1	1	1		3-1068374, 75, 76, 77, 78, 79
6	4/18/90	1455		X	Location 6	10	2	1 2	1 2	1 2	1 2		3-1068380, 81, 82, 83, 84, 85, 86, 87, 88, 89
7	4/18/90	1505		X	Location 7	10	2	1 2	1 2	1 2	1 2		3-1068390, 91, 92, 93, 94, 95, 96, 97, 98, 99

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sharon E. Schaeffer	4/18/90 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature) J. L. Morrison	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) J. L. Morrison	Date / Time 4/19/90 0900	Remarks Shipped via Federal Express Airbill # 4026936093	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

100088

VERSAR INC.

SAMPLE PREPARATION COMMENT SHEET

ORIGINAL (Red)

PROJECT VERSCAM BATCH 24 CASE B3-7

MATRIX HOH PREPARATION PARAMETER TCAS CONTROL 2536 2565

VERSAR SAMPLE NUMBER 16418	Clear, Colorless Hot DW 5-8-90
FIELD SAMPLE NUMBER /	
SOIL SAMPLE PH	
VERSAR SAMPLE NUMBER 16460	Clear, Colorless Hot DW 5-8-90
FIELD SAMPLE NUMBER 11	
SOIL SAMPLE PH	
VERSAR SAMPLE NUMBER 6-1 BLANK 1	Clear Colorless Hot DW 5-8-90
FIELD SAMPLE NUMBER	
SOIL SAMPLE PH	

100699

VERSAR INC. SAMPLE PREPARATION COMMENT SHEET

ORIGINAL (Red)

PROJECT VERSCAM BATCH 24 CASE B3-7

MATRIX HOH PREPARATION PARAMETER TCPS CONTROL 2536, 2565

VERSAR SAMPLE NUMBER	Clear, Colorless HOH. AW. 5-8-90
Fed BLANK 2	
FIELD SAMPLE NUMBER	
SOIL SAMPLE pH	
VERSAR SAMPLE NUMBER	
FIELD SAMPLE NUMBER	
SOIL SAMPLE pH	
VERSAR SAMPLE NUMBER	
FIELD SAMPLE NUMBER	
SOIL SAMPLE pH	

100090

Shu' Out

VERSAR INC PEST TYPE WATER SAMPLE PREPARATIO ZET -BY ~~CONTINUOUS~~ EXTRACTION

CONTROL 2565 2536

PROJECT VERSCAN EXTRACTION PARAMETER TCPS MATRIX SPIKE SOLUTION B475 PAGE 1 OF 1

CASE A3-7 EXTRACTION START DATE 05-08-90

BATCH 2,4 DATE EXTRACTION COMPLETE 05-08-90 SURROGATE SPIKE SOLUTION B461

DATE 05-08-90 ADSORBENT BATCH NUMBER —

VERSAR SAMPLE NUMBER	FIELD SAMPLE NUMBER	SAMPLE VOLUME IN ML.	SPIKE SURR.	SPIKE MS	DATE PEST RECOVERED	DATE PEST CONCENTRN	INITIAL EXTRACT FINAL VOL.	ACID CLEANED YES/NO	VOLUME TO COLUMN CLEAN UP	FINAL CLEANED VOLUME	SAMPLE COMMENTS
16418	1	20ml	1ml	—	05-08-90	NA	10ml	NO	NA	10ml	
16418MS	1	20ml	1ml	1ml			10ml			10ml	
16418MSD	1	20ml	1ml	1ml			10ml			10ml	
16960	11	20ml	1ml	—			10ml			10ml	
RB 8049	PBLK 49	20ml	1ml	—			10ml			10ml	
RB 8050	PBLK 50	20ml	1ml	—			10ml			10ml	
PBTD 3080	—	20ml	1ml	1ml			10ml			10ml	
Ext BLANK 1	—	20ml	1ml	—			10ml			10ml	
Ext BLANK 2		20ml	1ml				10ml			10ml	
		DV	DV 5-8-90	DV	DV	DV	DV 5-8-90	DV	DV 5-8-90	DV	

00091

ORIGINAL (Red)

ORIGINAL (Red)

