UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
HOUSTON BRANCH
6608 HORNWOOD DRIVE
HOUSTON, TEXAS 77074

Ref. Case No. 8016

Site Name South Cavalcade

Date: 10-30-87

Subject: CLP Data Review

From: Michael Daggett, Chief, Organic Lab Section; 6E-HL

To: Keith Bradley, Hazardous Waste Section; 6E-SH

004979

A review of the laboratory raw data for the reference site has been completed by members of the Laboratory Section. Samples were:

INORGANIC:

ORGANIC: FD211
FD272
FD273
FD610

The data was found:

( ) Acceptable

(✓) Provisional; use of data requires caution. Problems are noted in Review Summary.

( ) Unacceptable; data should not be used. Problems are noted in Review Summary.

Questions regarding the review can be addressed to me.

Attachments

1012328

cc: David Stockton, 6E-HL
Duane Geuder, WH-548A

ORGANIC QA CHECKLIST

Site: South Cavalcade

Case No.: 8016

Reviewed By: Jeff Pamerson

Date: 10-28-87

Contract No.: 68-01-7414

Contractor: EIRA

Matrix: Water

Acct. #: 8TFAN25 SF TFAU56

Sample No.: FD 211, FD610, FD272, FD273

OVERALL COMMENTS (To Be Completed By EPA PERSONNEL)

	VOA	B/N	A	Pest	Other
1. Holding Times	A	A	A	A	
2. Tuning/Performance	A	A	A	A	
3. Calibrations	P	P	P	A	
4. Blanks	A	A	A	A	
5. Surrogates	A	A	A	A	
6. Matrix Spike/Dup	A	P	P	P	
7. Compound Identity	A	A	A	A	
8. Case Assessment	A	A	A	A	

COMMENTS OR CLARIFICATIONS (See Attached)

A - Acceptable - All items delivered; all criteria met.

P - Provisional - Data usable; some non-essential review items missing or criteria were not met.

U - Unacceptable - Data unusable; essential review items missing or criteria not met.

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COMMENTS/CLARIFICATIONS
REGION VI CLP QA REVIEW

Case 8016 Site South Cavalcade Lab EIRA

The following is a summary of sample qualifiers used by Region VI in reporting this CLP data:

No.	Acceptable	Provisional	Unacceptable
VOA	7	1	
BN	6	2	
A	6	2	
Pest	7	1	
Other			

Comments:

This data package is complete and acceptable with the following provisions; GC/MS calibrations; 1) the RF for 2-Butanone was equal to .05 2) %D was greater than 25% for chloromethane, Bromomethane, chloroethane, 2-Butanone, vinyl acetate, bromoform, hexachlorocyclopentadiene and 2,4-dinitrophenol Matrix spike/Dup; 1) In the ABN fraction % Recovery for 4-Nitrophenol was outside the limits in both the matrix spike and the duplicate. 2) In the pesticide fraction the % Recovery for lindane, dieldrin and endrin for both matrix spike and duplicate were outside the limits. 3) The RPD for dieldrin was above the limit. The lab suspects breakdown of endrin since endrin Ketone was found in both spiked samples but not in

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ORGANIC CLP/QA REVIEW
CONTINUATION PAGE

CASE NO. 8016 SITE _____

COMMENTS:

the sample itself. Holding times; The holding time was exceeded for the ABN analysis of sample FD273RE, since it was necessary to reextract sample FD273 because initial recoveries for phenol-d_5 and terphenyl-d_4 were below the contract required criteria, The reextracted sample adhered to contract limits.

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REPORT

CASE 8016
(SDG FD211)

004983

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

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CASE NARRATIVE

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NARRATIVE

Contract No. 68-01-7414
Case Number: 8016

The following samples were received on September 12, 1987 as a group:

WATER
FD211 (SDG #)
FD272
FD273
FD610 (LAST #)

Samples FD272, FD273, and FD610 were requested for full organics; sample FD211 required volatiles only. A receipt data of September 14, 1987 (Monday) was originally recorded on the Traffic Reports for these samples received on Saturday, September 12, 1987. This date is corrected manually on the Traffic Report copies and on the pesticide forms.

It was necessary to reextract FD273 for semi-volatiles because the initial recoveries for phenol-d_5 and terphenyl-d_{14} were below contract requirements. The reextracted sample was within specifications for all surrogates.

The matrix spike set of sample FD272 for pesticides exhibited some peculiar recoveries. Dieldrin was not recovered from FD272MS. Endrin was not recovered from either FD272MS or FD272MSD. Breakdown of endrin was suspected since endrin ketone was found in both spiked samples but not in the sample itself. Chromatographic degradation was not suspected because endrin breakdown was evaluated at <6% before and after the injections.

The SDG # was mistakenly identified as FD272 for pesticides because the lower number sample did not require pesticide analysis. This was corrected manually on the forms.

Diskette Software Anomalies

This is the second case submitted using the public domain, format B, diskette software. Some anomalies remain as a result of software use.

The pesticide fraction for sample FD272 was not actually run on the confirmation column (nor was it required to be run). The software necessitates that this name be included in order to properly process the data.

Also Note: The volatile instrument identifier "9601A" captured by the public domain software from Hewlett Packard data files does not match that used by the analyst in the header of the data files ("INST A").

Release of the data contained in this hard copy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

John R. Troost
Vice President, Analytical Services
October 9, 1987

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

TRAFFIC REPORTS

004989

004989

SDG COVER SHEET

* Environmental Industrial Research Associates, Inc.
* Contract Number: 68-01-7414
* Analysis Price: $788.00
* Case Number: 8016
* Samples Included: FD211 (SDG #)
  FD272
  FD273
  FD610 (LAST #)

004990

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

U.S. ENVIRONMENTAL PROTECTION AGENCY

ORGANICS TRAFFIC REPORT

Sample Number
FD 211

① Case Number: 8016

Sample Site Name/Code:

② SAMPLE CONCENTRATION (Check One)

X Low Concentration
___ Medium Concentration

③ SAMPLE MATRIX (Check One)

X Water
___ Soil/Sediment

④ Ship To: 005

Environmental Industrial Research
161 James Drive West
St. Rose, LA 70087
(504)461-0333
Attn: Cynthia Albert

Transfer
Ship To:

⑤ Regional Office: VI

Sampling Personnel:
Gene Schenk
(Name)
(713)245-6651
(Phone)

Sampling Date:
09/11/07
(Begin) (End)

⑥ For each sample collected specify number of containers used and mark volume level on each bottle.

	Number of Containers	Approximate Total Volume	
Water (Extractable)			
Water (VOA)	1	40 ml	intact, good
Soil/Sediment (Extractable)			
Soil/Sediment (VOA)			
Other			air bubble

⑪ Analysis Lab:
Rec'd by: Cynthia Albert
Date Rec'd: 9/12/07
Sample Condition on Receipt (e.g., broken, no ice, Chain-of-Custody, etc.) FD211

⑦ Shipping Information

Federal Express
Name of Carrier

09/11/07
Date Shipped:

4668499796
Airbill Number:

⑧ Sample Description

___ Surface Water
___ Ground Water
___ Leachate
___ Mixed Media
___ Solids
X Other (specify) Trip Blank

⑨ Sample Location

⑩ Special Handling Instructions:
(e.g., safety precautions, hazardous nature)

LAB COPY FOR RETURN TO SMO

004991

004991

ORGANICS TRAFFIC REPORT

FD 272

0006

① **Case Number:** 8016

Sample Site Name/Code:

② **SAMPLE CONCENTRATION** (Check One)

X Low Concentration
___ Medium Concentration

③ **SAMPLE MATRIX** (Check One)

X Water
___ Soil/Sediment

④ **Ship To:**
Environmental Industrial Research
161 James Drive West
St. Rose, LA 70087
(504) 461-0333
Attn: Cynthia Hibert

Transfer
Ship To:

⑤ **Regional Office:** VI

Sampling Personnel:
Rose - Schnick
(Name)
(512) 345-6651
(Phone)

Sampling Date:
09/11/87
(Begin) (End)

⑥ **For each sample collected specify number of containers used and mark volume level on each bottle.**

	Number of Containers	Approximate Total Volume	
Water (Extractable)	2	160 oz	good, intact
Water (VOA)	2	80 ml	good, intact
Soil/Sediment (Extractable)			
Soil/Sediment (VOA)			
Other			

⑪ **Analysis Lab:**
Rec'd by: Cynthia Altt
Date Rec'd: 9/14/87
Sample Condition on Receipt (e.g., broken, no ice, Chain-of-Custody, etc.): FD2N

004992

⑦ **Shipping Information**

Federal Express
Name of Carrier

09/11/87
Date Shipped:

4668488786
Airbill Number:

⑧ **Sample Description**

___ Surface Water
X Ground Water
___ Leachate
___ Mixed Media
___ Solids
___ Other (specify) _____

⑨ **Sample Location**

SCK-MW05-001

⑩ **Special Handling Instructions:**
(e.g., safety precautions, hazardous nature)

LAB COPY FOR RETURN TO SMO

ORGANICS TRAFFIC REPORT

FD 273

① Case Number: 8016

Sample Site Name/Code:

② SAMPLE CONCENTRATION (Check One)

X Low Concentration
___ Medium Concentration

③ SAMPLE MATRIX (Check One)

X Water
___ Soil/Sediment

④ Ship To: 007
Environmental Industrial Research
161 James Drive West
St. Rose, LA 70087
(504) 469-0333
Attn: Cynthia Albert

Transfer
Ship To:

⑤ Regional Office: VI

Sampling Personnel:
Robert Sokowski
(Name)
(512) 345-6651
(Phone)

Sampling Date:
09/11/87
(Begin) (End)

⑥ For each sample collected specify number of containers used and mark volume level on each bottle.

	Number of Containers	Approximate Total Volume	
Water (Extractable)	2	1000 ml	good, intact
Water (VOA)	2	80 ml	good, intact
Soil/Sediment (Extractable)			
Soil/Sediment (VOA)			
Other			

⑪ Analysis Lab:
Rec'd by: Cynthia Albert 9/12/87
Date Rec'd: 9/14/87
Sample Condition on Receipt (e.g., broken, no ice, Chain-of-Custody, etc.) FD 211

⑦ Shipping Information

Federal Express
Name of Carrier

09/11/87
Date Shipped:

4668408786
Airbill Number:

⑧ Sample Description

___ Surface Water
X Ground Water
___ Leachate
___ Mixed Media
___ Solids
___ Other (specify) _____

⑨ Sample Location

SCK-MW08-001

⑩ Special Handling Instructions:
(e.g., safety precautions, hazardous nature)

LAB COPY FOR RETURN TO SMO

004993

ORGANICS TRAFFIC REPORT

FD 610

008

① **Case Number:** 8016

Sample Site Name/Code:

② **SAMPLE CONCENTRATION** (Check One)

X Low Concentration
___ Medium Concentration

③ **SAMPLE MATRIX** (Check One)

X Water
___ Soil/Sediment

④ **Ship To:**
Environmental Industrial Research
161 James Drive West
St. Rose, LA 70087
(504) 461-0333
Attn: Cynthia Albert

Transfer
Ship To:

⑤ **Regional Office:** VI

Sampling Personnel:
Rene Schenk (Name)
(512) 245-6651 (Phone)

Sampling Date:
09/11/87 (Begin) (End)

⑥ **For each sample collected specify number of containers used and mark volume level on each bottle.**

	Number of Containers	Approximate Total Volume	⑪ Analysis Lab: Rec'd by: Cynthia Albert 9/12/87 Date Rec'd: 9/14/87 Sample Condition on Receipt (e.g., broken, no ice, Chain-of-Custody, etc.) FD2N 66400
Water (Extractable)	2	160 ml	intact, good
Water (VOA)	2	80 ml	intact, good
Soil/Sediment (Extractable)			
Soil/Sediment (VOA)			
Other			

⑦ **Shipping Information**

Federal Express
Name of Carrier

09/11/87
Date Shipped:

4109448796
Airbill Number:

⑧ **Sample Description**

___ Surface Water
___ Ground Water
___ Leachate
___ Mixed Media
___ Solids
X Other (specify) Field Blank

⑨ **Sample Location**

Field Blank

⑩ **Special Handling Instructions:**
(e.g., safety precautions, hazardous nature)

LAB COPY FOR RETURN TO SMO

004994

VOLATILES DATA

004995

004996

VOLATILES

QC SUMMARY

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK	99	98	97		0
2	FD211	99	100	97		0
3	FD273	101	100	97		0
4	FD610	101	99	99		0
5	VBLK	100	102	96		0
6	FD272	98	102	98		0
7	FD272MS	99	105	103		0
8	FD272MSD	98	101	102		0
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = 4-Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

004997

FORM II VOA-1 1/87 Rev.

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Matrix Spike - EPA Sample No.: FD272

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.	0.	54.	109.	61-145
Trichloroethene	50.	0.	46.	91.	71-120
Benzene	50.	0.	49.	98.	76-127
Toluene	50.	0.	51.	102.	76-125
Chlorobenzene	50.	0.	53.	106.	75-130

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.	56.	111.	3.	14	61-145
Trichloroethene	50.	44.	88.	4.	14	71-120
Benzene	50.	48.	96.	2.	11	76-127
Toluene	50.	49.	97.	4.	13	76-125
Chlorobenzene	50.	51.	102.	3.	13	75-130

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

004998

004998

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: A259H

Lab Sample ID: _____

Date Analyzed: 9/16/87

Time Analyzed: 15:31

Matrix: (soil/water) WATER

Level:(low/med) LOW

Instrument ID: 9601A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	FD211		A259I	16:35
2	FD273		A259J	17:26
3	FD610		A259K	18:17
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
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21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM IV VOA

1/87 Rev.

VOLATILE METHOD BLANK SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: A260C Lab Sample ID: _____

Date Analyzed: 9/17/87 Time Analyzed: 9:51

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

Instrument ID: 9601A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	FD272		A260D	11:07
2	FD272MS		A260E	12:21
3	FD272MSD		A260F	13:11
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM IV VOA 1/87 Rev.

005000

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: A222A BFB Injection Date: 8/10/87

Instrument ID.: 9601A BFB Injection Time: 9:01

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	57.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	.0 (.0)1
174	Greater than 50.0% of mass 95	66.6
175	5.0 - 9.0% of mass 174	4.9 (7.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	64.0 (96.1)1
177	5.0 - 9.0% of mass 176	4.2 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A222B	8/10/87	10:01
2	VSTD020		A222C	8/10/87	11:09
3	VSTD100		A222D	8/10/87	12:54
4	VSTD150		A222E	8/10/87	13:39
5	VSTD200		A222F	8/10/87	14:31
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA 1/87 Rev.

005001

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: A259C BFB Injection Date: 9/16/87

Instrument ID.: 9601A BFB Injection Time: 8:57

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.4
75	30.0 - 60.0% of mass 95	53.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	.0 (.0)1
174	Greater than 50.0% of mass 95	91.9
175	5.0 - 9.0% of mass 174	6.9 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	89.8 (97.7)1
177	5.0 - 9.0% of mass 176	6.0 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

005002

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A259G	9/16/87	14:29
2	VBLK		A259H	9/16/87	15:31
3	FD211		A259I	9/16/87	16:35
4	FD273		A259J	9/16/87	17:26
5	FD610		A259K	9/16/87	18:17
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA 1/87 Rev.

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: A260A BFB Injection Date: 9/17/87

Instrument ID.: 9601A BFB Injection Time: 7:56

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.6
75	30.0 - 60.0% of mass 95	52.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	.0 (.0)1
174	Greater than 50.0% of mass 95	94.1
175	5.0 - 9.0% of mass 174	7.1 (7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.4 (96.0)1
177	5.0 - 9.0% of mass 176	6.3 (6.9)2

1-Value is % mass 174 2-Value is % mass 176

005003

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A260B	9/17/87	8:34
2	VBLK		A260C	9/17/87	9:51
3	FD272		A260D	9/17/87	11:07
4	FD272MS		A260E	9/17/87	12:21
5	FD272MSD		A260F	9/17/87	13:11
6					
7					
8					
9					
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14					
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16					
17					
18					
19					
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21					
22					

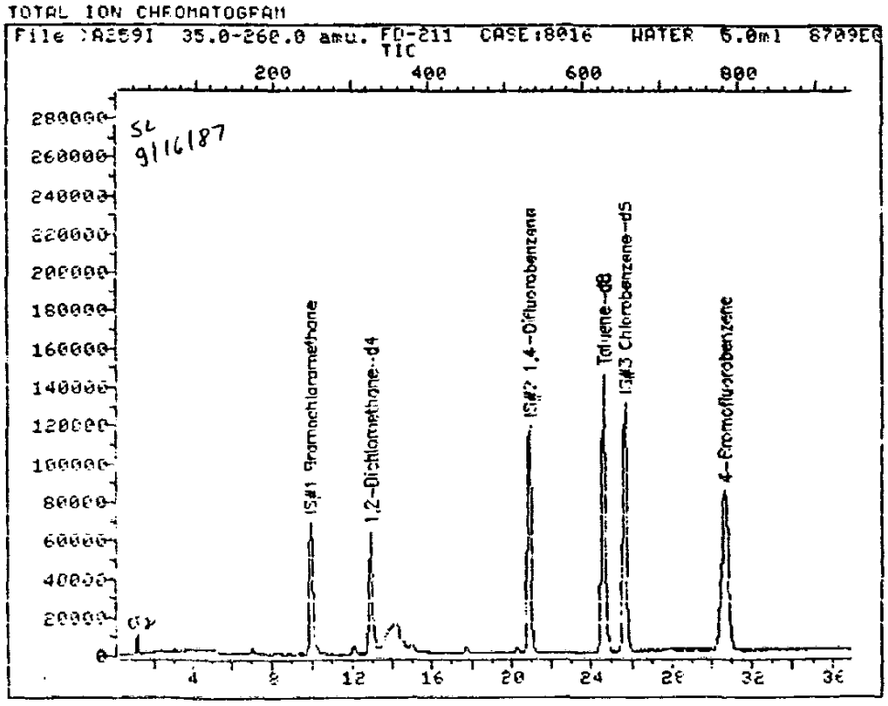
FORM V VOA 1/87 Rev.

VOLATILES

SAMPLE DATA

005004

TOTAL ION CHROMATOGRAM



Data File: >A259I::D2 Quant Output File: ^A259I::QT
Name: FD-211 CASE:8016
Misc: WATER 5.0ml 8709EG01 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

Operator ID: SYLVIA
Quant Time: 870916 17:13
Injected at: 870916 16:35

005005

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD211

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259I

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	5.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	3.	J
78-93-3	2-Butanone	5.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	5.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	5.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005006

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD211

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A2591

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	Pentane (ACN)(DOT)(8CI9CI)	14.20	30.	BJ
2.					
3.					
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30.					

005007

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

Operator ID: SYLVIA Quant Rev: 6 Quant Time: 870916 17:13
Output File: ^A2591::QT Injected at: 870916 16:35
Data File: >A2591::D2 Dilution Factor: 1.00000
Name: FD-211 CASE:8016
Misc: WATER 5.0ml 8709EG01 INST A

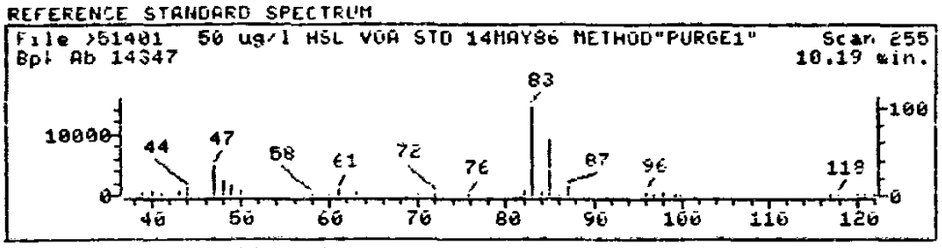
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.94	127.9	121299	50.00	ug/l	89
12)	Chloroform	12.10	82.9	22554	2.64	ug/l	99
14)	1,2-Dichloroethane-d4	12.92	65.0	326415	48.52	ug/l	96
15)	*IS#2 1,4-Difluorobenzene	20.89	113.9	561463	50.00	ug/l	72
29)	*IS#3 Chlorobenzene-d5	25.66	116.9	467197	50.00	ug/l	94
39)	Toluene-d8	24.61	98.0	620646	49.41	ug/l	98
40)	4-Bromofluorobenzene	30.65	95.0	369251	49.97	ug/l	100

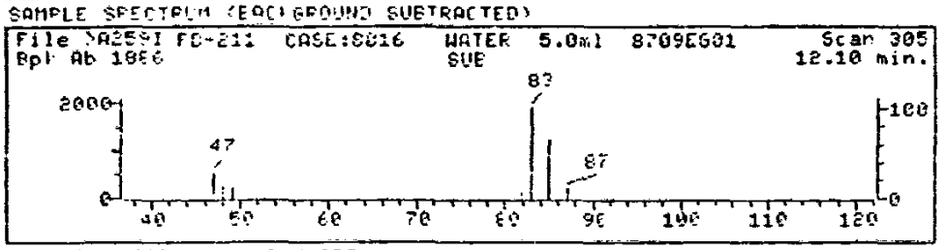
* Compound is ISTD

005008

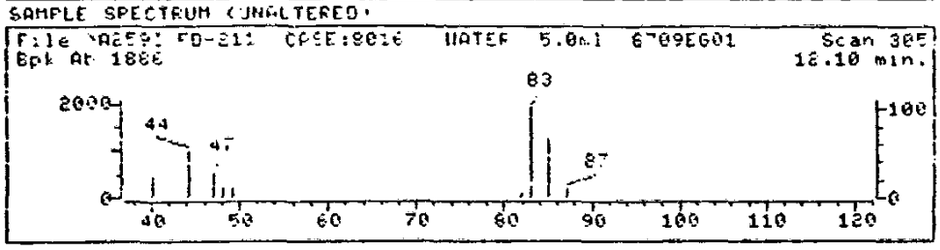
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



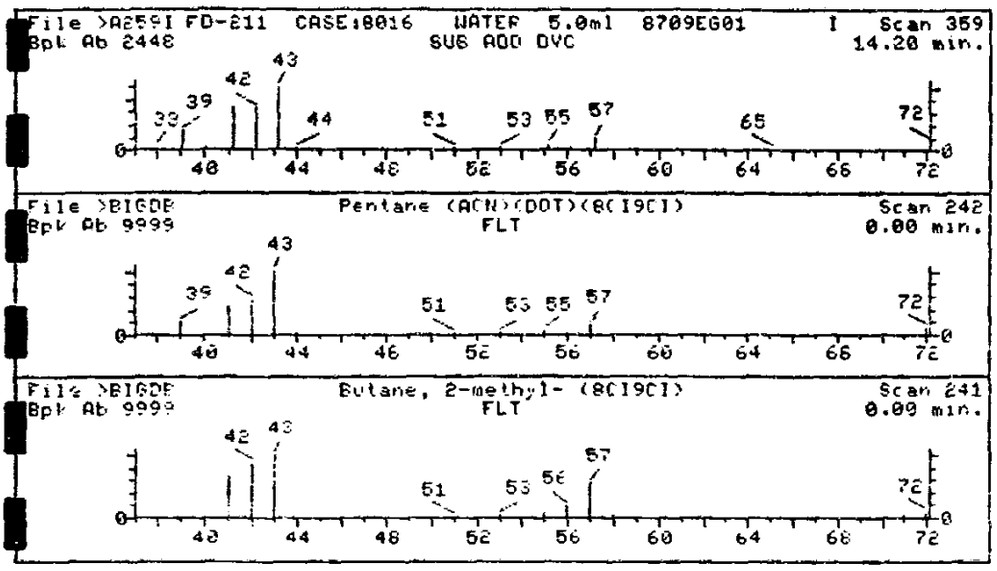
Data File: >A2591::D2
Name: FD-211 CASE:8016
Misc: WATER 5.0ml 8709EG01
Quant Time: 870916 17:13
Injected at: 870916 16:35

Quant Output File: ^A2591::QT

INST A
Quant ID File: ID_V::D3
Last Calibration: 870916 15:13

Compound No: 12
Compound Name: Chloroform
Scan Number: 305
Retention Time: 12.10 min.
Quant Ion: 82.9
Area: 22554
Concentration: 2.64 ug/l
q-value: 99

005009



005010

Unknown #.3
Area = 541041.0 Tentative Concentration is 31.00

1. Pentane (ACN)(DOT)(8CI9CI) 72 C5H12
2. Butane, 2-methyl- (8CI9CI) 72 C5H12

Sample file: >A259I Spectrum #: 359
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IU
1.	83*	109660	242	"BIGDB	40	44	0	0	100	9	54	50
2.	36*	78784	241	"BIGDB	29	57	3	0	78	26	14	13

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

FD272

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A260D

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/17/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

FORM I VOA 1/87 Rev.

005011

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD272

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A260D

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/17/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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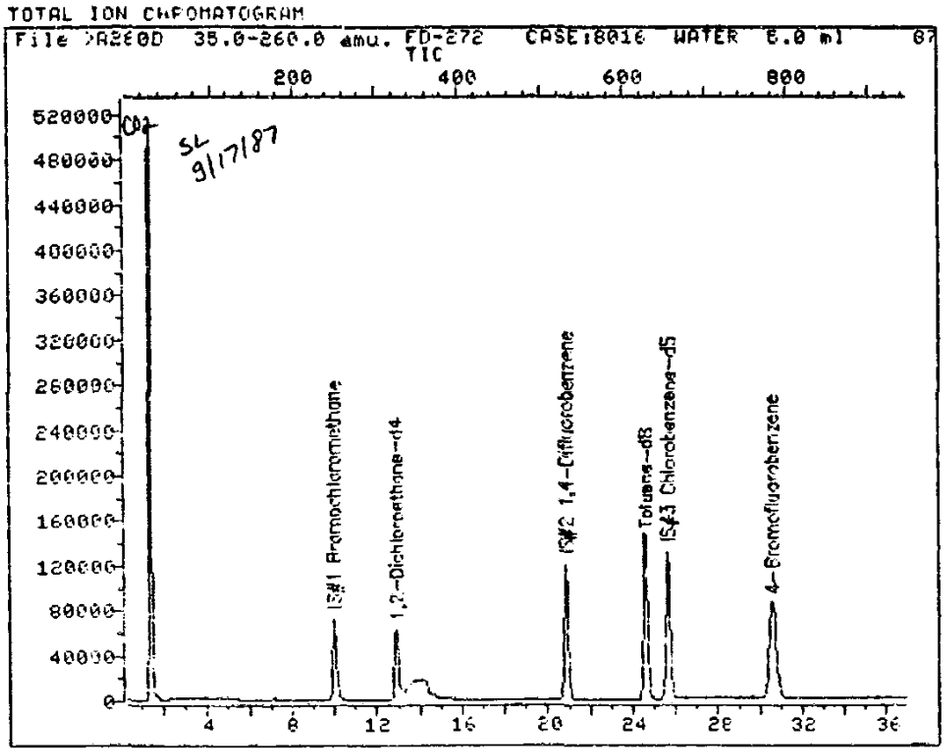
FORM I VOA-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >A260D::D2 Quant Output File: ^A260D::QT
Name: FD-272 CASE:8016
Misc: WATER 5.0 ml 8709EG02 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870917 09:24

Operator ID: SYLVIA
Quant Time: 870917 11:58
Injected at: 870917 11:37

005013

QUANT REPORT

Operator ID: SYLVIA
Output File: ^A260D::QT
Data File: >A260D::D2
Name: FD-272 CASE:8016
Misc: WATER 5.0 ml 8709EG02 INST A

Quant Rev: 6
Quant Time: 870923 15:47
Injected at: 870917 11:07
Dilution Factor: 1.00000

ID File: ID_V::D8
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870923 15:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.99	127.9	121407	50.00	ug/l	89
14)	1,2-Dichloroethane-d4	12.93	65.0	325470	49.13	ug/l	94
15)	*IS#2 1,4-Difluorobenzene	20.87	113.9	576444	50.00	ug/l	73
29)	*IS#3 Chlorobenzene-d5	25.67	116.9	472578	50.00	ug/l	96
39)	Toluene-d8	24.62	98.0	622845	49.11	ug/l	99
40)	4-Bromofluorobenzene	30.59	95.0	374803	51.12	ug/l	100

* Compound is ISTD

005014

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD273

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259J

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	31.	B
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005015

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.:

FD273

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259J

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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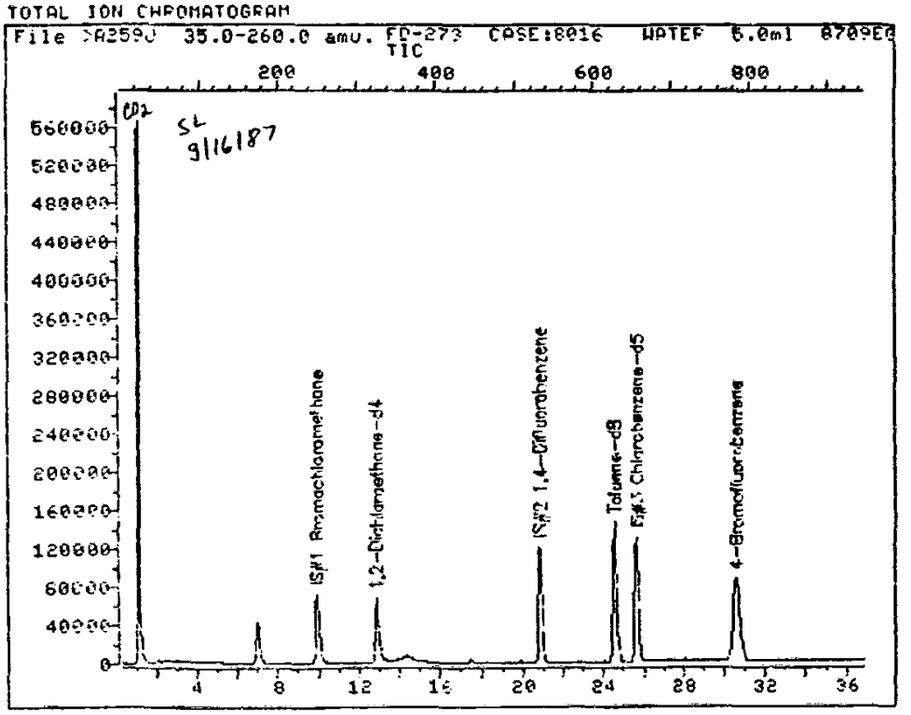
FORM I VOA-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: ^A259J::D2 Quant Output File: ^A259J::QT
Name: FD-273 CASE:8016
Misc: WATER 5.0ml 8709EG08 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

Operator ID: SYLVIA
Quant Time: 870916 18:04
Injected at: 870916 17:26

005017

QUANT REPORT

Operator ID: SYLVIA Quant Rev: 6 Quant Time: 870916 18:04
Output File: ^A259J::QT Injected at: 870916 17:26
Data File: >A259J::D2 Dilution Factor: 1.00000
Name: FD-273 CASE:8016
Misc: WATER 5.0ml 8709ES08 INST A

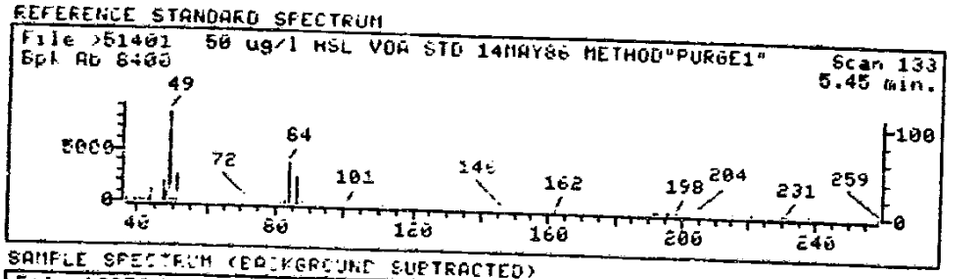
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.93	127.9	123973	50.00	ug/l	88
6)	Methylene Chloride	6.99	83.9	123803	30.96	ug/l	94
14)	1,2-Dichloroethane-d4	12.88	65.0	332599	48.37	ug/l	94
15)	*IS#2 1,4-Difluorobenzene	20.85	113.9	568536	50.00	ug/l	73
29)	*IS#3 Chlorobenzene-d5	25.65	116.9	474788	50.00	ug/l	95
34)	Toluene-d8	24.57	98.0	647038	50.69	ug/l	98
40)	4-Bromofluorobenzene	30.61	95.0	376603	50.15	ug/l	100

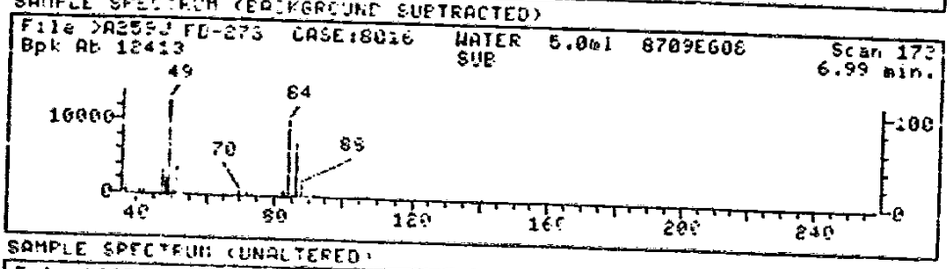
* Compound is ISTD

005018

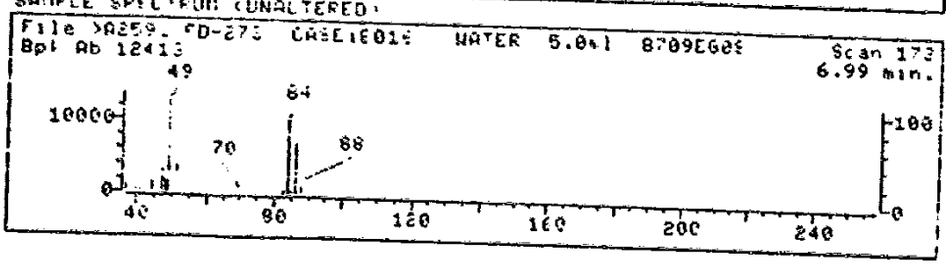
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >A259J::D2
Name: FD-273 CASE:8016
Misc: WATER 5.0ml 8709EG08
Quant Time: 870916 18:04
Injected at: 870916 17:26

Quant Output File: ^A259J::QT

INST A
Quant ID File: ID_V::D3
Last Calibration: 870916 15:13

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 173
Retention Time: 6.99 min.
Quant Ion: 83.9
Area: 123803
Concentration: 30.96 ug/l
q-value: 94

005019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD610

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259K

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	33.	B
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	3.	J
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005020

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD610

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: B016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259K

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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19.					
20.					
21.					
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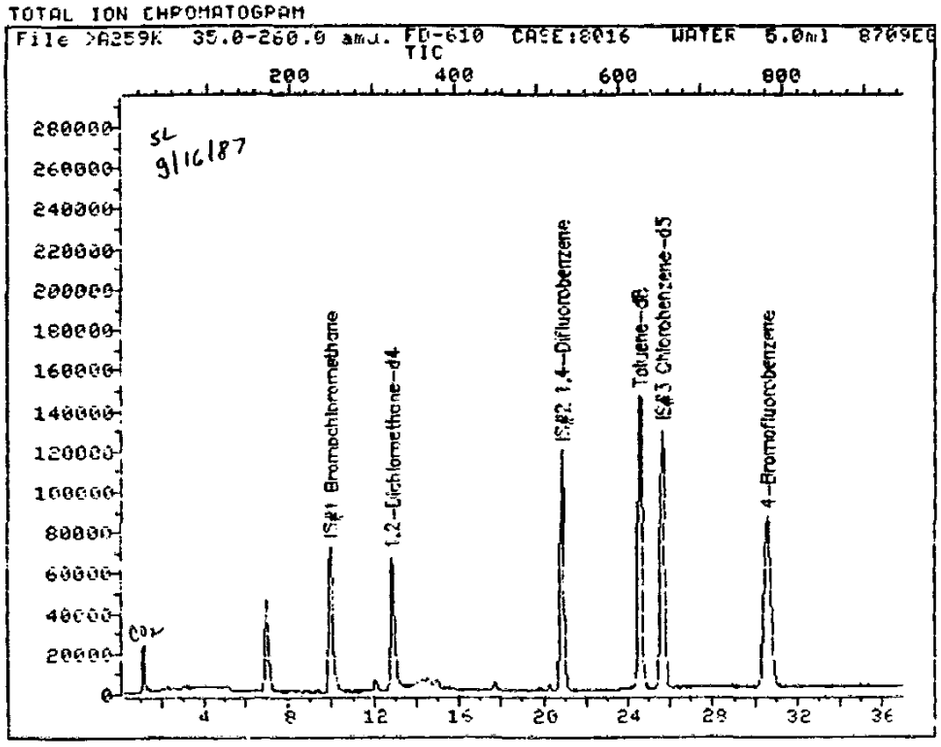
26.					
27.					
28.					
29.					
30.					

FORM I VOA-TIC 1/87 Rev.

005021

TOTAL ION CHROMATOGRAM



Data File: >A259K::D2 Quant Output File: ^A259K::QT
Name: FD-610 CASE:8016
Misc: WATER 5.0ml 8709EG12 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

Operator ID: SYLVIA
Quant Time: 870916 18:55
Injected at: 870916 18:17

005022

QUANT REPORT

Operator ID: SYLVIA
Output File: ^A259K::QT
Data File: >A259K::D2
Name: FD-610 CASE:8016
Misc: WATER 5.0ml 8709EG12

Quant Rev: 6
Quant Time: 870916 18:55
Injected at: 870916 18:17
Dilution Factor: 1.00000

INST A

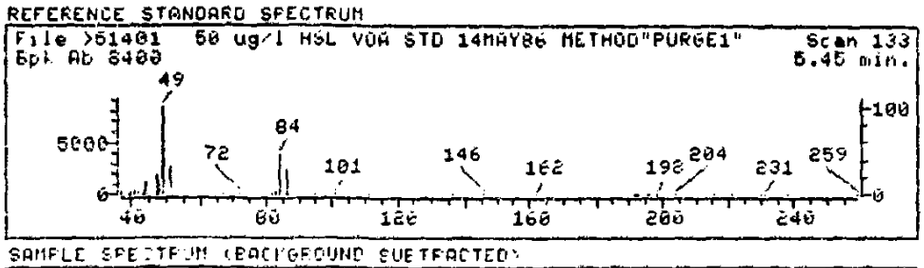
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.93	127.9	123031	50.00	ug/l	83
6)	Methylene Chloride	6.99	83.9	129599	32.66	ug/l	97
12)	Chloroform	12.06	82.9	24670	2.85	ug/l	96
14)	1,2-Dichloroethane-d4	12.88	65.0	337143	49.41	ug/l	93
15)	*IS#2 1,4-Difluorobenzene	20.85	113.9	559139	50.00	ug/l	73
29)	*IS#3 Chlorobenzene-d5	25.65	116.9	469143	50.00	ug/l	95
39)	Toluene-d8	24.57	98.0	634318	50.29	ug/l	97
40)	4-Bromofluorobenzene	30.57	95.0	368044	49.60	ug/l	100

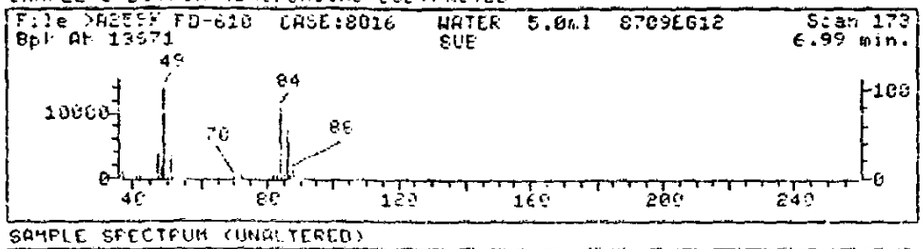
* Compound is ISTD

005023

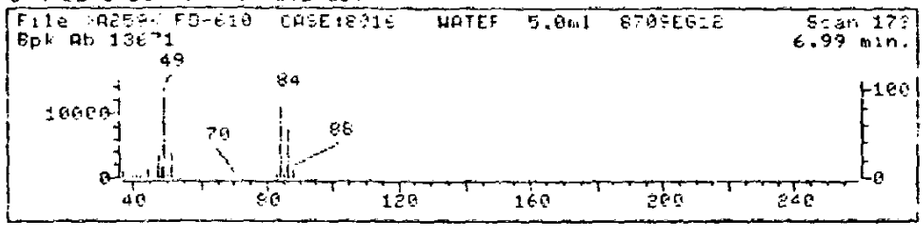
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

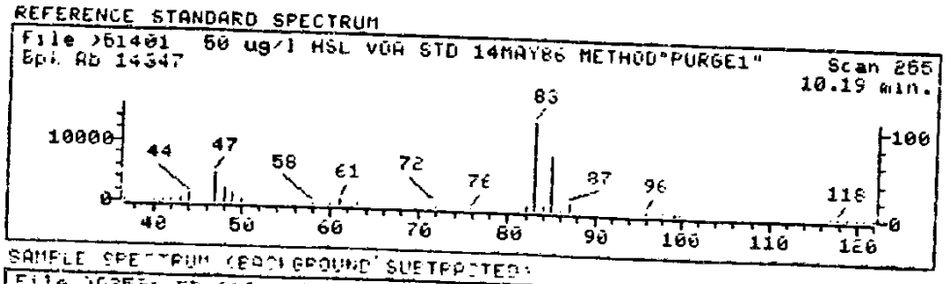


Data File: >A259K::D2 Quant Output File: ^A259K::Q1
Name: FD-610 CASE:8016
Misc: WATER 5.0ml 8709EG12 INST A
Quant Time: 870916 18:55 Quant ID File: ID_U::D3
Injected at: 870916 18:17 Last Calibration: 870916 15:13