PESTICIDES DILUTION FACTOR TABLE

Lab Name: VERSAR, INC. Case No.: VERSCDM 2536,2565

Lab Code: VERSAR Contract:

Instrument ID: A SAS No.:

Run Date: 05/11,12/90 GC Column ID: SP2250/SP2401

Inject 2.00 (uL) Window Width: 1.0%

Extraction Date: 05/08/90 Extraction Chemist: DN

DILUTION FACTOR (DF) = (NG INJECTED)/(UL INJECTED)*DF = CONC (UG/KG OR UG/L) DFWATER

	MATRIX	EPA SAMPLE #	LAB SAMPLE ID #	VOL (ml) OF SAMPLE	% MOISTURE	INITIAL EXT FINAL VOL (ML)	ALIQUOT TO PEST (ML)	FINAL PEST VOL (ML)	DILUTION AT INSTRUMENT	DILUTION FACTOR (ml/L)
1	WATER	PBLK49	RB8049	20	0.00	10.00	10.00	10.00	1.0	500.00
2	WATER	PBLK50	RB8050	20	0.00	10.00	10.00	10.00	1.0	500.00
3	WATER	MSTD3080	MSTD3080	20	0.00	10.00	10.00	10.00	1.0	500.00
4	WATER	EXTBLANK1	EXTBLANK1	20	0.00	10.00	10.00	10.00	1.0	500.00
5	WATER	EXTBLANK2	EXTBLANK2	20	0.00	10.00	10.00	10.00	1.0	500.00
6	WATER	1	16418	20	0.00	10.00	10.00	10.00	1.0	500.00
7	WATER	1MS	16418MS	20	0.00	10.00	10.00	10.00	1.0	500.00
8	WATER	1MSD	16418MSD	20	0.00	10.00	10.00	10.00	1.0	500.00
9	WATER	11	16960	20	0.00	10.00	10.00	10.00	1.0	500.00
10	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
11	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
12	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
13	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
14	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
15	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
16	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
17	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
18	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
19	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
20	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
21	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
22	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
23	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
24	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
25	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
26	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
27	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
28	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
29	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR
30	WATER	X	X	X	0.00	10.00	10.00	10.00	1.0	ERR

If sample matrix is SOIL, DF adjusted to meet EPA-CLP specified limits (1.20lx).

100092

11-May-90

DATE 5/11/90 SUBJECT INJECT LOG A PROJECT NO.

ORIGINAL (Red)

Oper. Ezelsdorf Date 05-11-90
Detec. ECD Temp. 300 °C
Column 6' x 4mm Type Sp2250/Sp2401
Carrier Gas N_2 at _____ ml/min
Oven 215 °C for 32 min to 150 °C
for — min at — °C/min
Inst. ID A Baseline _____
Project VERS EIDER Conf. Parameter 8080
VERS COM

PAGE 2

SAMP#	RACK/VIAL	TYPE SAMPLE ID
1	1/ 1	B789 EVAL.05
2	1/ 2	B989 INDA.02
3	1/ 4	B990 INDA.05
4	1/ 5	B991 INDA.08
5	1/ 7	B992 INDA.10
6	1/ 8	B993 INDA.15
7	1/10	B994 INDB.~~20~~ .02 JRK 05/11/90
8	1/11	B995 INDB.~~50~~ .05 JRK 05/11/90
9	1/13	B996 INDB.08
10	1/14	B997 INDB.10
11	2/ 1	B998 INDB.15
12	2/ 2	A910 T.CHL
13	2/ 4	B767 TOXAPH
14	2/ 5	B699 AR1660
15	2/ 7	A321 AR1221
16	2/ 8	B684 AR1232
17	2/10	B762 AR1242
18	2/11	B948 AR1248
19	2/13	B761 AR1254
20	2/14	PBLK45
21	3/ 1	19467
22	3/ 2	RB8049
23	3/ 4	EXTBLK 01
24	3/ 5	EXTBLK 02
25	3/ 7	EVAL B
26	3/ 8	16960
27	3/10	16418
28	3/11	16418MS
29	3/13	16418MSD
30	3/14	MSTD 3080
31	4/ 1	B991 INDA.08
32	4/ 2	B996 INDB.08
33	4/ 4	