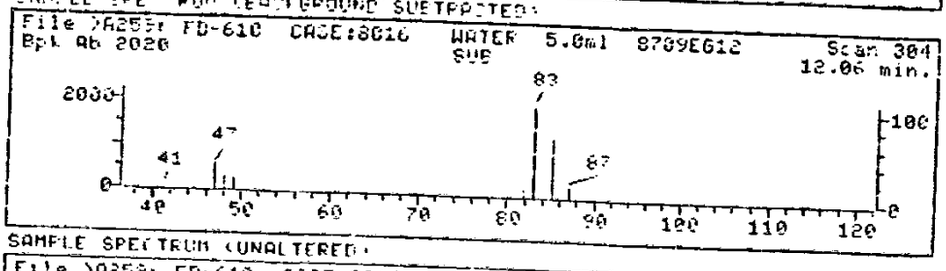
Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 173
Retention Time: 6.99 min.
Quant Ion: 83.9
Area: 129599
Concentration: 32.66 ug/l
q-value: 97

005024

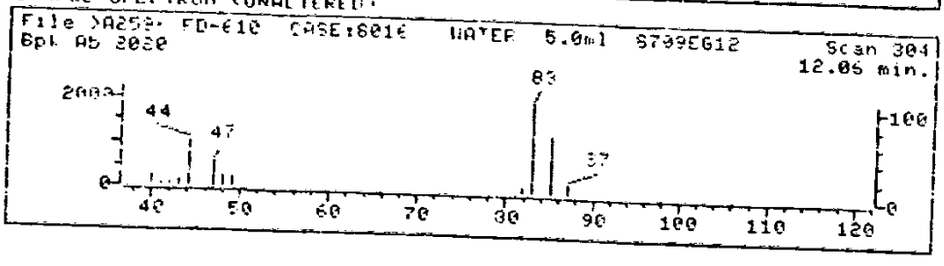
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >A259K::D2
Name: FD-610 CASE:8016
Misc: WATER 5.0ml 8709EG12
Quant Time: 870916 18:55
Injected at: 870916 18:17

Quant Output File: ^A259K::QT

INST A
Quant ID File: ID_V::D3
Last Calibration: 870916 15:13

Compound No: 12
Compound Name: Chloroform
Scan Number: 304
Retention Time: 12.06 min.
Quant Ion: 82.9
Area: 24670
Concentration: 2.85 ug/l
q-value: 96

005025

VOLATILES

STANDARDS DATA

005026

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 9601A Calibration Date(s): 8/10/87 8/~~12~~ 10/87

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK 8/24/87

Min $\overline{RRF}$ for SPCC(#) = .300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

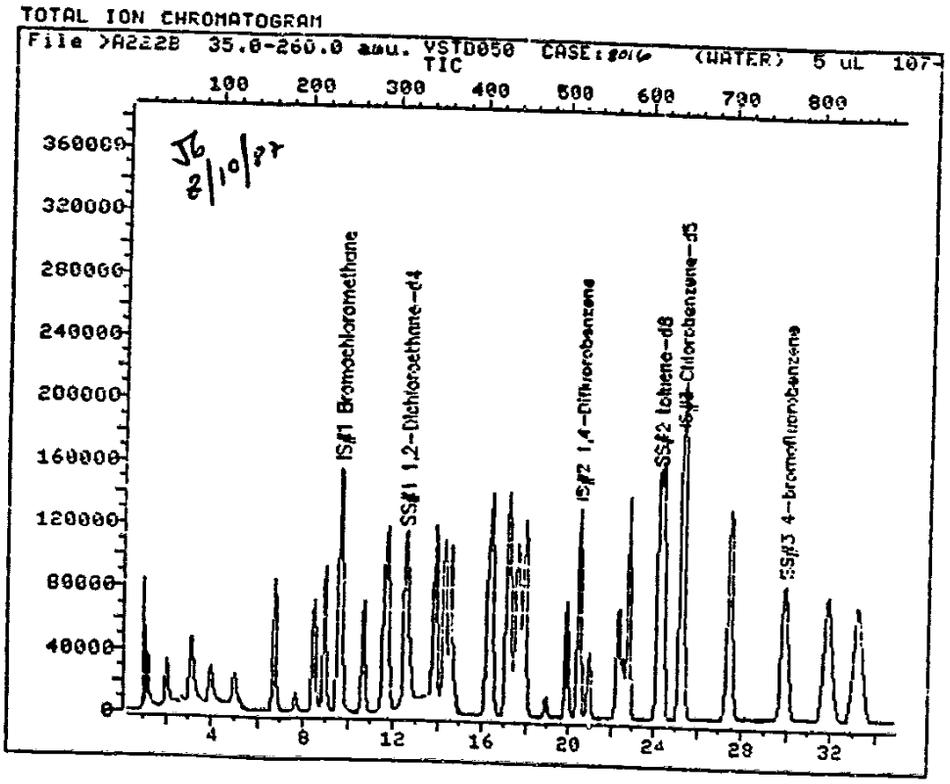
LAB FILE ID: RRF 20= A222C RRF 50= A222B
RRF100= A222D RRF150= A222E RRF200= A222F

COMPOUND	RRF 20	RRF 50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	1.758	1.526	1.327	1.397	1.388	1.479	11.6#
Bromomethane	1.758	1.585	1.499	1.377	.828	1.409	25.1
Vinyl Chloride *	1.841	1.650	1.674	1.792	1.622	1.716	5.6*
Chloroethane	1.101	.908	.877	.816	.744	.889	15.1
Methylene Chloride	1.881	1.747	1.714	1.920	1.896	1.832	5.1
Acetone	1.016	.804	.877	1.013	1.055	.953	11.3
Carbon Disulfide	5.845	5.419	5.430	6.256	6.207	5.832	6.9
1,1-Dichloroethene *	1.544	1.453	1.454	1.651	1.613	1.543	5.9*
1,1-Dichloroethane #	3.442	3.155	3.151	3.564	3.512	3.365	5.9#
1,2-Dichloroethene (total)	1.646	1.588	1.591	1.809	1.760	1.679	6.0
Chloroform *	4.293	3.973	3.874	4.371	4.194	4.141	5.1*
1,2-Dichloroethane	3.900	3.454	3.479	3.870	3.740	3.689	5.7
2-Butanone	.067	.054	.038	.044	.045	.050	23.4
1,1,1-Trichloroethane	.788	.693	.752	.744	.711	.738	5.0
Carbon Tetrachloride	.736	.647	.694	.695	.650	.684	5.4
Vinyl Acetate	.172	.157	.153	.162	.168	.162	4.6
Bromodichloromethane	.786	.760	.735	.765	.739	.757	2.7
1,2-Dichloropropane *	.363	.342	.338	.352	.350	.349	2.8*
cis-1,3-Dichloropropene	.668	.651	.633	.651	.633	.647	2.3
Trichloroethene	.448	.416	.422	.428	.397	.422	4.4
Dibromochloromethane	.533	.519	.528	.545	.512	.527	2.4
1,1,2-Trichloroethane	.341	.310	.318	.340	.331	.328	4.1
Benzene	1.069	1.026	1.022	1.089	1.080	1.057	3.0
trans-1,3-Dichloropropene	.631	.619	.593	.613	.616	.614	2.2
Bromoform #	.361	.355	.364	.376	.372	.366	2.2#
4-Methyl-2-Pentanone	.430	.382	.374	.434	.445	.413	7.9
2-Hexanone	.411	.366	.350	.415	.415	.392	8.0
Tetrachloroethene	.417	.402	.414	.443	.414	.418	3.6
1,1,2,2-Tetrachloroethane #	.506	.510	.446	.514	.535	.502	6.7#
Toluene *	.958	.883	.877	.938	.913	.914	3.8*
Chlorobenzene #	1.102	1.063	1.015	1.127	1.081	1.078	3.9#
Ethylbenzene *	.557	.516	.530	.581	.565	.550	4.8*
Styrene	1.094	1.073	1.071	1.172	1.142	1.110	4.0
Xylene (total)	.678	.619	.641	.709	.677	.665	5.3
Toluene-d8	1.390	1.362	1.287	1.344	1.353	1.347	2.8
4-Bromofluorobenzene	.827	.811	.747	.787	.782	.791	3.9
1,2-Dichloroethane-d4	3.292	2.919	2.932	3.131	3.079	3.071	5.0

FORM VI VOA

005027

TOTAL ION CHROMATOGRAM



Data File: >A222B::D3
Name: VSTD050 CASE: 8016
Misc: (WATER) 5 uL 107-40-VSTD INST A

Quant Output File: ^A222B::D1

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870810 13:05

Operator ID: JEANNETTE
Quant Time: 870810 13:09
Injected at: 870810 10:01

005028

QUANT REPORT

Operator ID: JEANNETTE Quant Rev: 6 Quant Time: 870814 13:12
Output File: ^A222B::D1 Injected at: 870810 10:01
Data File: >A222B::D3 Dilution Factor: 1.00000
Name: VSTD050 CASE: 846
Misc: (WATER) 5 uL 107-40-VSTD INST A

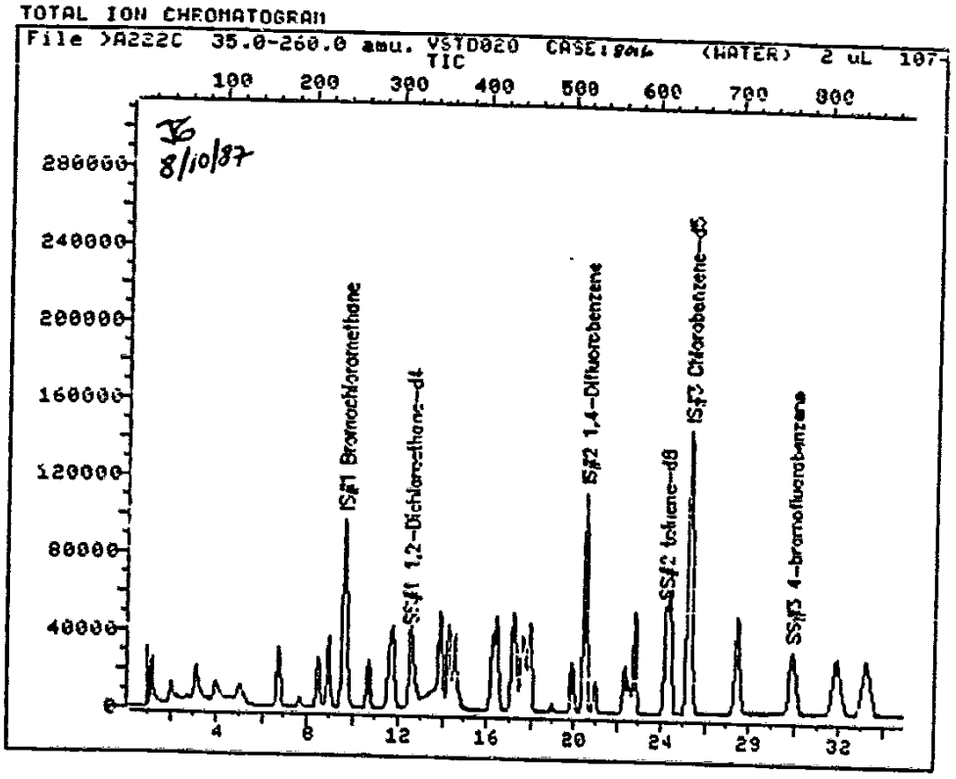
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870814 13:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.63	127.9	112492	50.00	ug/l	94
2)	Chloromethane	2.04	50.0	171646	50.00	ug/l	98
3)	Bromomethane	3.12	93.9	170303	50.00	ug/l	95
4)	Vinyl Chloride	3.98	61.9	185645	50.00	ug/l	93
5)	Chloroethane	4.98	64.0	102181	50.00	ug/l	92
6)	Methylene Chloride	6.73	83.9	196516	50.00	ug/l	99
7)	Acetone	7.66	43.0	90403	50.00	ug/l	84
8)	Carbon Disulfide	8.47	76.0	609643	50.00	ug/l	100
9)	1,1-Dichloroethene	9.67	96.0	163419	50.00	ug/l	96
10)	1,1-Dichloroethane	10.68	63.0	354880	50.00	ug/l	94
11)	1,2-Dichloroethene (total)	11.57	95.9	178600	50.00	ug/l	88
12)	Chloroform	11.72	82.9	446923	50.00	ug/l	96
13)	1,2-Dichloroethane	12.61	62.0	388549	50.00	ug/l	83
14)	1,2-Dichloroethane-d4	12.53	65.0	328377	50.00	ug/l	96
15)	*IS#2 1,4-Difluorobenzene	20.48	113.9	544765	50.00	ug/l	71
16)	2-Butanone	12.81	72.0	29631	50.00	ug/l	1
17)	1,1,1-Trichloroethane	13.89	97.0	377726	50.00	ug/l	90
18)	Carbon Tetrachloride	14.28	116.9	352500	50.00	ug/l	87
19)	Vinyl Acetate	14.78	43.0	85435	50.00	ug/l	98
20)	Bromodichloromethane	14.59	82.9	413955	50.00	ug/l	97
21)	1,2-Dichloropropane	16.25	63.0	186499	50.00	ug/l	99
22)	cis-1,3-Dichloropropene	16.41	75.0	432570	61.00	ug/l	88
23)	Trichloroethene	17.14	129.9	226672	50.00	ug/l	93
24)	Dibromochloromethane	17.26	128.9	282608	50.00	ug/l	91
25)	1,1,2-Trichloroethane	17.57	97.0	169041	50.00	ug/l	97
26)	Benzene	17.96	78.0	558996	50.00	ug/l	100
27)	trans-1,3-Dichloropropene	17.73	75.0	263018	39.00	ug/l	99
28)	Bromoform	19.89	172.9	193645	50.00	ug/l	85
29)	*IS#3 Chlorobenzene-d5	25.24	116.9	438867	50.00	ug/l	98
30)	4-Methyl-2-Pentanone	20.98	43.0	167615	50.00	ug/l	84
31)	2-Hexanone	22.53	43.0	160666	50.00	ug/l	92
32)	Tetrachloroethene	22.80	163.9	176514	50.00	ug/l	35
33)	1,1,2,2-Tetrachloroethane	22.33	82.9	224021	50.00	ug/l	98
34)	Toluene	24.39	92.0	387679	50.00	ug/l	96
35)	Chlorobenzene	25.36	112.0	466511	50.00	ug/l	99
36)	Ethylbenzene	27.45	106.1	226472	50.00	ug/l	98
37)	Styrene	31.86	104.0	470701	50.00	ug/l	34
38)	Xylene (total)	33.22	106.0	271638	50.00	ug/l	99
39)	Toluene-d8	24.19	98.0	597524	50.00	ug/l	94
40)	4-Bromofluorobenzene	29.93	95.0	355824	50.00	ug/l	100

* Compound is ISTD

005029

TOTAL ION CHROMATOGRAM



Data File: >A222C::D4 Quant Output File: ^A222C::D1
Name: VSTD020 CASE: 8016
Misc: (WATER) 2 uL 107-40-VSTD INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870810 13:05

Operator ID: JEANNETTE
Quant Time: 870810 13:12
Injected at: 870810 11:09

005030

QUANT REPORT

Operator ID: JEANNETTE
Output File: ^A222C::D1
Data File: >A222C::D4
Name: VSTD020 CASE: 5016
Misc: (WATER) 2 uL 107-40-VSTD INST A

Quant Rev: 6
Quant Time: 870814 13:15
Injected at: 870810 11:09
Dilution Factor: 1.00000

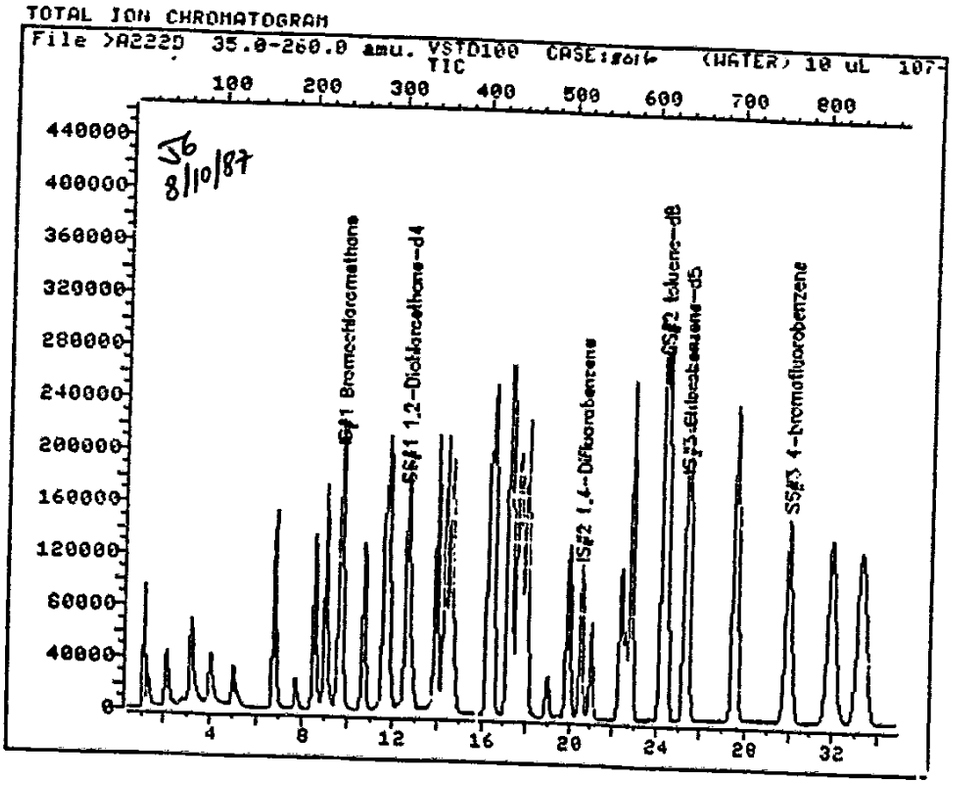
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870814 13:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.63	127.9	94501	50.00	ug/l	92
2)	Chloromethane	2.04	50.0	66447	23.04	ug/l	96
3)	Bromomethane	3.12	93.9	66437	22.18	ug/l	97
4)	Vinyl Chloride	3.97	61.9	69607	22.32	ug/l	93
5)	Chloroethane	5.02	64.0	41603	24.23	ug/l	94
6)	Methylene Chloride	6.72	83.9	71104	21.54	ug/l	93
7)	Acetone	7.69	43.0	38409	25.29	ug/l	84
8)	Carbon Disulfide	8.50	76.0	220941	21.57	ug/l	100
9)	1,1-Dichloroethene	9.66	96.0	58382	21.26	ug/l	96
10)	1,1-Dichloroethane	10.67	63.0	130120	21.82	ug/l	95
11)	1,2-Dichloroethene (total)	11.56	95.9	62216	20.73	ug/l	83
12)	Chloroform	11.76	82.9	162288	21.61	ug/l	98
13)	1,2-Dichloroethane	12.65	62.0	147426	22.58	ug/l	83
14)	1,2-Dichloroethane-d4	12.53	65.0	124444	22.56	ug/l	96
15)	*IS#2 1,4-Difluorobenzene	20.51	113.9	461219	50.00	ug/l	69
16)	2-Butanone	12.80	72.0	12438	24.79	ug/l	28
17)	1,1,1-Trichloroethane	13.89	97.0	145326	22.72	ug/l	91
18)	Carbon Tetrachloride	14.31	116.9	135816	22.75	ug/l	87
19)	Vinyl Acetate	14.78	43.0	31645	21.87	ug/l	96
20)	Bromodichloromethane	14.58	82.9	145024	20.69	ug/l	97
21)	1,2-Dichloropropane	16.25	63.0	66893	21.18	ug/l	99
22)	cis-1,3-Dichloropropene	16.44	75.0	150312	25.04	ug/l	93
23)	Trichloroethene	17.14	129.9	82716	21.55	ug/l	93
24)	Dibromochloromethane	17.29	128.9	98246	20.53	ug/l	86
25)	1,1,2-Trichloroethane	17.60	97.0	62834	21.95	ug/l	96
26)	Benzene	17.95	78.0	197140	20.83	ug/l	100
27)	trans-1,3-Dichloropropene	17.72	75.0	90750	15.89	ug/l	97
28)	Bromoform	19.93	172.9	66554	20.30	ug/l	94
29)	*IS#3 Chlorobenzene-d5	25.27	116.9	384751	50.00	ug/l	94
30)	4-Methyl-2-Pentanone	20.97	43.0	66236	22.54	ug/l	84
31)	2-Hexanone	22.56	43.0	63295	22.47	ug/l	95
32)	Tetrachloroethene	22.79	163.9	64104	20.71	ug/l	23
33)	1,1,2,2-Tetrachloroethane	22.33	82.9	77847	19.82	ug/l	98
34)	Toluene	24.38	92.0	147382	21.68	ug/l	98
35)	Chlorobenzene	25.35	112.0	169619	20.74	ug/l	98
36)	Ethylbenzene	27.48	106.1	85678	21.58	ug/l	98
37)	Styrene	31.86	104.0	168431	20.41	ug/l	37
38)	Xylene (total)	33.25	106.0	104389	21.92	ug/l	98
39)	Toluene-d8	24.19	98.0	213921	20.42	ug/l	94
40)	4-Bromofluorobenzene	29.92	95.0	127349	20.41	ug/l	100