TNESSED AND UNDERSTOOD

SIGNED Maya [signature] DATE 5/11/90 SIGNED [signature] 05/11/90

100093

ORIGINAL
(Red)

SINGLE CHANNEL METHOD: CLP-3A 20:53 11 MAY 90

SECTION 1: BASIC
PAGE 1
ANALYSIS PARAMETERS
CHANNEL: 3
CALCULATION: ES
AREA/HT: A
STOP TIME: 30.00
NUMB EXPECTED PKS: 300
EQUILIBRATION TIME: 10
UNRETAINED PK TIME: 0.00
UNIDENT PK FACTOR: 1.000000
SLICE WIDTH: 10

PAGE 2
SAMPLE PARAMETERS
RUN TYPE: A
SAMPLE ID: EXTBLK 01
DIVISOR: 1.000000
AMT STD: 1.000000
MLTPLR: 10000.00

INST ID NO ~~0~~ A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME
SAMPLE
Method

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

PAGE 4
PLOT INSTRUCTIONS
PLOT: N
ZERO OFFSET: 10
ANNOTATION
RETENTION TIME: Y
PLOT CONTROL: N
TIME TICKS: N
TIME EVENTS: N
PK START/END: Y

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

PAGE 6
PLOT ATTEN
INIT PLOT ATTEN: 16

SECTION 2: TIME EVENTS
PAGE 1
LINE# TIME EVENT VALUE

100094

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

3	0.00	T%	5.0
4	0.00	WI	4
5	0.00	II	1.00

ORIGINAL (Red)

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

PAGE 2

PK#	TIME	NAME	FACTOR	AMOUNT	REF	GR#	MUST LO	MUST HI
1	2.06	A-BHC	1.000000	1.000000			0.000000	0.000000
2	2.53	G-BHC	1.000000	1.000000			0.000000	0.000000
3	2.86	B-BHC	1.000000	1.000000			0.000000	0.000000
4	3.09	HEPTACHLOR	1.000000	1.000000			0.000000	0.000000
5	3.33	D-BHC	1.000000	1.000000			0.000000	0.000000
6	3.67	ALDRIN	1.000000	1.000000			0.000000	0.000000
7	5.33	HEPT EPOX	1.000000	1.000000			0.000000	0.000000
8	5.96	G-CHLORDAN	1.000000	1.000000			0.000000	0.000000
9	6.48	A-CHLORDAN	1.000000	1.000000			0.000000	0.000000
10	6.65	A-ENDOSULF	1.000000	1.000000			0.000000	0.000000
11	7.61	DDE	1.000000	1.000000			0.000000	0.000000
12	8.06	DIELDRIN	1.000000	1.000000			0.000000	0.000000
13	9.86	ENDRIN	1.000000	1.000000			0.000000	0.000000
14	11.41	DDD	1.000000	1.000000			0.000000	0.000000
15	11.71	B-ENDOSULF	1.000000	1.000000			0.000000	0.000000
16	13.55	DDT	1.000000	1.000000			0.000000	0.000000
17	14.95	ENDRIN ALD	1.000000	1.000000			0.000000	0.000000
18	18.05	ESS	1.000000	1.000000			0.000000	0.000000
19	22.88	DBC	1.000000	1.000000			0.000000	0.000000
20	24.57	ENDRIN KET	1.000000	1.000000			0.000000	0.000000
21	25.50	METHOXYCHL	1.000000	1.000000			0.000000	0.000000

SECTION 4: GC INSTRUMENT CONTROL
PAGE 1
COL TEMP
ISO/INIT COL TEMP: 205
INIT HOLD TIME: 30.00

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

LN#	TIME	SIDE	ATTN	RANGE	ZERO
1	0.00	A	32	10	Y
2	0.00	B			Y

INST ID NO. A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90 TIME
SAMPLE

Method

PAGE 3
TEMP/FLOW
INJ A TEMP: 240
INJ B TEMP: 0
ION TEMP: 300
TCD TEMP:
TCD FIL TEMP:
AUX TEMP:
COL A FLOW:
COL B FLOW:

PAGE 4

SECTION 7: POST RUN
PAGE 1
FILE NAME:
SAVE INSTRUCTIONS
TYPE:
WHERE TO SAVE: M

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

TRANSMIT RAW DATA: N
REPLOT WITH BASELINES: Y
RAW DATA LOCATION: L
TRANSMIT REPORT: N

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

ORIGINAL (Red)

SECTION 9: SAMPLE LIST+A/S CONTROL
PAGE 1
AUTOSAMPLER CONTROL
INJECT/CALIBRATION: 1
INJECT/ANALYSIS: 1
SAMP VOLUME: 2
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		B789 EVALB			
2	1/ 2		B989 INDA.02			
3	1/ 4		B990 INDA.05			
4	1/ 5		B991 INDA.08			
5	1/ 7		B992 INDA.10			
6	1/ 8		B993 INDA.15			
7	1/10		B994 INDB.20			
8	1/11		B995 INDB.50			
9	1/13		B996 INDB.08			
10	1/14		B997 INDB.10			
11	2/ 1		B998 INDB.15			
12	2/ 2		A910 T.CHL			
13	2/ 4		B767 TOXAPH			
14	2/ 5		B699 AR1660			
15	2/ 7		A321 AR1221			
16	2/ 8		B684 AR1232			
17	2/10		B762 AR1242			
18	2/11		B948 AR1248			
19	2/13		B761 AR1254			
20	2/14		PBLK45			
21	3/ 1		19467			
22	3/ 2		RB8049			
23	3/ 4		EXTBLK 01			
24	3/ 5		EXTBLK 02			
25	3/ 7		EVAL B			
26	3/ 8		16960			
27	3/10		16418			
28	3/11		16418MS			
29	3/13		16418MSD			
30	3/14		MSTD 3080			
31	4/ 1		B991 INDA.08			
32	4/ 2		B996 INDB.08			

INST ID NO A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05/11/90
SAMPLE TIME

Method

SECTION 10: NOTE PAD
PAGE 1

LINE#	VALUE
1	COL: 1.5% SP2250/1.95% SP2401
2	AMT INJ.2UL/INSTRUMENT LETTER A
3	ORT= OUTSIDE RETENTION TIME WINDOW
4	VERSELDE 2561 WATER CLP CONF
5	VERSCDM 2536,2565 WATER M608 QUANT

varian 'sunnyvale, calif.p/n 03-906302-00

ORIGINAL
(Red)

PESTICIDE SAMPLE TABLE

EPA SAMPLE NUMBER

MSTD3080

Lab Name: VERSAR, INC.

Lab Code: VERSAR

Instrument ID: A

Run Date: 05/12/90

Case No.: VERSGBM R3-7

Contract:

SAS No.:

GC Column ID: SP2250/SP2401

Window Width: 1.0%

MATRIX IS: WATER

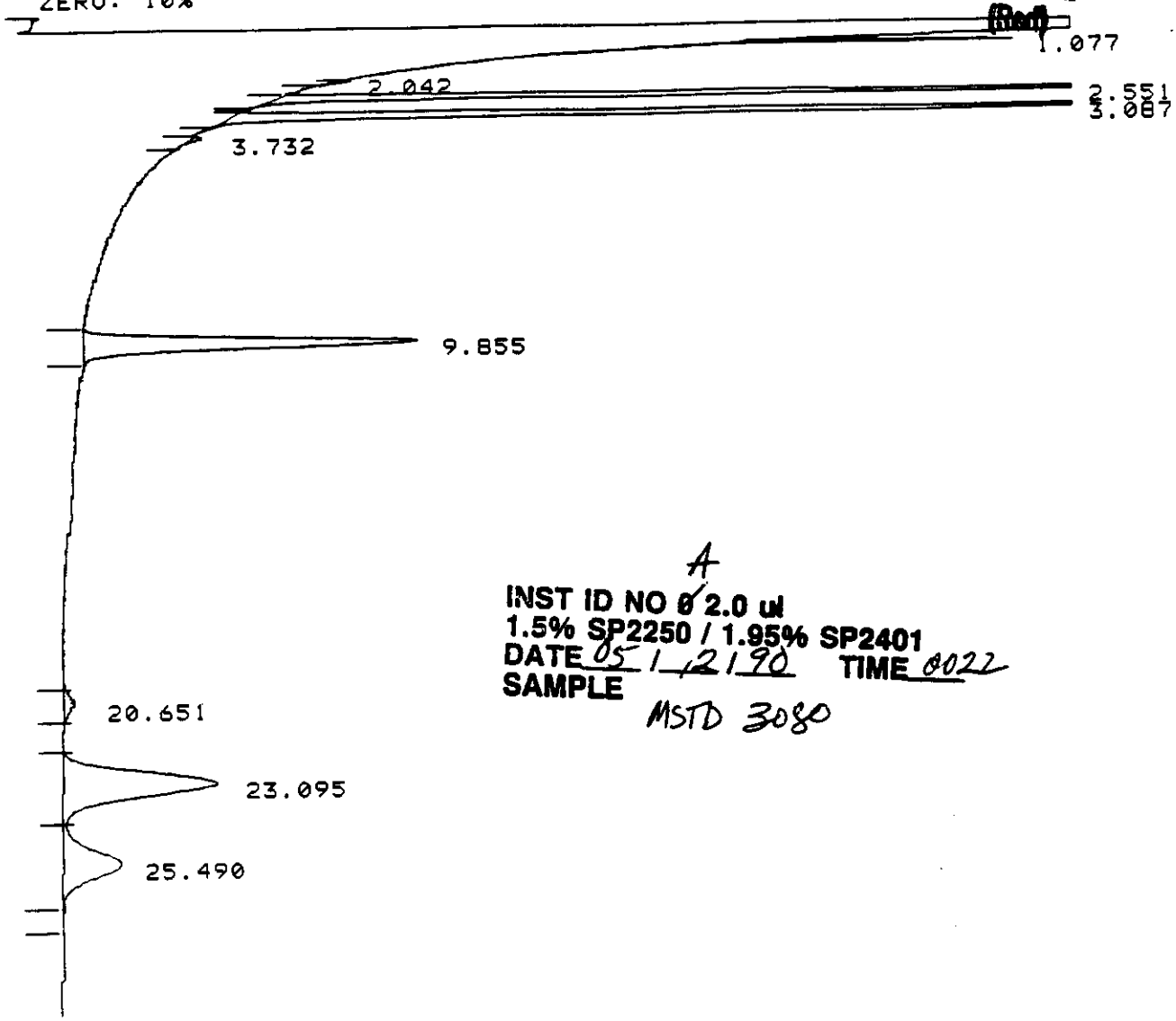
Inject Vol 2.00 (uL)

COMPOUND	RT WINDOW FROM	RT WINDOW TO	SAMPLE RT	SAMPLE AREA	/ CALIB FACTOR =	NG INJECTED	/ INJECT VOLUME (uL)	= INJECT CONC (ug/ml)	X DF	= SAMPLE CONC (ug/L)	DETECTION LIMIT (ug/L)		% Rec
alpha-BHC	2.03	2.07	2.04	556	992722	0.001	2.00	0.000	500.00	0.14	2.50	BDL	
beta-BHC	2.82	2.88	0.00	0	297343	0.000	2.00	0.000	500.00	0.00	2.50		
delta-BHC	3.29	3.35	0.00	0	917492	0.000	2.00	0.000	500.00	0.00	2.50		
gamma-BHC	2.49	2.55	2.55	182269	814856	0.224	2.00	0.112	500.00	55.92	2.50	HIT	112
Heptachlor	3.05	3.11	3.09	180471	863854	0.209	2.00	0.104	500.00	52.23	2.50	HIT	104
Aldrin	3.62	3.70	3.73	1849	800269	0.002	2.00	0.001	500.00	0.58	2.50	BDL	
Hept. epoxide	5.27	5.37	0.00	0	769525	0.000	2.00	0.000	500.00	0.00	2.50		
Endosulfan I	6.57	6.71	0.00	0	718982	0.000	2.00	0.000	500.00	0.00	2.50		
Dieldrin	7.97	8.13	0.00	0	790896	0.000	2.00	0.000	500.00	0.00	5.00		
4,4'-DDE	7.50	7.66	0.00	0	698639	0.000	2.00	0.000	500.00	0.00	5.00		
Endrin	9.73	9.93	9.86	102025	523658	0.195	2.00	0.097	500.00	48.71	5.00	HIT	97
Endosulfan II	11.57	11.81	0.00	0	713173	0.000	2.00	0.000	500.00	0.00	5.00		
4,4'-DDD	11.26	11.48	0.00	0	572143	0.000	2.00	0.000	500.00	0.00	5.00		
Endo.sulfate	17.82	18.18	0.00	0	514163	0.000	2.00	0.000	500.00	0.00	5.00		
4,4'DDT	13.39	13.67	0.00	0	504926	0.000	2.00	0.000	500.00	0.00	5.00		
Methoxychlor	25.17	25.67	25.49	50044	261003	0.192	2.00	0.096	500.00	47.93	25.00	HIT	96
Endrin ketone	24.26	24.76	0.00	0	723623	0.000	2.00	0.000	500.00	0.00	5.00		
a. Chlordane	6.40	6.52	0.00	0	741797	0.000	2.00	0.000	500.00	0.00	5.00		
g. Chlordane	5.88	6.00	0.00	0	768348	0.000	2.00	0.000	500.00	0.00	5.00		
Toxaphene	14.36	14.65	0.00	0	282124	0.000	2.00	0.000	500.00	0.00	50.00		
Aroclor-1016	2.75	2.81	0.00	0	64752	0.000	2.00	0.000	500.00	0.00	25.00		
Aroclor-1221	1.57	1.61	0.00	0	18596	0.000	2.00	0.000	500.00	0.00	25.00		
Aroclor-1232	2.39	2.43	0.00	0	30823	0.000	2.00	0.000	500.00	0.00	25.00		
Aroclor-1242	3.74	3.82	0.00	0	51936	0.000	2.00	0.000	500.00	0.00	25.00		
Aroclor-1248	5.17	5.27	0.00	0	107949	0.000	2.00	0.000	500.00	0.00	25.00		
Aroclor-1254	7.77	7.93	0.00	0	151284	0.000	2.00	0.000	500.00	0.00	50.00		
Aroclor-1260	11.91	12.15	0.00	0	271936	0.000	2.00	0.000	500.00	0.00	50.00		
DBC	22.59	23.05	23.10	109376	674216	0.162	2.00	0.081	500.00	40.56	5.00	HIT	81

QA 5/14/6

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10%

ORIGINAL (Red)



INST ID NO 0 A 2.0 ul
1.5% SP2250 / 1.95% SP2401
DATE 05 / 12 / 90 TIME 0022
SAMPLE
MSTD 3080

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

TITLE: CLP PESTICIDES 0:22 12 MAY 90

ORIGINAL (Red)

CHANNEL NO: 3 SAMPLE: MSTD 3080 METHOD: CLP-3A

	PEAK NAME	RESULT AREA	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		9778	1.077		9778	BB	2.15
2	A-BHC	[illegible]	2.642	-0.018	[illegible]	BB	1.95
3	G-BHC	182269	2.551	0.021	182269	BB	5.10
4	HEPTACHLOR	180471	3.087	-0.003	180471	BB	6.15
5	ALDRIN	1849	3.732	0.062	1849	BB	6.80
6	ENDRIN	102025	9.855	-0.005	102025	BB	? 20.25
7		4888	20.651		4888	BB	? 40.30
8	DBC	109376	23.095	0.215	109376	BV	46.65
9	METHOXYCHL	50044	25.490	-0.010	50044	VB	52.55
TOTALS:		641256		0.262	641256		

DETECTED PKS: 9 REJECTED PKS: 0

DIVISOR: 1.00000 MULTIPLIER: 10000.0

NOISE: 36.4 OFFSET: -12

ICK: 3 VIAL: 14 INJ: 1

NOTES:
COL: 1.5% SP2250/1.95% SP2401
AMT INJ.2UL/INSTRUMENT LETTER A
ORT= OUTSIDE RETENTION TIME WINDOW
VERSELDE 2561 WATER CLP CONF
VERSCDM 2536,2565 WATER M608 QUANT