* Compound is ISTD

005031

TOTAL ION CHROMATOGRAM



Data File: >A222D::D4
Name: VSTD100 CASE: soil
Misc: (WATER) 10 uL 107-40-VSTD INST A

Quant Output File: ^A222D::D1

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870810 13:05

Operator ID: JEANNETTE
Quant Time: 870810 13:31
Injected at: 870810 12:54

005032

QUANT REPORT

Operator ID: JEANNETTE Quant Rev: 6 Quant Time: 870814 13:16
Output File: ^A222D::D1 Injected at: 870810 12:54
Data File: >A222D::D4 Dilution Factor: 1.00000
Name: VSTD100 CASE: 8014
Misc: (WATER) 10 uL 107-40-VSTD INST A

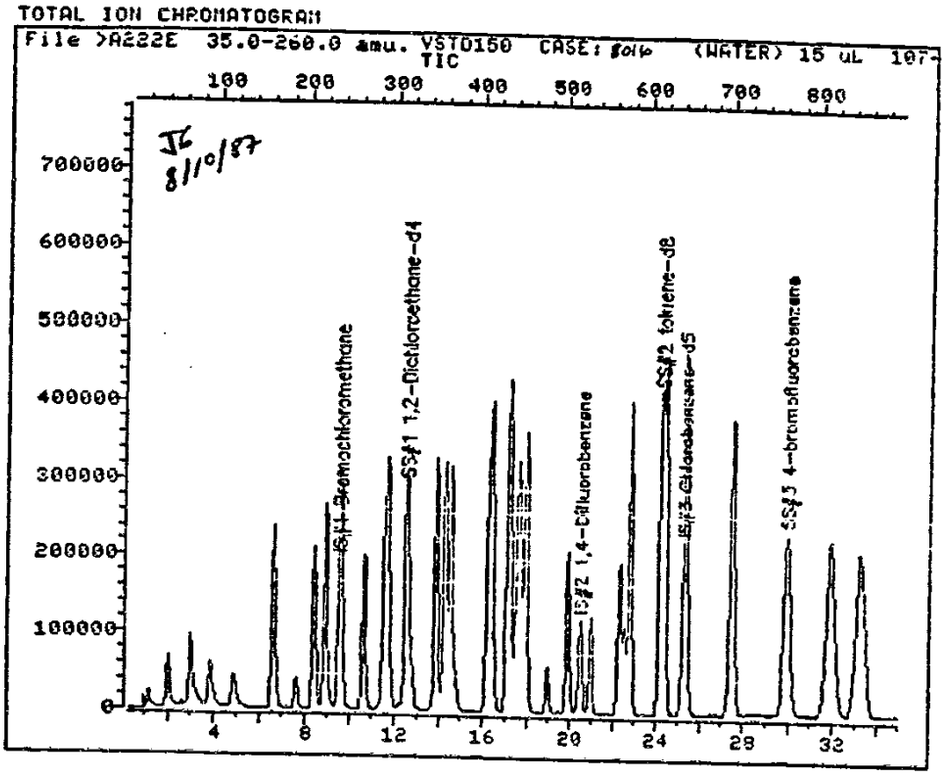
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870814 13:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.66	127.9	100620	50.00	ug/l	97
2)	Chloromethane	2.11	50.0	266963	86.94	ug/l	97
3)	Bromomethane	3.12	93.9	301638	94.57	ug/l	93
4)	Vinyl Chloride	4.04	61.9	336896	101.44	ug/l	92
5)	Chloroethane	5.05	64.0	176481	96.55	ug/l	93
6)	Methylene Chloride	6.76	83.9	344999	98.14	ug/l	99
7)	Acetone	7.68	43.0	176586	109.19	ug/l	86
8)	Carbon Disulfide	8.50	76.0	1092808	100.20	ug/l	100
9)	1,1-Dichloroethene	9.70	96.0	292561	100.07	ug/l	98
10)	1,1-Dichloroethane	10.71	63.0	634024	99.87	ug/l	92
11)	1,2-Dichloroethene (total)	11.60	95.9	320173	100.21	ug/l	88
12)	Chloroform	11.75	82.9	779667	97.52	ug/l	97
13)	1,2-Dichloroethane	12.64	62.0	700043	100.71	ug/l	83
14)	1,2-Dichloroethane-d4	12.53	65.0	590133	100.46	ug/l	95
15)	*IS#2 1,4-Difluorobenzene	20.51	113.9	492250	50.00	ug/l	72
16)	2-Butanone	12.84	72.0	37104	69.29	ug/l	28
17)	1,1,1-Trichloroethane	13.92	97.0	740142	108.43	ug/l	94
18)	Carbon Tetrachloride	14.35	116.9	682856	107.19	ug/l	90
19)	Vinyl Acetate	14.81	43.0	151089	97.86	ug/l	99
20)	Bromodichloromethane	14.58	82.9	724090	96.79	ug/l	94
21)	1,2-Dichloropropane	16.28	63.0	332407	98.63	ug/l	99
22)	cis-1,3-Dichloropropene	16.44	75.0	760060	118.62	ug/l	95
23)	Trichloroethene	17.17	129.9	415231	101.36	ug/l	97
24)	Dibromochloromethane	17.33	128.9	519402	101.70	ug/l	92
25)	1,1,2-Trichloroethane	17.60	97.0	312715	102.36	ug/l	92
26)	Benzene	17.99	78.0	1006068	99.59	ug/l	100
27)	trans-1,3-Dichloropropene	17.76	75.0	455101	74.68	ug/l	98
28)	Bromoform	19.92	172.9	358286	102.38	ug/l	89
29)	*IS#3 Chlorobenzene-d5	25.27	116.9	403448	50.00	ug/l	91
30)	4-Methyl-2-Pentanone	21.01	43.0	301638	97.88	ug/l	84
31)	2-Hexanone	22.56	43.0	282340	95.58	ug/l	92
32)	Tetrachloroethene	22.83	163.9	333851	102.87	ug/l	41
33)	1,1,2,2-Tetrachloroethane	22.36	82.9	359785	87.35	ug/l	92
34)	Toluene	24.42	92.0	707534	99.26	ug/l	98
35)	Chlorobenzene	25.39	112.0	819371	95.53	ug/l	98
36)	Ethylbenzene	27.52	106.1	427393	102.64	ug/l	99
37)	Styrene	31.93	104.0	864257	99.86	ug/l	36
38)	Xylene (total)	33.29	106.0	517612	103.64	ug/l	95
39)	Toluene-d8	24.22	98.0	1038868	94.56	ug/l	96
40)	4-Bromofluorobenzene	29.96	95.0	602986	92.17	ug/l	100

* Compound is ISTD

005033

TOTAL ION CHROMATOGRAM



Data File: >A222E::D4 Quant Output File: ^A222E::D1
Name: VSTD150 CASE: 8016
Misc: (WATER) 15 uL 107-40-VSTD INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870810 13:05

Operator ID: JEANNETTE
Quant Time: 870810 14:15
Injected at: 870810 13:39

005034

QUANT REPORT

Operator ID: JEANNETTE Quant Rev: 6 Quant Time: 870814 13:18
Output File: ^A222E::D1 Injected at: 870810 13:39
Data File: >A222E::D4 Dilution Factor: 1.00000
Name: VSTD150 CASE: 8016
Misc: (WATER) 15 uL 107-40-VSTD INST A

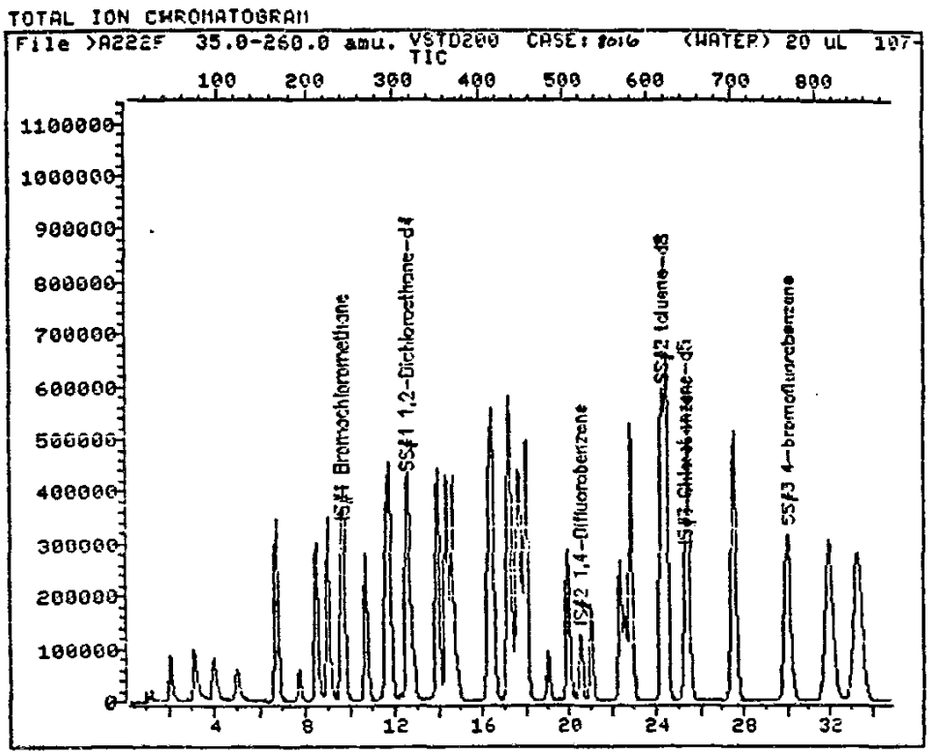
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870814 13:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.56	127.9	93361	50.00	ug/l	90
2)	Chloromethane	2.01	50.0	391268	137.33	ug/l	95
3)	Bromomethane	3.01	93.9	385691	130.32	ug/l	94
4)	Vinyl Chloride	3.83	61.9	501823	162.85	ug/l	93
5)	Chloroethane	4.91	64.0	228430	134.68	ug/l	92
6)	Methylene Chloride	6.61	83.9	537778	164.87	ug/l	94
7)	Acetone	7.62	43.0	283742	189.09	ug/l	85
8)	Carbon Disulfide	8.40	76.0	1752096	173.14	ug/l	100
9)	1,1-Dichloroethene	9.63	96.0	462557	170.53	ug/l	95
10)	1,1-Dichloroethane	10.64	63.0	998341	169.48	ug/l	96
11)	1,2-Dichloroethene (total)	11.53	95.9	506692	170.92	ug/l	83
12)	Chloroform	11.73	82.9	1224291	165.04	ug/l	97
13)	1,2-Dichloroethane	12.58	62.0	1083891	168.06	ug/l	84
14)	1,2-Dichloroethane-d4	12.50	65.0	876904	160.88	ug/l	96
15)	*IS#2 1,4-Difluorobenzene	20.48	113.9	502574	50.00	ug/l	73
16)	2-Butanone	12.77	72.0	66324	121.31	ug/l	30
17)	1,1,1-Trichloroethane	13.90	97.0	1122458	161.05	ug/l	92
18)	Carbon Tetrachloride	14.28	116.9	1048230	161.17	ug/l	90
19)	Vinyl Acetate	14.79	43.0	243641	154.56	ug/l	98
20)	Bromodichloromethane	14.55	82.9	1154120	151.10	ug/l	92
21)	1,2-Dichloropropane	16.26	63.0	531001	154.31	ug/l	99
22)	cis-1,3-Dichloropropene	16.41	75.0	1197878	183.10	ug/l	93
23)	Trichloroethene	17.11	129.9	645164	154.26	ug/l	97
24)	Dibromochloromethane	17.27	128.9	821185	157.48	ug/l	91
25)	1,1,2-Trichloroethane	17.58	97.0	512986	164.47	ug/l	98
26)	Benzene	17.96	78.0	1642189	159.22	ug/l	100
27)	trans-1,3-Dichloropropene	17.73	75.0	720670	115.83	ug/l	98
28)	Bromoform	19.90	172.9	566330	158.50	ug/l	85
29)	*IS#3 Chlorobenzene-d5	25.25	116.9	391047	50.00	ug/l	95
30)	4-Methyl-2-Pentanone	20.98	43.0	509185	170.47	ug/l	84
31)	2-Hexanone	22.57	43.0	486582	169.94	ug/l	96
32)	Tetrachloroethene	22.81	163.9	519962	165.30	ug/l	22
33)	1,1,2,2-Tetrachloroethane	22.34	82.9	603392	151.14	ug/l	93
34)	Toluene	24.39	92.0	1100031	159.22	ug/l	96
35)	Chlorobenzene	25.36	112.0	1322500	159.08	ug/l	95
36)	Ethylbenzene	27.49	106.1	681014	168.74	ug/l	98
37)	Styrene	31.91	104.0	1375328	163.96	ug/l	36
38)	Xylene (total)	33.26	106.0	832001	171.87	ug/l	93
39)	Toluene-d8	24.20	98.0	1576237	148.03	ug/l	96
40)	4-Bromofluorobenzene	29.93	95.0	923279	145.60	ug/l	100

* Compound is ISTD

005035

TOTAL ION CHROMATOGRAM



Data File: >A222F::D4 Quant Output File: ^A222F::D1
Name: VSTD200 CASE: 8016
Misc: (WATER) 20 uL 107-40-VSTD . INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870810 13:05

Operator ID: JEANNETTE
Quant Time: 870810 15:09
Injected at: 870810 14:31

005036

QUANT REPORT

Operator ID: JEANNETTE
Output File: ^A222F::D1
Data File: >A222F::D4
Name: VSTD200 CASE: 8016
Misc: (WATER) 20 uL 107-40-VSTD INST A

Quant Rev: 6
Quant Time: 870814 13:20
Injected at: 870810 14:31
Dilution Factor: 1.00000

ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870814 13:12

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.62	127.9	99985	50.00	ug/l	87
2)	Chloromethane	2.04	50.0	555039	181.91	ug/l	93
3)	Bromomethane	3.08	93.9	331113	104.47	ug/l	94
4)	Vinyl Chloride	3.97	61.9	648873	196.62	ug/l	92
5)	Chloroethane	4.98	64.0	297583	163.83	ug/l	90
6)	Methylene Chloride	6.68	83.9	758146	217.03	ug/l	96
7)	Acetone	7.69	43.0	422051	262.63	ug/l	83
8)	Carbon Disulfide	8.46	76.0	2482622	229.08	ug/l	100
9)	1,1-Dichloroethene	9.70	96.0	645299	222.13	ug/l	99
10)	1,1-Dichloroethane	10.71	63.0	1404512	222.64	ug/l	96
11)	1,2-Dichloroethene (total)	11.56	95.9	703975	221.73	ug/l	87
12)	Chloroform	11.72	82.9	1677456	211.14	ug/l	96
13)	1,2-Dichloroethane	12.61	62.0	1495954	216.59	ug/l	84
14)	1,2-Dichloroethane-d4	12.53	65.0	1231444	210.96	ug/l	94
15)	*IS#2 1,4-Difluorobenzene	20.51	113.9	533588	50.00	ug/l	72
16)	2-Butanone	12.80	72.0	95134	163.89	ug/l	29
17)	1,1,1-Trichloroethane	13.92	97.0	1518072	205.16	ug/l	92
18)	Carbon Tetrachloride	14.31	116.9	1386372	200.77	ug/l	92
19)	Vinyl Acetate	14.82	43.0	357574	213.65	ug/l	97
20)	Bromodichloromethane	14.58	82.9	1578018	194.60	ug/l	98
21)	1,2-Dichloropropane	16.25	63.0	747479	204.60	ug/l	96
22)	cis-1,3-Dichloropropene	16.40	75.0	1649145	237.43	ug/l	95
23)	Trichloroethene	17.18	129.9	847687	190.90	ug/l	99
24)	Dibromochloromethane	17.30	128.9	1092700	197.37	ug/l	92
25)	1,1,2-Trichloroethane	17.61	97.0	706208	213.26	ug/l	94
26)	Benzene	17.99	78.0	2305448	210.53	ug/l	100
27)	trans-1,3-Dichloropropene	17.72	75.0	1024854	155.15	ug/l	95
28)	Bromoform	19.93	172.9	793548	209.19	ug/l	93
29)	*IS#3 Chlorobenzene-d5	25.28	116.9	411444	50.00	ug/l	98
30)	4-Methyl-2-Pentanone	21.01	43.0	732735	233.15	ug/l	85
31)	2-Hexanone	22.60	43.0	683805	226.99	ug/l	96
32)	Tetrachloroethene	22.84	163.9	681151	205.81	ug/l	26
33)	1,1,2,2-Tetrachloroethane	22.33	82.9	880937	209.72	ug/l	92
34)	Toluene	24.42	92.0	1503227	206.80	ug/l	94
35)	Chlorobenzene	25.39	112.0	1779869	203.48	ug/l	98
36)	Ethylbenzene	27.52	106.1	930173	219.05	ug/l	97
37)	Styrene	31.94	104.0	1879474	212.95	ug/l	37
38)	Xylene (total)	33.29	106.0	1114842	218.88	ug/l	96
39)	Toluene-d8	24.23	98.0	2226452	198.72	ug/l	98
40)	4-Bromofluorobenzene	30.00	95.0	1286452	192.82	ug/l	100

* Compound is ISTD

005037

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 9601A Calibration Date: 9/16/87 Time: 14:29

Lab File ID: A259G Init. Calib. Date(s): 8/10/87 6/~~12~~ 10/87 8/5/87

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

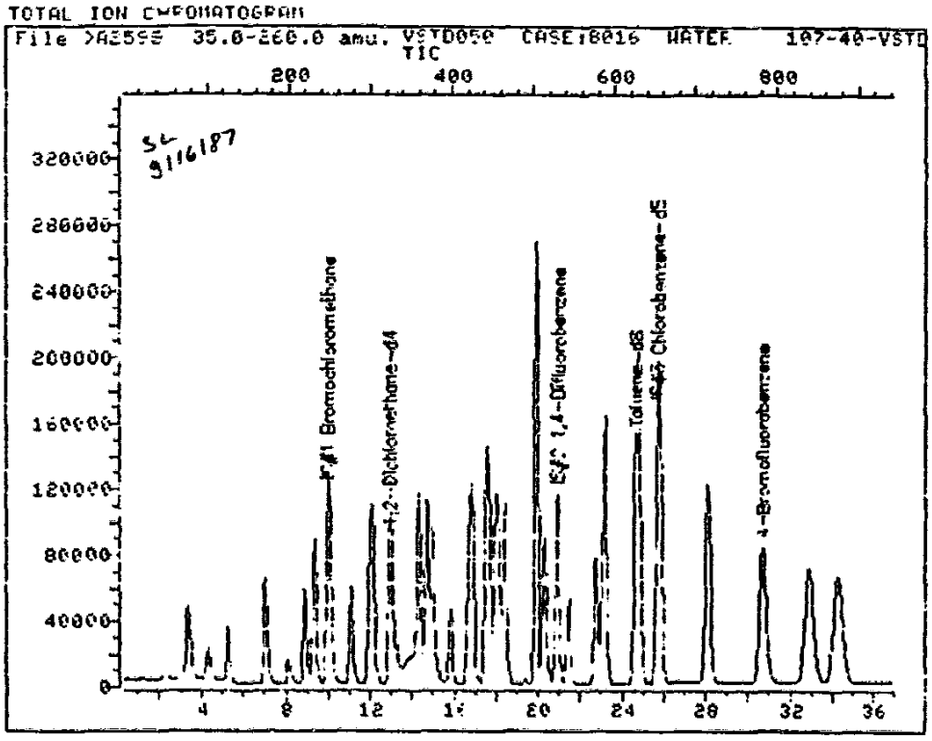
Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*) is 25.0%

COMPOUND	RRF	RRF50	%D
Chloromethane #	1.479	.515	65.2 #
Bromomethane	1.409	1.800	27.8
Vinyl Chloride *	1.716	1.363	20.6 *
Chloroethane	.889	1.306	46.9
Methylene Chloride	1.832	1.613	11.9
Acetone	.953	1.035	8.6
Carbon Disulfide	5.832	4.473	23.3
1,1-Dichloroethene *	1.543	1.368	11.4 *
1,1-Dichloroethane #	3.365	2.647	21.3 #
1,2-Dichloroethene (total)	1.679	1.524	9.2
Chloroform *	4.141	3.522	15.0 *
1,2-Dichloroethane	3.689	3.201	13.2
2-Butanone	.050	.066	33.5
1,1,1-Trichloroethane	.738	.710	3.8
Carbon Tetrachloride	.684	.726	6.1
Vinyl Acetate	.162	.023	85.8
Bromodichloromethane	.757	.699	7.6
1,2-Dichloropropane *	.349	.300	13.9 *
cis-1,3-Dichloropropene	.647	.567	12.4
Trichloroethene	.422	.486	15.1
Dibromochloromethane	.527	.633	20.1
1,1,2-Trichloroethane	.328	.377	15.1
Benzene	1.057	.932	11.8
trans-1,3-Dichloropropene	.614	.553	9.9
Bromoform #	.366	.546	49.3 #
4-Methyl-2-Pentanone	.413	.452	9.5
2-Hexanone	.392	.425	8.7
Tetrachloroethene	.418	.506	21.2
1,1,2,2-Tetrachloroethane #	.502	.560	11.5 #
Toluene *	.914	.880	3.7 *
Chlorobenzene #	1.078	1.099	1.9 #
Ethylbenzene *	.550	.560	1.8 *
Styrene	1.110	1.136	2.3
Xylene (total)	.665	.656	1.4
Toluene-d8	1.347	1.344	.2
4-Bromofluorobenzene	.791	.791	.0
1,2-Dichloroethane-d4	3.071	2.773	9.7

FORM VII VOA 1/87 Rev.

005038

TOTAL ION CHROMATOGRAM



Data File: ^A259G::D2 Quant Output File: ^A259G::QT
Name: VSTD050 CASE:8016
Misc: WATER 107-40-VSTD INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APP86
Last Calibration: 870916 15:13

Operator ID: SYLVIA
Quant Time: 870916 15:13
Injected at: 870916 14:29

005039

QUANT REPORT

Operator ID: SYLVIA Quant Rev: 6 Quant Time: 870916 15:13
Output File: ^A259G::QT Injected at: 870916 14:29
Data File: >A259G::D2 Dilution Factor: 1.00000
Name: VSTD050 CASE:8016
Misc: WATER 107-40-VSTD INST A

ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.98	127.9	118569	50.00	ug/l	90
2)	Chloromethane	2.27	50.0	61028	50.00	ug/l	98
3)	Bromomethane	3.36	93.9	213481	50.00	ug/l	99
4)	Vinyl Chloride	4.36	61.9	161607	50.00	ug/l	92
5)	Chloroethane	5.30	64.0	154872	50.00	ug/l	90
6)	Methylene Chloride	7.04	83.9	191237	50.00	ug/l	98
7)	Acetone	8.12	43.0	122763	50.00	ug/l	78
8)	Carbon Disulfide	8.90	76.0	530394	50.00	ug/l	100
9)	1,1-Dichloroethene	10.06	96.0	162157	50.00	ug/l	97
10)	1,1-Dichloroethane	11.11	63.0	313911	50.00	ug/l	95
11)	1,2-Dichloroethene (total)	11.96	95.9	180712	50.00	ug/l	87
12)	Chloroform	12.11	82.9	417570	50.00	ug/l	99
13)	1,2-Dichloroethane	13.04	62.0	379910	50.00	ug/l	85
14)	1,2-Dichloroethane-d4	12.93	65.0	328799	50.00	ug/l	92
15)	*IS#2 1,4-Difluorobenzene	20.95	113.9	551108	50.00	ug/l	72
16)	2-Butanone	13.31	72.0	36491	50.00	ug/l	28
17)	1,1,1-Trichloroethane	14.32	97.0	391138	50.00	ug/l	91
18)	Carbon Tetrachloride	14.75	116.9	400237	50.00	ug/l	93
19)	Vinyl Acetate	15.21	43.0	12650	50.00	ug/l	93
20)	Bromodichloromethane	14.98	82.9	385443	50.00	ug/l	91
21)	1,2-Dichloropropane	16.68	63.0	165588	50.00	ug/l	97
22)	cis-1,3-Dichloropropene	16.88	75.0	381241	61.00	ug/l	98
23)	Trichloroethene	17.54	129.9	267816	50.00	ug/l	94
24)	Dibromochloromethane	17.69	128.9	348877	50.00	ug/l	94
25)	1,1,2-Trichloroethane	18.00	97.0	208032	50.00	ug/l	91
26)	Benzene	18.43	78.0	513891	50.00	ug/l	100
27)	trans-1,3-Dichloropropene	18.16	75.0	237756	39.00	ug/l	91
28)	Bromoform	20.33	172.9	300842	50.00	ug/l	97
29)	*IS#3 Chlorobenzene-d5	25.71	116.9	454664	50.00	ug/l	94
30)	4-Methyl-2-Pentanone	21.49	43.0	205638	50.00	ug/l	77
31)	2-Hexanone	23.04	43.0	193450	50.00	ug/l	88
32)	Tetrachloroethene	23.19	163.9	230217	50.00	ug/l	43
33)	1,1,2,2-Tetrachloroethane	22.73	82.9	254655	50.00	ug/l	91
34)	Toluene	24.86	92.0	399990	50.00	ug/l	97
35)	Chlorobenzene	25.86	112.0	499611	50.00	ug/l	99
36)	Ethylbenzene	28.11	106.1	254421	50.00	ug/l	99
37)	Styrene	32.88	104.0	516545	50.00	ug/l	52
38)	Xylene (total)	34.31	106.0	298126	50.00	ug/l	93
39)	Toluene-d8	24.66	98.0	611208	50.00	ug/l	99
40)	4-Bromofluorobenzene	30.67	95.0	359590	50.00	ug/l	100

* Compound is ISTD

005040

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 9601A Calibration Date: 9/17/87 Time: 8:34

Lab File ID: 4260B Init. Calib. Date(s): 8/10/87 8/~~12~~10/87 9/24/87

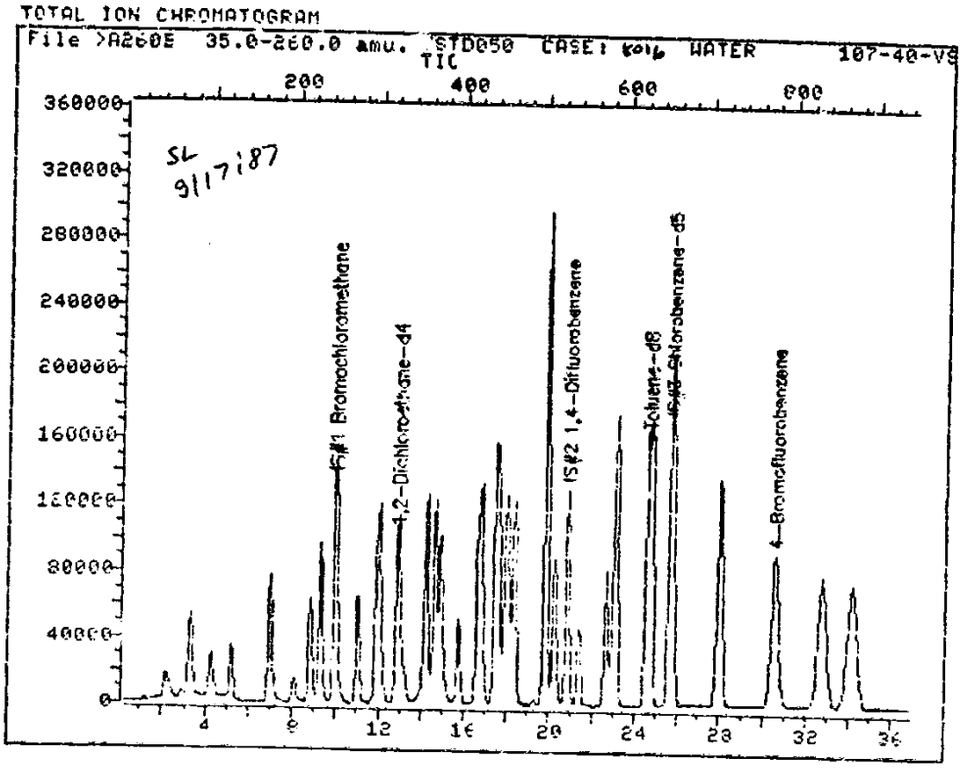
Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*) is 25.0%

COMPOUND	RRF	RRF50	%D
Chloromethane #	1.479	.978	33.9 #
Bromomethane	1.409	1.681	19.3
Vinyl Chloride *	1.716	1.571	8.5 *
Chloroethane	.889	1.133	27.5
Methylene Chloride	1.832	1.661	9.3
Acetone	.953	.909	4.6
Carbon Disulfide	5.832	4.517	22.5
1,1-Dichloroethene *	1.543	1.362	11.7 *
1,1-Dichloroethane #	3.365	2.663	20.9 #
1,2-Dichloroethene (total)	1.679	1.514	9.8
Chloroform *	4.141	3.499	15.5 *
1,2-Dichloroethane	3.689	3.204	13.1
2-Butanone	.050	.050	.2
1,1,1-Trichloroethane	.738	.693	6.1
Carbon Tetrachloride	.684	.705	3.0
Vinyl Acetate	.162	.022	86.3
Bromodichloromethane	.757	.688	9.1
1,2-Dichloropropane *	.349	.305	12.5 *
cis-1,3-Dichloropropene	.647	.567	12.3
Trichloroethene	.422	.483	14.5
Dibromochloromethane	.527	.609	15.6
1,1,2-Trichloroethane	.328	.367	12.0
Benzene	1.057	.969	8.4
trans-1,3-Dichloropropene	.614	.541	11.8
Bromoform #	.366	.504	37.9 #
4-Methyl-2-Pentanone	.413	.392	5.1
2-Hexanone	.392	.364	7.1
Tetrachloroethene	.418	.501	19.9
1,1,2,2-Tetrachloroethane #	.502	.514	2.4 #
Toluene *	.914	.870	4.8 *
Chlorobenzene #	1.078	1.102	2.3 #
Ethylbenzene *	.550	.557	1.3 *
Styrene	1.110	1.104	.6
Xylene (total)	.665	.656	1.3
Toluene-d8	1.347	1.342	.4
4-Bromofluorobenzene	.791	.776	1.9
1,2-Dichloroethane-d4	3.071	2.728	11.2

005041

TOTAL ION CHROMATOGRAM



Data File: >A260B::D2
Name: VSTD050 CASE: 8016
Misc: WATER 107-40-VSTD

Quant Output File: ^A260B::Q1

INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870917 09:24

Operator ID: SYLVIA
Quant Time: 870917 09:41
Injected at: 870917 08:34

005042

QUANT REPORT

Operator ID: SYLVIA Quant Rev: 6 Quant Time: 870923 15:32
Output File: ^A260B::QT Injected at: 870917 08:34
Data File: >A260B::D2 Dilution Factor: 1.00000
Name: VSTD050 CASE: 8016
Misc: WATER 107-40-VSTD INST A

ID File: ID_V::DB
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870923 15:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.91	127.9	130230	50.00	ug/l	90
2)	Chloromethane	2.17	50.0	127412	50.00	ug/l	96
3)	Bromomethane	3.29	93.9	218931	50.00	ug/l	99
4)	Vinyl Chloride	4.26	61.9	204574	50.00	ug/l	91
5)	Chloroethane	5.23	64.0	147573	50.00	ug/l	91
6)	Methylene Chloride	6.97	83.9	216337	50.00	ug/l	98
7)	Acetone	8.05	43.0	118373	50.00	ug/l	81
8)	Carbon Disulfide	8.79	76.0	583272	50.00	ug/l	100
9)	1,1-Dichloroethene	9.99	96.0	177421	50.00	ug/l	98
10)	1,1-Dichloroethane	11.04	63.0	346740	50.00	ug/l	96
11)	1,2-Dichloroethene (total)	11.89	95.9	197132	50.00	ug/l	87
12)	Chloroform	12.04	82.9	455730	50.00	ug/l	99
13)	1,2-Dichloroethane	12.97	62.0	417236	50.00	ug/l	84
14)	1,2-Dichloroethane-d4	12.86	65.0	355274	50.00	ug/l	91
15)	*IS#2 1,4-Difluorobenzene	20.84	113.9	605052	50.00	ug/l	73
16)	2-Butanone	13.21	72.0	30071	50.00	ug/l	40
17)	1,1,1-Trichloroethane	14.25	97.0	419142	50.00	ug/l	91
18)	Carbon Tetrachloride	14.64	116.9	426583	50.00	ug/l	92
19)	Vinyl Acetate	15.14	43.0	13461	50.00	ug/l	94
20)	Bromodichloromethane	14.87	82.9	416363	50.00	ug/l	95
21)	1,2-Dichloropropane	16.61	63.0	184661	50.00	ug/l	99
22)	cis-1,3-Dichloropropene	16.77	75.0	418794	61.00	ug/l	93
23)	Trichloroethene	17.47	129.9	292453	50.00	ug/l	96
24)	Dibromochloromethane	17.62	128.9	368600	50.00	ug/l	94
25)	1,1,2-Trichloroethane	17.93	97.0	222245	50.00	ug/l	95
26)	Benzene	18.36	78.0	586176	50.00	ug/l	100
27)	trans-1,3-Dichloropropene	18.05	75.0	255512	39.00	ug/l	90
28)	Bromoform	20.22	172.9	305046	50.00	ug/l	94
29)	*IS#3 Chlorobenzene-d5	25.60	116.9	506176	50.00	ug/l	96
30)	4-Methyl-2-Pentanone	21.42	43.0	198351	50.00	ug/l	75
31)	2-Hexanone	22.97	43.0	184051	50.00	ug/l	88
32)	Tetrachloroethene	23.12	163.9	253716	50.00	ug/l	40
33)	1,1,2,2-Tetrachloroethane	22.66	82.9	260291	50.00	ug/l	90
34)	Toluene	24.75	92.0	440376	50.00	ug/l	97
35)	Chlorobenzene	25.76	112.0	557927	50.00	ug/l	98
36)	Ethylbenzene	28.00	106.1	281734	50.00	ug/l	98
37)	Styrene	32.73	104.0	558884	50.00	ug/l	49
38)	Xylene (total)	34.16	106.0	332131	50.00	ug/l	94
39)	Toluene-d8	24.56	98.0	679183	50.00	ug/l	98
40)	4-Bromofluorobenzene	30.56	95.0	392691	50.00	ug/l	100

* Compound is ISTD

005043

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID (Standard): A259G Date Analyzed: 9/16/87

Instrument ID: 9601A Time Analyzed: 14:29

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	118569.	9.98	551108.	20.95	454664.	25.71
	UPPER LIMIT	237138.	10.48	1102216.	21.45	909328.	26.21
	LOWER LIMIT	59285.	9.48	275554.	20.45	227332.	25.21
	EPA SAMPLE NO.						
1	VBLK	118832.	9.95	551860.	20.91	459149.	25.67
2	FD211	121299.	9.94	561463.	20.89	467197.	25.66
3	FD273	123973.	9.93	568536.	20.85	474788.	25.65
4	FD610	123031.	9.93	559139.	20.85	469143.	25.65
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7							
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20							
21							
22							

IS1 (BCM) = IS#1 Bromochloromethane
IS2 (DFB) = IS#2 1,4-Difluorobenzene
IS3 (CBZ) = IS#3 Chlorobenzene-d5

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

005044

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID (Standard): A260B Date Analyzed: 9/17/87

Instrument ID: 9601A Time Analyzed: 8:34

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	130230.	9.91	605052.	20.84	506176.	25.60
	UPPER LIMIT	260460.	10.41	1210104.	21.34	1012352.	26.10
	LOWER LIMIT	65115.	9.41	302526.	20.34	253088.	25.10
	EPA SAMPLE NO.						
1	VBLK	128141.	9.94	582176.	20.86	480938.	25.62
2	FD272	121407.	9.99	576444.	20.87	472578.	25.67
3	FD272MS	118132.	9.94	565478.	20.90	465474.	25.67
4	FD272MSD	116283.	9.94	577242.	20.90	476056.	25.66
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22							

IS1 (BCM) = IS#1 Bromochloromethane
IS2 (DFB) = IS#2 1,4-Difluorobenzene
IS3 (CBZ) = IS#3 Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

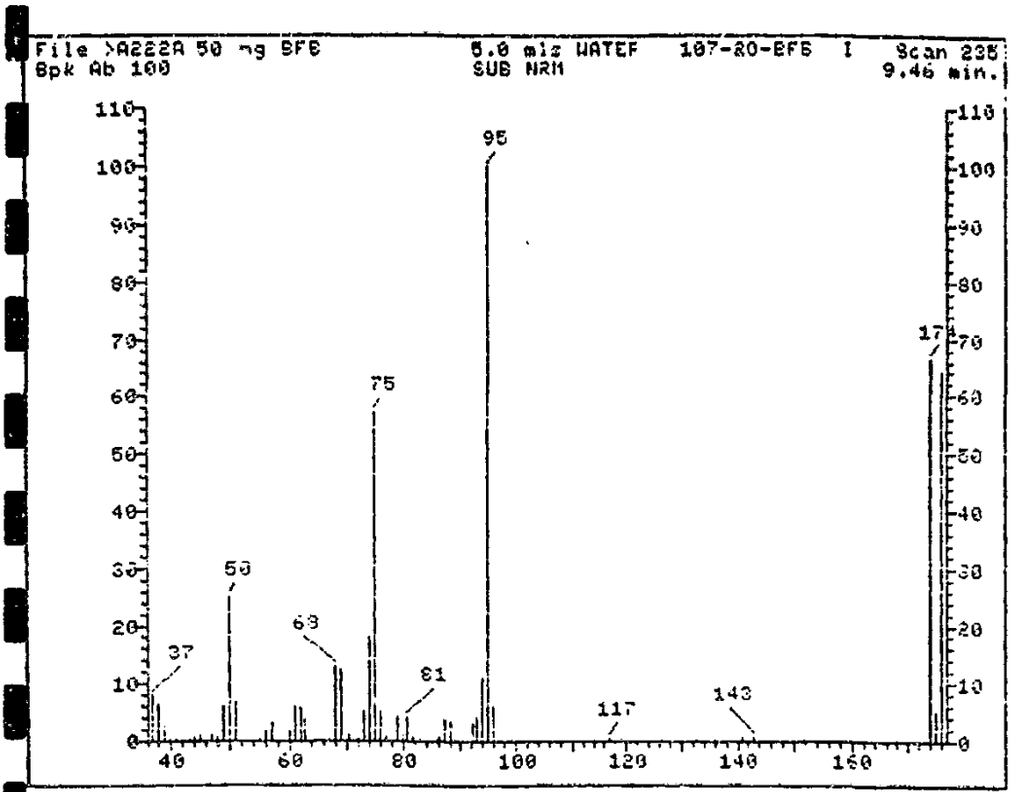
Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

VOLATILES

RAW QC DATA

005046



IND DATE: 8/10/87
INJ TIME: 09:01

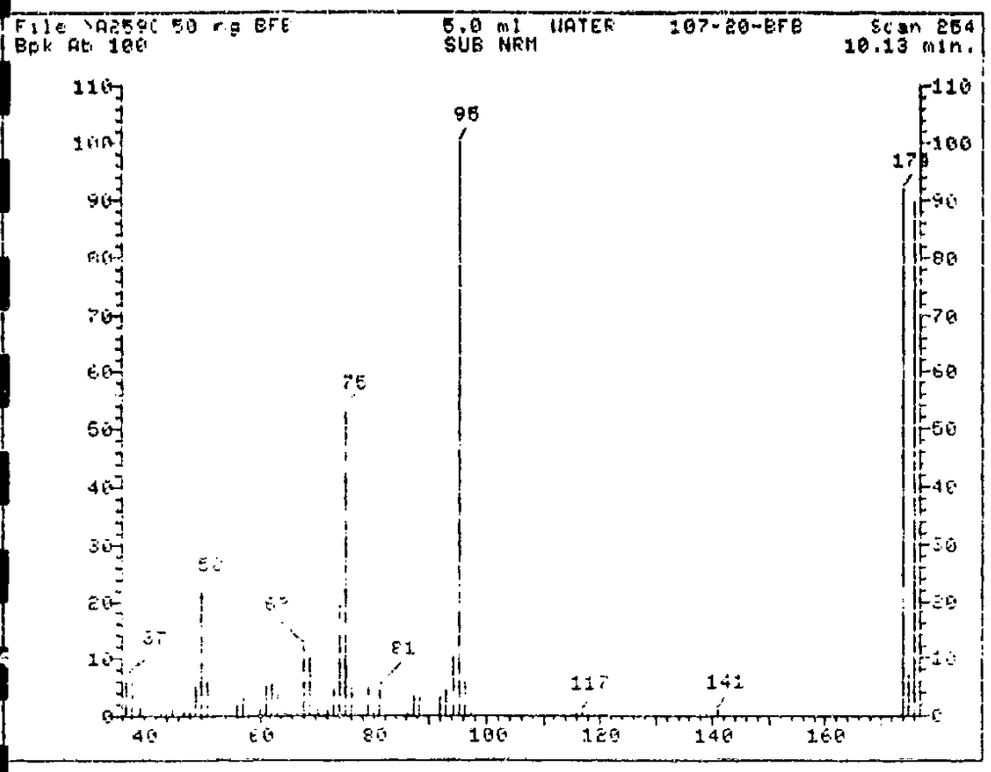
CASE: 8016

>A222A 50 ng BFB 5.0 mls WATER 107-20-BFB INST A 9601
235 SUB NRM

File: >A222A Scan #: 235 Retn. time: 9.46

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.669	49.00	5.929	63.00	3.879	77.00	.774	94.05	11.179
37.00	7.969	50.00	25.033	68.00	13.025	78.90	4.227	95.05	100.000
38.00	6.250	51.00	6.830	69.00	12.428	80.00	.934	96.05	6.128
39.00	2.360	55.00	.249	70.10	.967	80.90	4.216	116.95	.619
40.00	.309	56.00	1.873	71.10	.077	81.90	.873	140.95	.740
41.00	.359	57.10	3.183	72.00	.531	86.15	.669	143.00	.807
43.10	.254	58.10	.188	73.00	5.117	87.05	3.575	174.00	66.644
44.00	.763	60.00	1.586	74.00	18.203	88.05	3.249	175.00	4.913
45.10	1.188	61.00	6.156	75.10	57.140	92.05	2.896	176.00	64.025
47.00	1.100	62.10	5.775	76.10	5.001	93.05	4.172	177.00	4.167
48.00	.779								

005047



Data Filename: >A259C::D2
Name: 50 ng BFB CASE 8016
Misc: 5.0 ml WATER 107-20-BFB INST A

Operator ID: SYLVIA MS
Analysis Date/Time : 9/16/87 8:57

005048

Analysis Date/Time: 9/16/87 8:57
Data Filename and Sample ID:

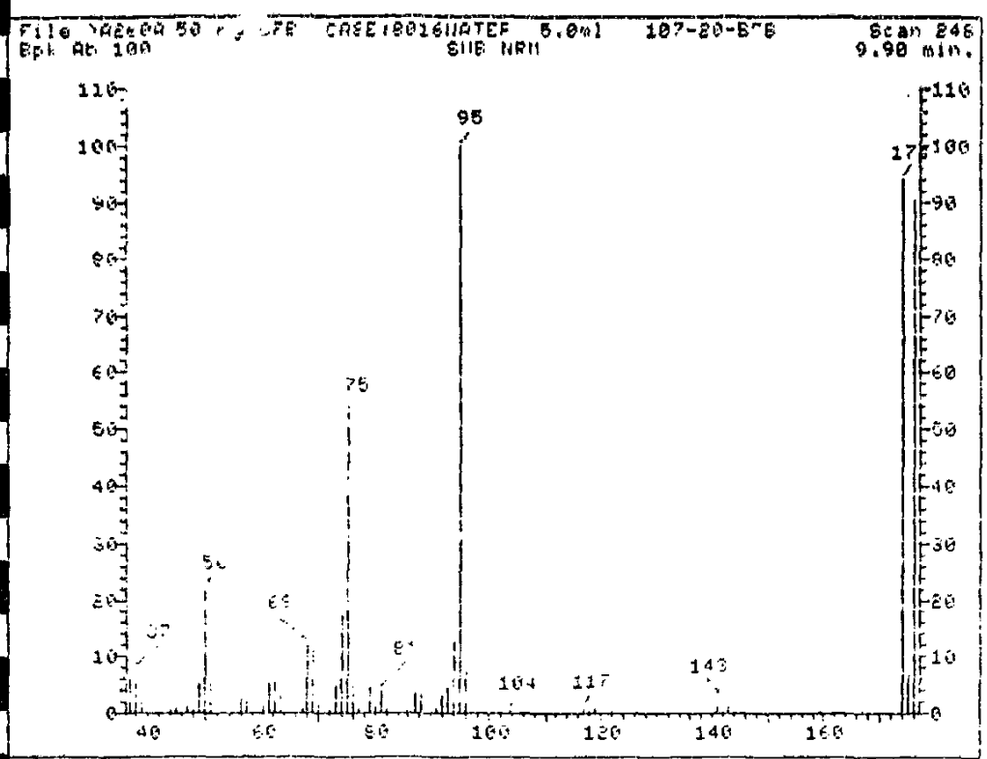
>A259C 50 ng BFB CASE: 8016 5.0 ml WATER 107-20-BFB INST A

254 SUB NRM

File: >A259C Scan #: 254 Retn. time: 10.13

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.461	49.15	4.978	63.15	3.826	80.05	1.063	97.15	.624
37.00	6.391	50.05	21.441	69.05	12.020	81.05	4.409	116.00	.459
38.00	5.588	51.05	6.068	69.05	11.492	86.05	.480	117.00	.658
39.05	1.413	55.15	.487	70.15	.987	87.05	3.374	141.00	1.029
42.15	.171	56.05	2.153	72.05	1.022	88.05	3.106	143.00	1.001
43.05	.219	57.15	3.271	73.05	4.834	92.05	3.312	174.10	91.895
44.05	.795	59.05	.987	74.15	19.323	93.05	4.313	175.10	6.946
45.05	.905	60.05	1.303	75.15	53.154	94.15	11.869	176.10	89.797
47.05	.679	61.05	5.554	76.15	4.752	95.15	100.000	177.10	5.979
48.05	.713	62.05	5.383	78.95	4.601	96.15	6.859		

005049



Data Filename: :A2604::DC
Name: 50 ng BFB CASE:8016
Misc: WATER 5.0ml 107-20-BFB INST A

Operator ID: SYLVIA MS
Analysis Date/Time : 9/17/87 7:56

005050

Analysis Date/Time: 9/17/87 7:56
Data Filename and Sample ID:

>A260A 50 ng BFB CASE:8016WATER 5.0ml 107-20-BFB INST A
24E SUB NRM

File: >A260A Scan #: 248 Retn. time: 9.90

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.378	55.05	.019	69.05	11.224	80.95	3.763	103.85	.429
37.00	6.891	56.05	2.288	70.05	1.256	81.95	.853	117.00	.846
38.00	5.192	57.05	2.064	72.05	.853	87.05	3.448	118.00	.423
38.95	1.660	58.05	.109	73.05	4.814	88.05	3.256	119.00	.667
44.05	.551	60.05	1.179	74.15	17.114	90.95	.692	141.00	.923
45.05	.724	61.05	5.224	75.05	52.811	92.05	2.897	143.00	1.006
47.05	.885	62.05	5.301	76.15	4.788	93.05	4.461	174.10	94.109
48.05	.615	63.05	3.538	77.05	.718	94.05	12.409	175.10	7.083
49.05	6.083	67.05	.635	78.95	4.295	95.05	100.000	176.10	90.365
50.05	21.608	68.05	11.858	79.95	.929	96.05	7.128	177.10	6.275
51.05	6.077								

005051

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259H

Level: (low/med) LOW Date Received: 0/ 0/ 0

Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	7.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005052

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A259H

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 9/16/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	Pentane (ACN)(DOT)(8CI9CI)	14.13	40.	J
2.					
3.					
4.					
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7.					
8.					
9.					
10.					
11.					
12.					
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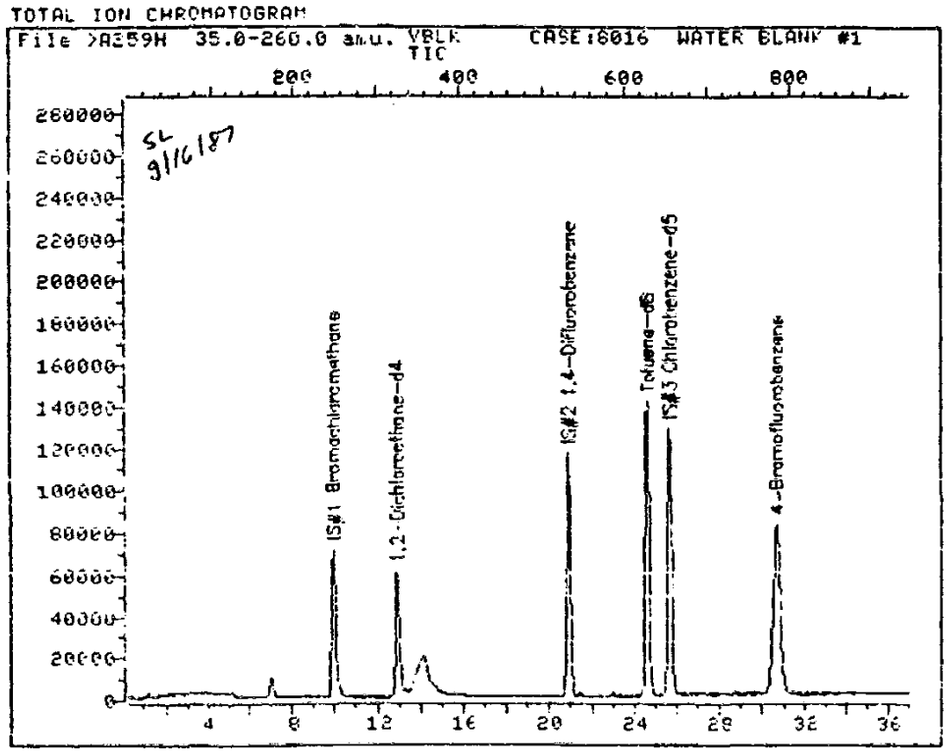
30.					

FORM I VOA-TIC 1/87 Rev.

005053

TOTAL ION CHROMATOGRAM



Data File: >A259H::D2 Quant Output File: ^A259H::QT
Name: VBLK CASE:8016
Misc: WATER BLANK #1 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

Operator ID: SYLVIA
Quant Time: 870916 16:09
Injected at: 870916 15:31

005054

QUANT REPORT

Operator ID: SYLVIA
Output File: ^A259H::QT
Data File: >A259H::D2
Name: VBLK CASE:8016
Misc: WATER BLANK #1

Quant Rev: 6

Quant Time: 870916 16:09
Injected at: 870916 15:31
Dilution Factor: 1.00000

INST A

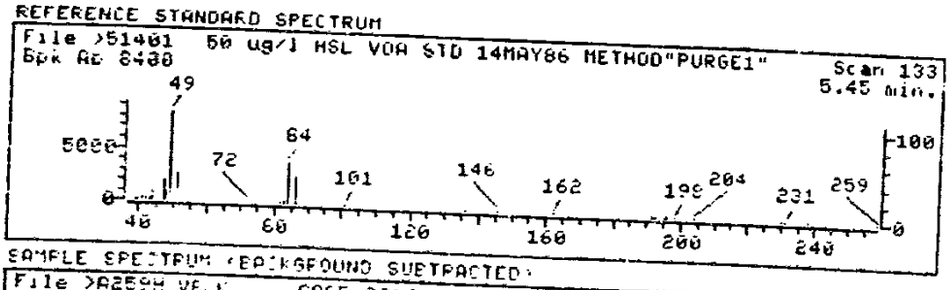
ID File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870916 15:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.95	127.9	118832	50.00	ug/l	91
6)	Methylene Chloride	7.01	83.9	27521	7.18	ug/l	99
14)	1,2-Dichloroethane-d4	12.89	65.0	318765	48.37	ug/l	93
15)	*IS#2 1,4-Difluorobenzene	20.91	113.9	551860	50.00	ug/l	72
29)	*IS#3 Chlorobenzene-d5	25.67	116.9	459149	50.00	ug/l	97
39)	Toluene-d8	24.62	98.0	608123	49.26	ug/l	96
40)	4-Bromofluorobenzene	30.66	95.0	354600	46.82	ug/l	100

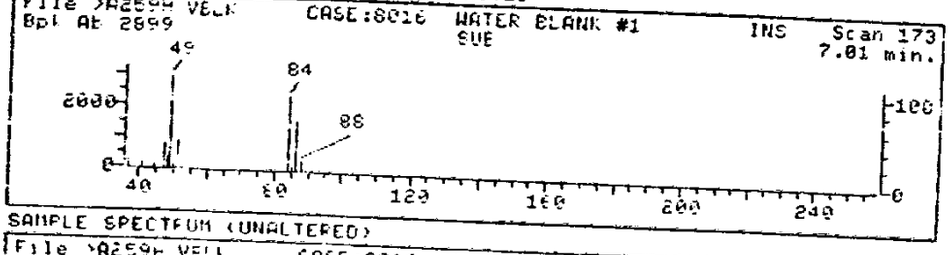
* Compound is ISTD

005055

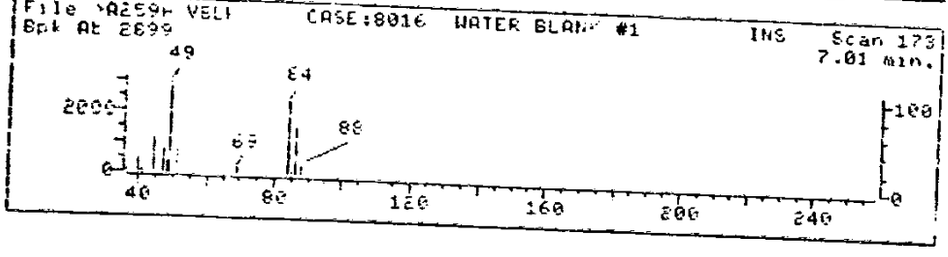
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >A259H::D2
Name: VBLK CASE:8016
Misc: WATER BLANK #1
Quant Time: 870916 16:09
Injected at: 870916 15:31

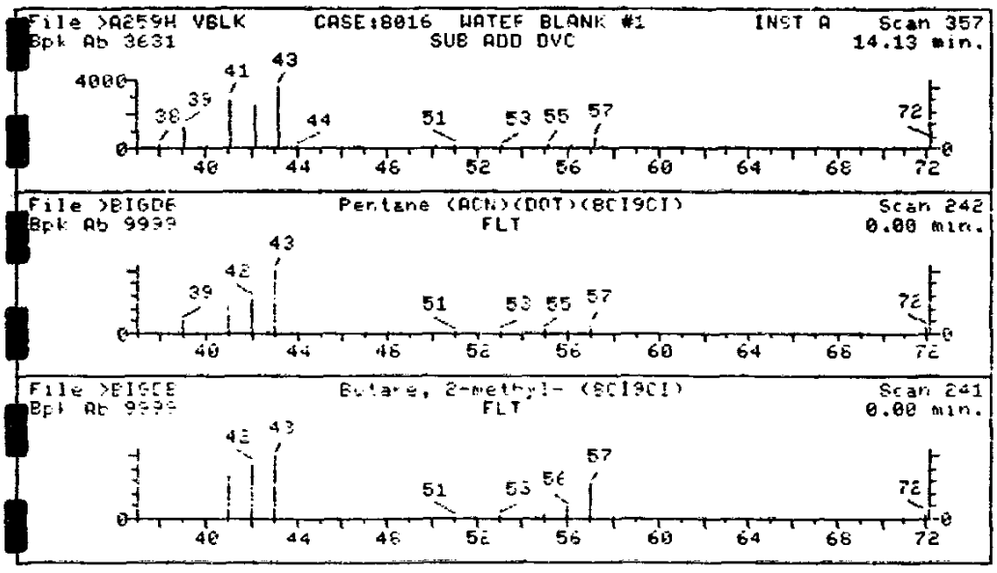
Quant Output File: ^A259H::QT

INST A

Quant ID File: ID_V::D3
Last Calibration: 870916 15:13

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 173
Retention Time: 7.01 min.
Quant Ion: 83.9
Area: 27521
Concentration: 7.18 ug/l
q-value: 99

005056



005057

. Unknown #,1
Area = 754286.0 Tentative Concentration is 44.00

1. Pentane (ACN)(DOT)(8CI9CI) 72 C5H12
2. Butane, 2-methyl- (8CI9CI) 72 C5H12

Sample file: >A259H Spectrum #: 357
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	67*	109660	242	"BIGDB	39	45	1	0	100	11	34	22
2.	52*	78784	241	"BIGDB	23	63	3	0	78	20	20	12

MS data file header from : >A259H

Sample: VBLK CASE:8016 Operator: SYLVIA MS 9/16/87 15:31
Misc : WATER BLANK #1 INST A
Sys. #: 1 MS model: 96 SW/HW rev.: IA ALS # : 0
Method file: PURGE1 Tuning file: MTVOAS No. of extra records: 2
Source temp.: 250 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	12.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

>A259H VBLK CASE:8016 WATER BLANK #1 INST A
35.01 260.0 CLP ADC TIC
Upslope: .08 Area Reject: 34951. Max Peaks: 1 Bunching: 1
Onslope: 0.00 Results File IA259H Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	14.13	348	357	389	18680	771337	754286	100.00	100.000

Sum of corrected areas: 754286.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	873771.	9.95	.34 - 15.43
2	50.0	1347118.	20.91	15.43 - 23.29
3	50.0	1611523.	25.67	23.29 - 36.98

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = .99
Amount Method (AM) = 5.00 Amount Used (AU) = 5.00

Correction Factor = 1.01 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

12:41 PM THU., 17 SEPT, 1987

005058

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Matrix: (soil/water) WATER

Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML

Lab File ID: A260C

Level: (low/med) LOW

Date Received: 0/ 0/ 0

% Moisture: not dec. 0.

Date Analyzed: 9/17/87

Column: (pack/cap) PACK

Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	4.	J
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005059

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A260C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 9/17/87

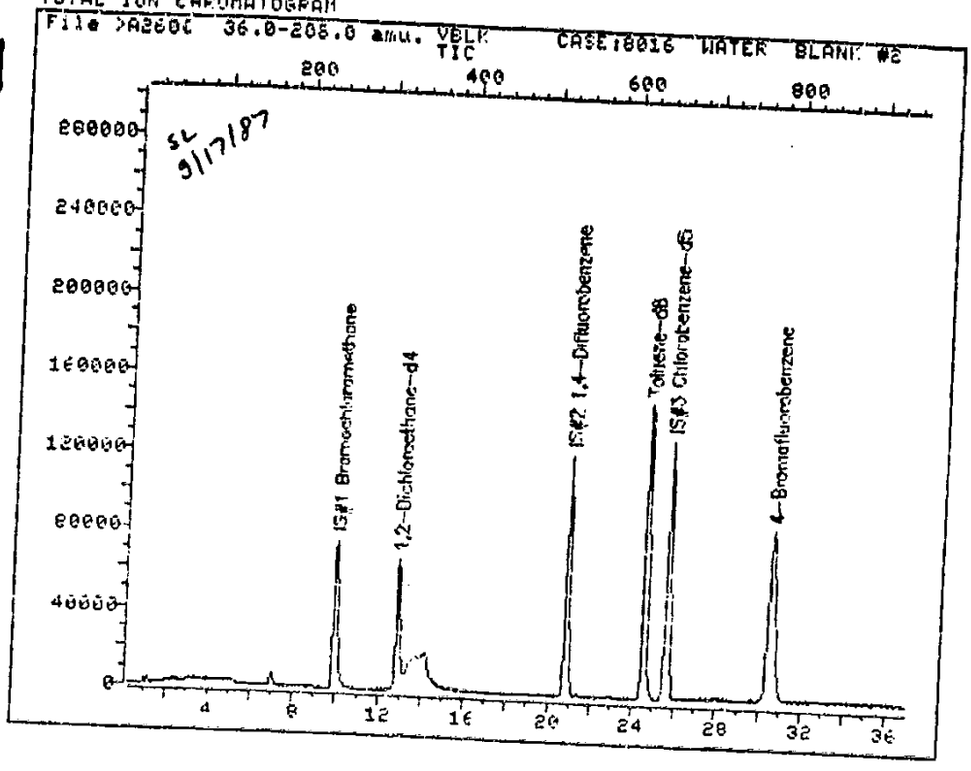
Column: (pack/cap) PACK Dilution Factor: 1.0000

Number TICs Found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	109-66-0	Pentane (ACN)(DOT)(BCISCI)	14.16	30.	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I VOA-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >A260C::D2
Name: VBLK CASE:8016
Misc: WATER BLANK #2

Quant Output File: ^A260C::Q1

INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870917 09:24

Operator ID: SYLVIA
Quant Time: 870917 10:49
Injected at: 870917 09:51

005061

QUANT REPORT

Operator ID: SYLVIA
Output File: ^A260C::QT
Data File: >A260C::D2
Name: VBLK CASE:8016
Misc: WATER BLANK #2

Quant Rev: 6
Quant Time: 870923 15:44
Injected at: 870917 09:51
Dilution Factor: 1.00000

INST A

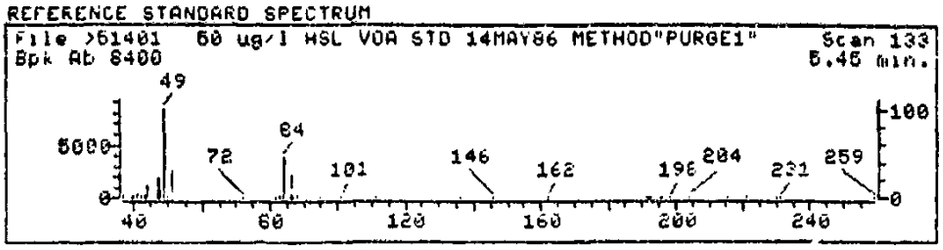
ID File: ID_V::DB
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870923 15:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.94	127.9	128141	50.00	ug/l	87
6)	Methylene Chloride	6.99	83.9	16600	3.90	ug/l	95
14)	1,2-Dichloroethane-d4	12.88	65.0	335472	47.98	ug/l	94
15)	*IS#2 1,4-Difluorobenzene	20.86	113.9	582176	50.00	ug/l	72
29)	*IS#3 Chlorobenzene-d5	25.62	116.9	480938	50.00	ug/l	96
39)	Toluene-d8	24.57	98.0	646407	50.08	ug/l	91
40)	4-Bromofluorobenzene	30.61	95.0	379088	50.80	ug/l	100

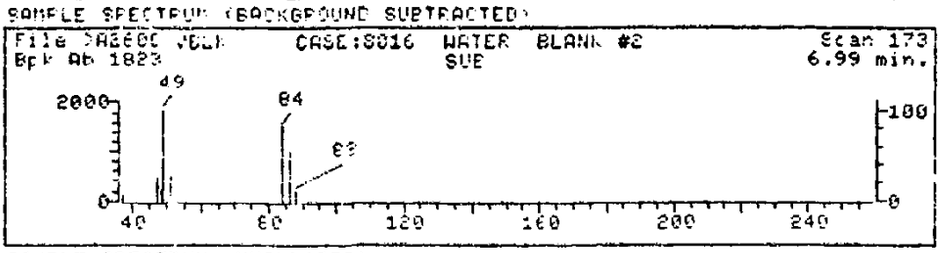
* Compound is ISTD

005062

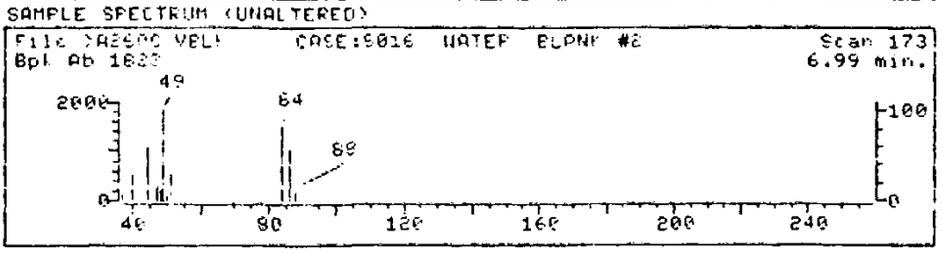
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



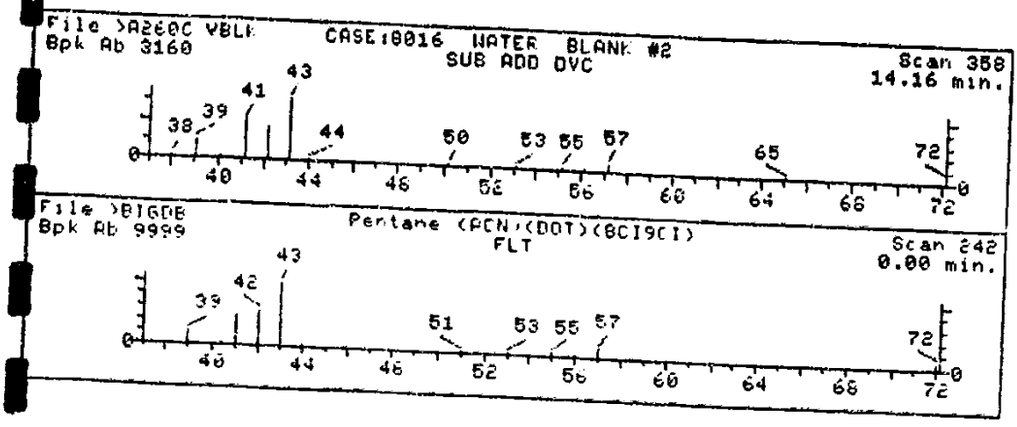
SAMPLE SPECTRUM (UNALTERED)



Data File: >A260C::D2 Quant Output File: ^A260C::QT
Name: VBLK CASE:8016
Misc: WATER BLANK #2 INST A
Quant Time: 870917 10:49 Quant ID File: ID_V::D3
Injected at: 870917 09:51 Last Calibration: 870917 09:24

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 173
Retention Time: 6.99 min.
Quant Ion: 83.9
Area: 16600
Concentration: 3.90 ug/l
q-value: 95

005063



005064

Unknown #.2
Area = 496861.0 Tentative Concentration is 27.00

1. Pentane (ACN)(DOT)(8CI9CI)

72 C5H12

Sample file: >A260C Spectrum #: 358
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	84*	109660	242	"BIGDB	49	35	0	0	97	10	55	60

MS data file header from : >A260C

Sample: VBLK CASE:8016 Operator: SYLVIA MS 9/17/87 9:51
Misc : WATER BLANK #2 INST A
Sys. #: 1 MS model: 96 SW/HW rev.: IA ALS # : 0
Method file: PURGE1 Tuning file: MTVOAS No. of extra records: 2
Source temp.: 250 Analyzer temp.: 180 Transfer line temp. : 250

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	12.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

>A260C VBLK CASE:8016 WATER BLANK #2 INST A
36.01 208.0 CLP ADC TIC
Upslope: .08 Area Reject: 36954. Max Peaks: 2 Bunching: 1
Dnslope: 0.00 Results File IA260C Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	13.73	346	347	352	16582	234883	226268	45.54	31.290
2	14.16	352	358	379	18299	611397	496861	100.00	68.710

Sum of corrected areas: 723129.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	923891.	9.94	.33 - 15.40
2	50.0	1432163.	20.86	15.40 - 23.24
3	50.0	1687746.	25.62	23.24 - 36.96

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = .99
Amount Method (AM) = 5.00 Amount Used (AU) = 5.00

Correction Factor = 1.01 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

2:29 PM THU., 17 SEPT, 1987

005065

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MS

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A260E

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. Date Analyzed: 9/17/87

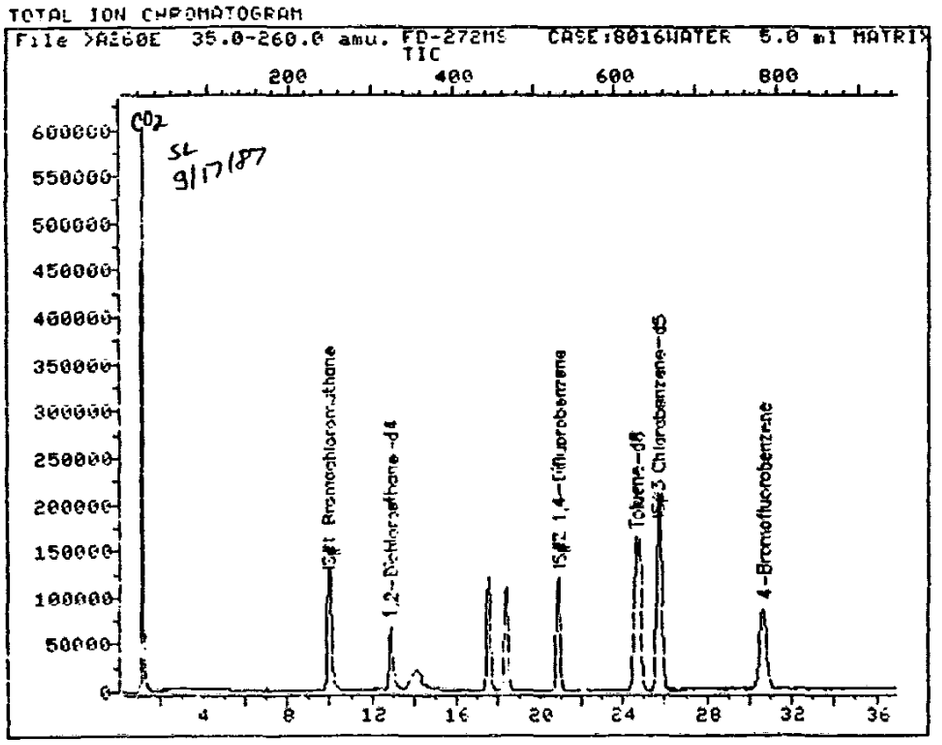
Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	54.	
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	46.	
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	49.	
10061-02-6	trans-1,3-Dichloropropere	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	51.	
108-90-7	Chlorobenzene	53.	
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005066

FORM I VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >A260E::D2 Quant Output File: ^A260E::QT
Name: FD-272MS CASE:8016
Misc: WATER 5.0 ml MATRIX SPIKE 8709EG02 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870917 09:24

Operator ID: SYLVIA
Quant Time: 870917 13:58
Injected at: 870917 12:21

005067

QUANT REPORT

Operator ID: SYLVIA Quant Rev: 6 Quant Time: 870923 15:49
Output File: ^A260E::OT Injected at: 870917 12:21
Data File: >A260E::D2 Dilution Factor: 1.00000
Name: FD-272MS CASE:8016
Misc: WATER 5.0 ml MATRIX SPIKE 8709EG02 INST A

ID File: ID_V::DE
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870923 15:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.94	127.9	118132	50.00	ug/l	89
9)	1,1-Dichloroethene	10.02	96.0	174654	54.26	ug/l	95
14)	1,2-Dichloroethane-d4	12.89	65.0	332785	51.63	ug/l	93
15)	*IS#2 1,4-Difluorobenzene	20.90	113.9	565478	50.00	ug/l	72
23)	Trichloroethene	17.49	129.9	249606	45.66	ug/l	96
26)	Benzene	18.38	78.0	535988	48.92	ug/l	100
29)	*IS#3 Chlorobenzene-d5	25.66	116.9	465474	50.00	ug/l	95
34)	Toluene	24.81	92.0	411169	50.77	ug/l	96
35)	Chlorobenzene	25.78	112.0	541954	52.32	ug/l	98
39)	Toluene-d8	24.62	98.0	621426	49.75	ug/l	99
40)	4-Bromofluorobenzene	30.66	95.0	377640	52.29	ug/l	100

* Compound is ISTD

005068

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MSD

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 5. (g/mL) ML Lab File ID: A260F

Level: (low/med) LOW Date Received: 9/12/87

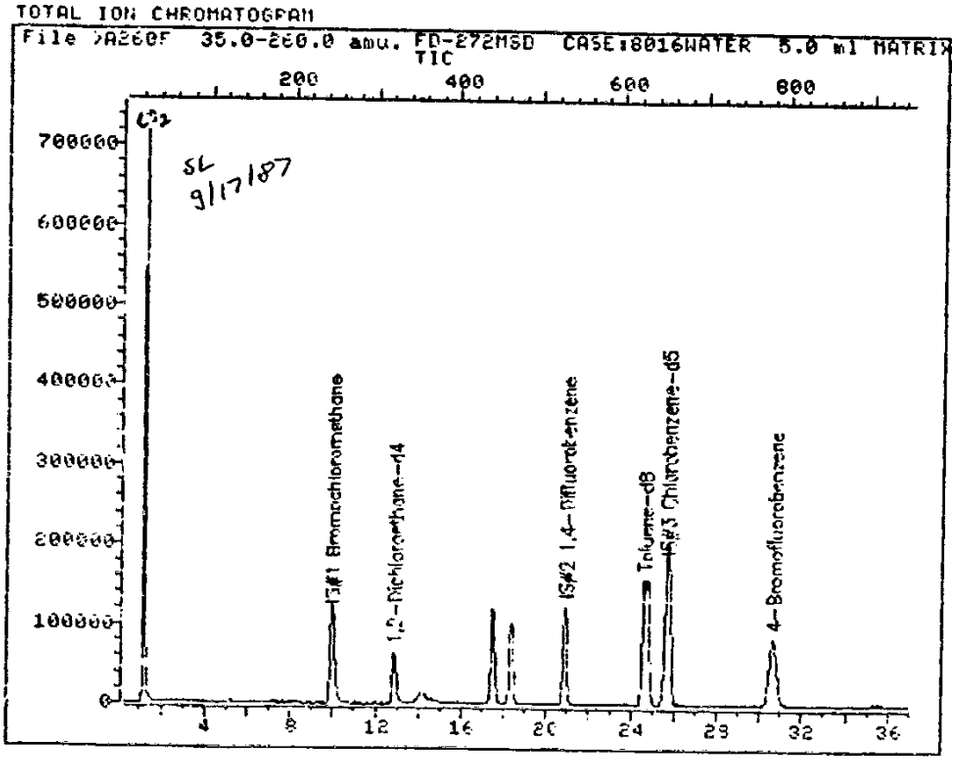
% Moisture: not dec. 0. Date Analyzed: 9/17/87

Column: (pack/cap) PACK Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	56.	
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	44.	
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	48.	
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	49.	
108-90-7	Chlorobenzene	51.	
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

005069

TOTAL ION CHROMATOGRAM



Data File: >A260F::D2 Quant Output File: ^A260F::QT
Name: FD-272MSD CASE:8016
Misc: WATER 5.0 ml MATRIX SPIKE DUPLICATE 8709EG02 INST A

Id File: ID_V::D3
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870917 09:24

Operator ID: SYLVIA
Quant Time: 870917 13:56
Injected at: 870917 13:11

005070

QUANT REPORT

Operator ID: SYLVIA Quant Rev: 6 Quant Time: 870923 15:53
Output File: ^A260F::QT Injected at: 870917 13:11
Data File: >A260F::D2 Dilution Factor: 1.00000
Name: FD-272MSD CASE:8016
Misc: WATER 5.0 ml MATRIX SPIKE DUPLICATE 8709EG02 INST A

ID File: ID_V::DB
Title: HSL VOLATILE ORGANIC ANALYSIS EPA CLP APR86
Last Calibration: 870923 15:31

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 Bromochloromethane	9.94	127.9	116283	50.00	ug/l	90
9)	1,1-Dichloroethene	10.01	96.0	176331	55.65	ug/l	98
14)	1,2-Dichloroethane-d4	12.88	65.0	322461	50.83	ug/l	93
15)	*IS#2 1,4-Difluorobenzene	20.90	113.9	577242	50.00	ug/l	71
23)	Trichloroethene	17.49	129.9	244538	43.82	ug/l	93
26)	Benzene	18.38	78.0	534203	47.77	ug/l	100
29)	*IS#3 Chlorobenzene-d5	25.66	116.9	476056	50.00	ug/l	96
34)	Toluene	24.77	92.0	402077	48.54	ug/l	96
35)	Chlorobenzene	25.78	112.0	535410	51.02	ug/l	99
39)	Toluene-d8	24.61	98.0	623406	48.80	ug/l	96
40)	4-Bromofluorobenzene	30.65	95.0	372606	50.44	ug/l	100

* Compound is ISTD

005071

SEMIVOLATILES DATA

005072

SEMIVOLATILES

QC SUMMARY

005073

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
1	SBLK	77	67	85	91	79	79		0
2	FD610	07	85	102	87	85	75		0
3	FD272	65	66	75	41	38	40		0
4	FD272MS	96	90	105	80	76	72		0
5	FD272MSD	92	78	105	70	66	68		0
6	SBLK	89	86	101	58	76	73		0
7	FD273 RE	91	91	103	59	69	81		0
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		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d5	(10- 94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II SV-1

1/87 Rev.

005074

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Matrix Spike - EPA Sample No.: FD272

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC	#	QC LIMITS REC.
Phenol	200.	0.	145.	72.		12- 89
2-Chlorophenol	200.	0.	141.	70.		27-123
1,4-Dichlorobenzene	100.	0.	73.	73.		36- 97
N-Nitroso-di-n-prop.(1)	120.	0.	71.	59.		41-116
1,2,4-Trichlorobenzene	116.	0.	88.	76.		39- 98
4-Chloro-3-methylphenol	200.	0.	125.	63.		23- 97
Acenaphthene	104.	0.	94.	91.		46-118
4-Nitrophenol	200.	0.	189.	95.	*	10- 80
2,4-Dinitrotoluene	104.	0.	85.	82.		24- 96
Pentachlorophenol	200.	0.	123.	61.		9-103
Pyrene	108.	0.	107.	99.		26-127

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
Phenol	200.	127.	63.		13.		42	12- 89
2-Chlorophenol	200.	129.	64.		9.		40	27-123
1,4-Dichlorobenzene	100.	69.	69.		6.		28	36- 97
N-Nitroso-di-n-prop.(1)	120.	73.	61.		3.		38	41-116
1,2,4-Trichlorobenzene	116.	79.	68.		12.		28	39- 98
4-Chloro-3-methylphenol	200.	109.	55.		14.		42	23- 97
Acenaphthene	104.	93.	89.		1.		31	46-118
4-Nitrophenol	200.	189.	95.	*	0.		50	10- 80
2,4-Dinitrotoluene	104.	88.	85.		4.		38	24- 96
Pentachlorophenol	200.	122.	61.		1.		50	9-103
Pyrene	108.	110.	102.		3.		31	26-127

(1) N-Nitroso-di-n-propylamine

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

* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 2 out of 22 outside limits

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

090

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: E276C Lab Sample ID: _____

Date Extracted: 9/15/87 Extraction:(SepF/Cont/Sonc) CONT

Date Analyzed: 10/ 3/87 Time Analyzed: 10:17

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

Instrument ID: 7002E

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	FD610		E276E	10/ 3/87
2	FD272		E276J	10/ 3/87
3	FD272MS		E276K	10/ 3/87
4	FD272MSD		E276L	10/ 3/87
5				
6				
7				
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COMMENTS:

FORM IV SV 1/87 Rev.

005076

005076

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: E279C Lab Sample ID: _____

Date Extracted: 10/ 5/87 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed: 10/ 6/87 Time Analyzed: 10:55

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

Instrument ID: 7002E

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	FD273 RE		E279D	10/ 6/87
2				
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COMMENTS:

FORM IV SV 1/87 Rev.

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: E275A DFTPP Injection Date: 10/ 2/87

Instrument ID.: 7002E DFTPP Injection Time: 14:03

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.3
68	Less than 2.0% of mass 69	.0 (.0)1
69	Mass 69 relative abundance	75.2
70	Less than 2.0% of mass 69	.0 (.0)1
127	40.0 - 60.0% of mass 198	48.4
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.6
441	Present, but less than mass 443	10.4
442	Greater than 40.0% of mass 198	81.7
443	17.0 - 23.0% of mass 442	13.9 (17.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050		E275B	10/ 2/87	14:27
2	SSTD020		E275E	10/ 2/87	16:58
3	SSTD080		E275F	10/ 2/87	17:48
4	SSTD120		E275G	10/ 2/87	18:37
5	SSTD160		E275H	10/ 2/87	19:27
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FORM V SV 1/87 Rev.

SB

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: E276A DFTPP Injection Date: 10/ 3/87

Instrument ID.: 7002E DFTPP Injection Time: 8:52

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.1
68	Less than 2.0% of mass 69	.0 (.0)1
69	Mass 69 relative abundance	70.3
70	Less than 2.0% of mass 69	.0 (.0)1
127	40.0 - 60.0% of mass 198	46.9
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	21.0
365	Greater than 1.00% of mass 198	2.4
441	Present, but less than mass 443	12.2
442	Greater than 40.0% of mass 198	85.2
443	17.0 - 23.0% of mass 442	16.2 (19.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050		E276B	10/ 3/87	9:15
2	SBLK		E276C	10/ 3/87	10:17
3	FD610		E276E	10/ 3/87	11:53
4	FD272		E276J	10/ 3/87	15:56
5	FD272MS		E276K	10/ 3/87	16:43
6	FD272MSD		E276L	10/ 3/87	17:32
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FORM V SV 1/87 Rev.

005079

005079

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID: E279A DFTPP Injection Date: 10/ 6/87

Instrument ID.: 7002E DFTPP Injection Time: 9:12

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.5
68	Less than 2.0% of mass 69	.0 (.0)1
69	Mass 69 relative abundance	77.6
70	Less than 2.0% of mass 69	.0 (.0)1
127	40.0 - 60.0% of mass 198	48.6
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.9
365	Greater than 1.00% of mass 198	2.8
441	Present, but less than mass 443	10.8
442	Greater than 40.0% of mass 198	76.9
443	17.0 - 23.0% of mass 442	17.1 (22.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050		E279B	10/ 6/87	9:41
2	SBLK		E279C	10/ 6/87	10:55
3	FD273 RE		E279D	10/ 6/87	11:43
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22					

FORM V SV 1/87 Rev.

005080

005081

SEMIVOLATILES

SAMPLE DATA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Matrix: (soil/water) WATER

Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML

Lab File ID: E276J

Level: (low/med) LOW

Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0.

Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 10/ 3/87

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

Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	10.	U
111-91-1	bis(2-Chloroethoxy)methane	50.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	10.	U
91-58-7	2-Chloronaphthalene	50.	U
88-74-4	2-Nitroaniline	10.	U
131-11-3	Dimethylphthalate	50.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
		10.	U

005082

FORM I SV-1

1/87 Rev.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276J

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 1/87 Rev.

005083

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD272 098

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276J

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0000

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	UNKNOWN	7.06	30.	J
2. - -	UNKNOWN	13.14	10.	J
3.				
4.				
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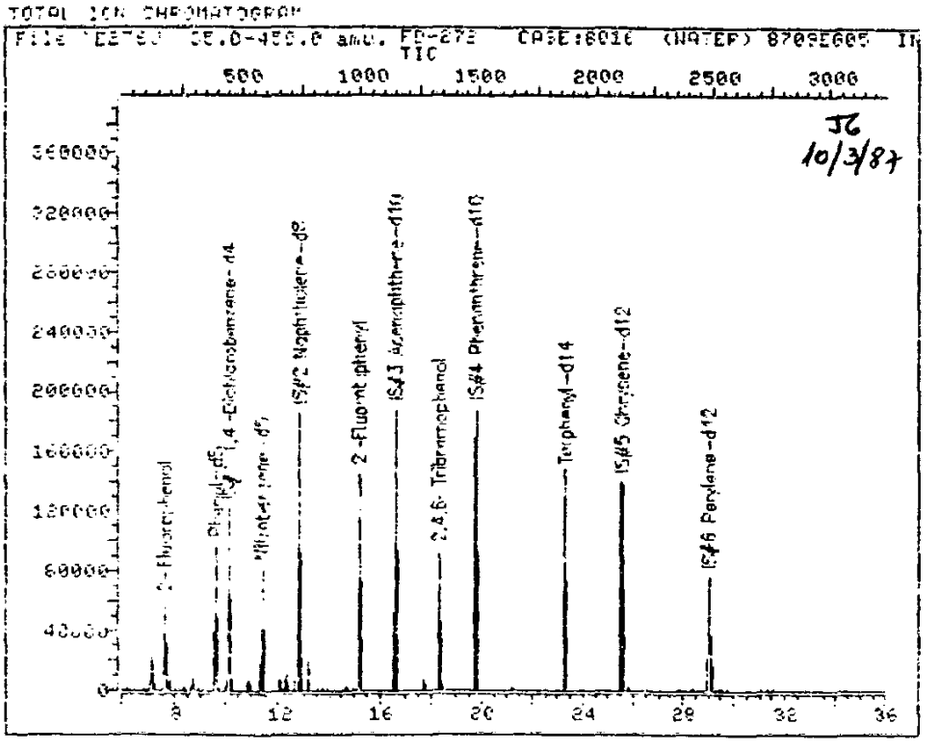
005084

FORM I SV-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: 'E2760::03 Quant Output File: 'E2760::QT
Name: FD-272 CASE:8016
Misc: (WATER 8709EG05 INST 7002E BTL# 8

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

Operator ID: SAVOY
Quant Time: 871003 16:35
Injected at: 871003 15:56

005085

QUANT REPORT

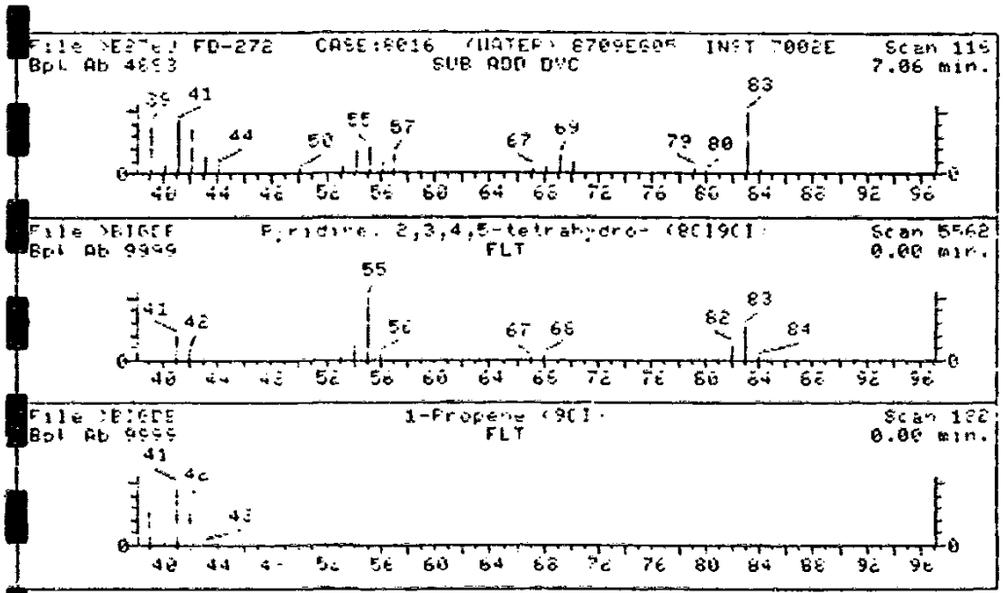
Operator ID: SAVOY Quant Rev: 6 Quant Time: 871003 16:35
Output File: ^E276J::QT Injected at: 871003 15:56
Data File: >E276J::D3 Dilution Factor: 1.00000
Name: FD-272 CASE:8016
Misc: (WATER) 8709EG05 INST 7002F BTL# 8

ID File: ID_SV::DB
Title: HS_ SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.11	152.1	44388	40.00	ng/ul	98
2)	Phenol-d6	9.57	99.0	68686	40.99	ng/ul	59
3)	2-Fluorophenol	7.57	112.0	52813	38.22	ng/ul	70
16)	*IS#2 Naphthalene-d8	12.78	136.1	150223	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.32	82.1	55295	32.55	ng/ul	79
31)	*IS#3 Acenaphthene-d10	16.57	164.2	76296	41.00	ng/ul	91
35)	2-Fluorobiphenyl	15.17	172.1	80609	32.91	ng/ul	93
51)	2,4,6-Tribromophenol	18.29	329.7	20365	39.73	ng/ul	94
52)	*IS#4 Phenanthrene-d10	19.74	188.2	141924	40.00	ng/ul	89
62)	*IS#5 Chrysene-d12	25.51	240.2	121465	40.00	ng/ul	99
64)	Terphenyl-d14	23.27	244.2	99017	37.67	ng/ul	97
70)	*IS#6 Perylene-d12	28.99	264.2	100881	40.00	ng/ul	100

* Compound is ISTD

005086



Unknown #.1
Area = 96887.00 Tentative Concentration is 14.00

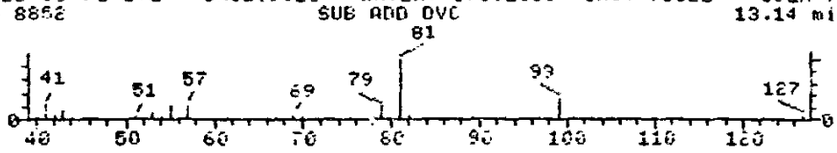
1. Pyridine, 2,3,4,5-tetrahydro- (8CI9CI) 83 C5H9N
2. 1-Propene (9CI) 42 C3H6

Sample file: >E276J Spectrum #: 116
Search speed: 1 Tilting option: S No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	505180	5562	"BIGDB	37	56	2	0	151	50	7	17
2.	15*	115071	182	"BIGDB	21	58	2	0	85	57	3	13

005087

File [illegible] FD-272 CASE:6016 (WATER) 8709E605 INST 7002E Scan 772
Bpk At 8852 SUB ADD OVC 13.14 min.



Unknown #.2
Area = 51497.00 Tentative Concentration is 6.00

Sample file: [illegible]6J Spectrum #: 772

No data base entries were retrieved.

005088

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD273 RE

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E279D

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 10/ 5/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/ 6/87

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

005089

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
104
FD273 RE

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E279D

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 10/ 5/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/ 6/87

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	5.	J
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	24.	
206-44-0	Fluoranthene	5.	J
129-00-0	Pyrene	13.	
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	7.	J
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 1/87 Rev.

005090

EPA SAMPLE NO.

105

FD273 RE

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E279D

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 10/ 5/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/ 6/87

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 2.0000

Number TICs found: 4

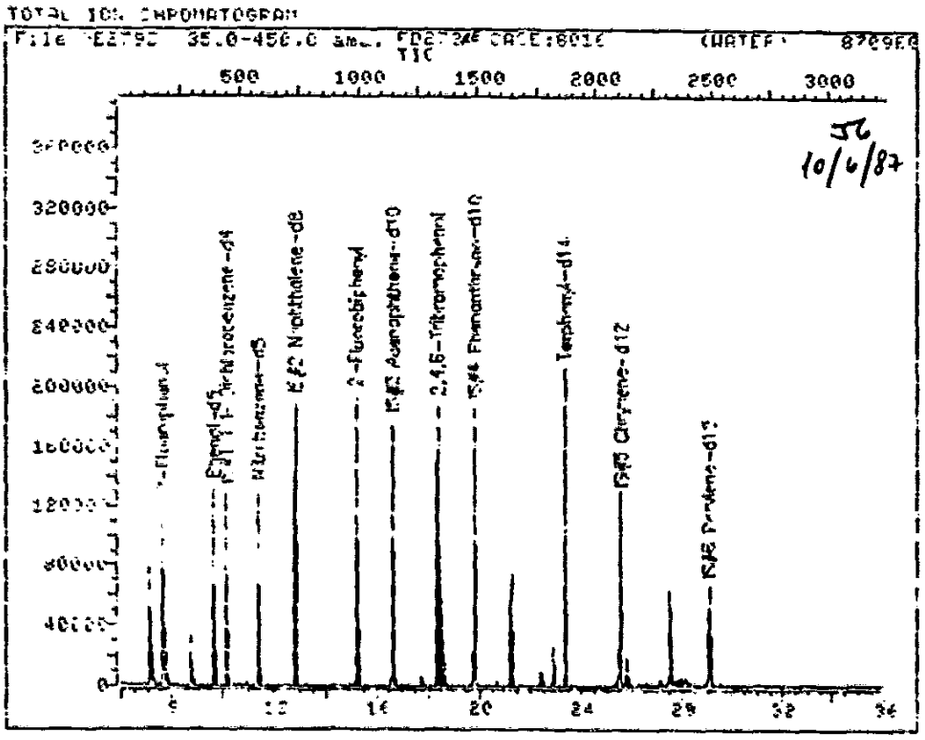
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	7.08	70.	J
2.	930-68-7	2-Cyclohexen-1-one	8.68	20.	BJ
3.	- -	UNKNOWN	18.56	30.	J
4.	- -	UNKNOWN	27.46	50.	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-TIC 1/87 Rev.

005091

TOTAL ION CHROMATOGRAM



Data File: 'E279D::D3 Quant Output File: 'E279D::DT
Name: FD273RE CASE:8016
Misc: (WATER) 8709EG03 INST 7002E BTL# 2

Id File: ID_SV::DE
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MH:56
Last Calibration: 871006 10:55

Operator ID: JEANNETTE
Quant Time: 871006 12:21
Injected at: 871006 11:43

005092

QUANT REPORT

Operator ID: JEANNETTE Quant Rev: 6 Quant Time: 871006 12:22
Output File: ^E279D::QT Injected at: 871006 11:43
Data File: >E279D::D3 Dilution Factor: 1.00000
Name: FD2736 CASE:8016
Misc: (WATER) 8709EG07 INST 7002E BTL# 2

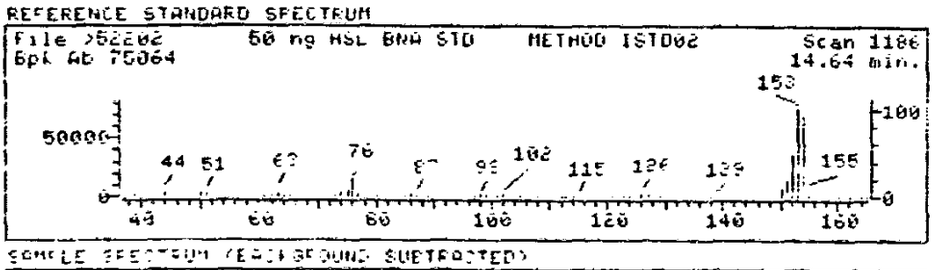
ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871006 10:55

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS01 1,4-Dichlorobenzene-d4	10.13	152.1	46916	40.00	ng/ul	98
2)	Phenol-d5	9.61	99.0	108494	59.35	ng/ul	60
3)	2-Fluorophenol	7.60	112.0	103046	69.66	ng/ul	66
16)	*IS02 Naphthalene-d8	12.80	136.1	157052	40.03	ng/ul	97
17)	Nitrobenzene-d5	11.35	82.1	86240	45.68	ng/ul	78
31)	*IS03 Acenaphthene-d10	16.60	164.2	76470	40.00	ng/ul	84
39)	2-Fluorobiphenyl	15.19	172.1	110259	45.41	ng/ul	97
42)	Acenaphthene	16.65	153.1	6273	2.75	ng/ul	98
51)	2,4,6-Tribromophenol	18.32	329.7	36807	81.30	ng/ul	92
52)	*IS04 Phenanthrene-d10	19.77	188.2	140598	40.00	ng/ul	91
60)	Fluoranthene	22.40	202.1	10943	2.69	ng/ul	99
61)	Di-n-butylphthalate	21.24	149.0	72057	12.02	ng/ul	93
62)	*IS05 Chrysene-d12	25.55	240.2	111593	40.00	ng/ul	97
63)	Pyrene	22.88	202.1	27503	6.41	ng/ul	98
64)	Terphenyl-d14	23.30	244.2	133906	51.74	ng/ul	99
68)	bis(2-Ethylhexyl)phthalate	25.78	149.0	13383	3.31	ng/ul	81
70)	*IS06 Perylene-d12	29.04	264.2	87242	40.00	ng/ul	100

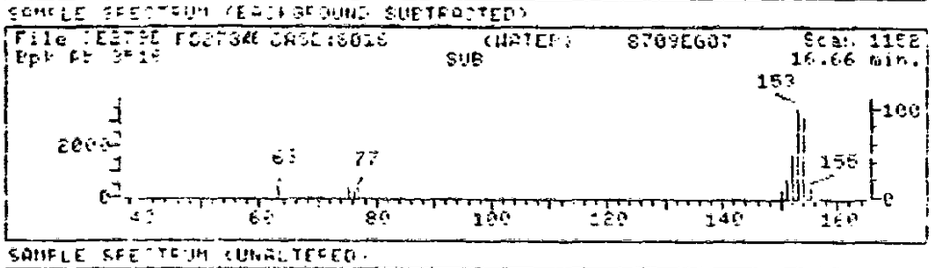
* Compound is ISTD

005093

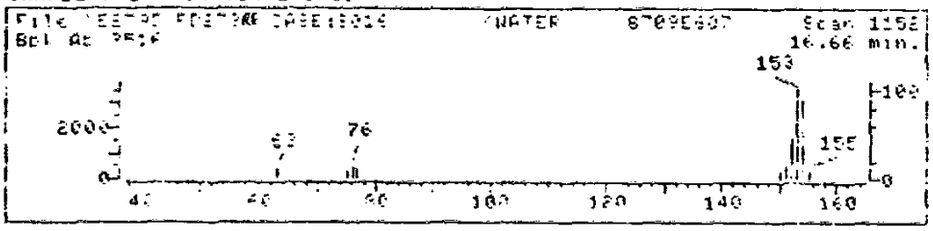
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

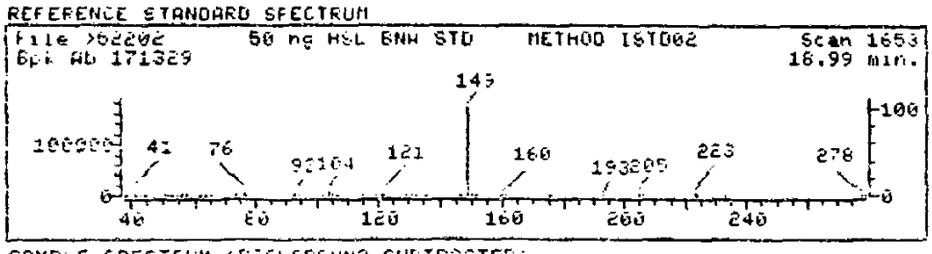


Data File: >E279D::D3 Quant Output File: ^E279D::QT
Name: FD273AE CASE:8016
Misc: (WATER) 8709EG07 INST 7002E BTL# 2
Quant Time: 871006 12:22 Quant ID File: ID_SV::DE
Injected at: 871006 11:43 Last Calibration: 871006 10:55

Compound No: 42
Compound Name: Acenaphthene
Scan Number: 1152
Retention Time: 16.66 min.
Quant Ion: 153.1
Area: 6273
Concentration: 2.75 ng/ul
o-value: 98

005094

REFERENCE STANDARD SPECTRUM



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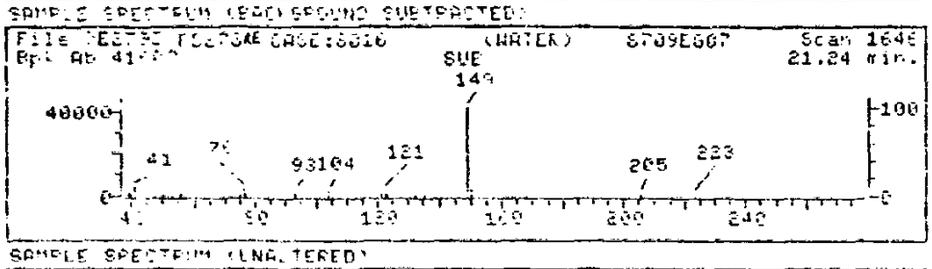

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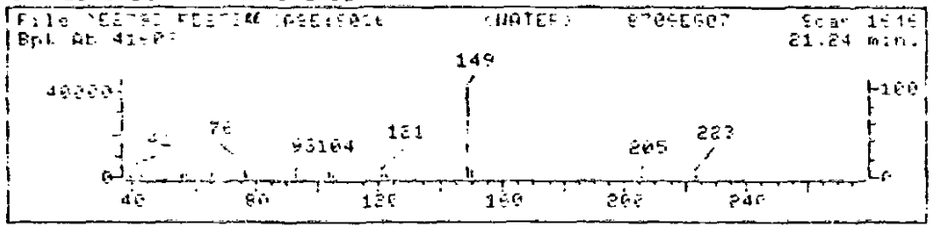
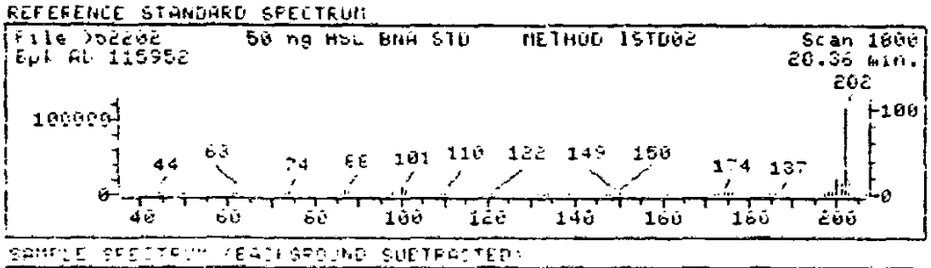


Data File: ^E279D::D3 Quant Output File: ^E279D::QT
Name: FD273AE CASE:8016
Misc: (WATER) 8709E607 INST 7002E BTL# 2
Quant Time: 871006 12:22 Quant ID File: ID_SV::DB
Injected at: 871006 11:43 Last Calibration: 871006 10:55

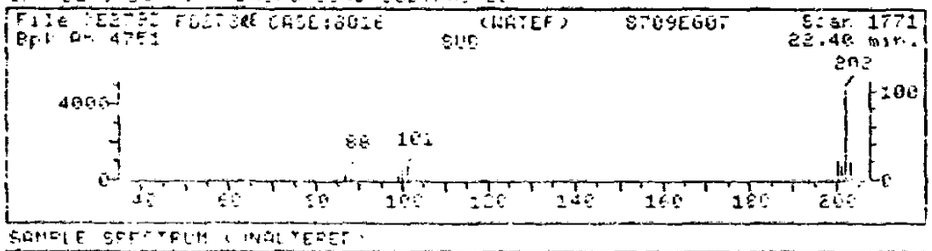
Compound No: 61
Compound Name: Di-n-butylphthalate
Scan Number: 1646
Retention Time: 21.24 min.
Quant Ion: 149.0
Area: 72057
Concentration: 12.02 ng/ul
q-value: 93

005095

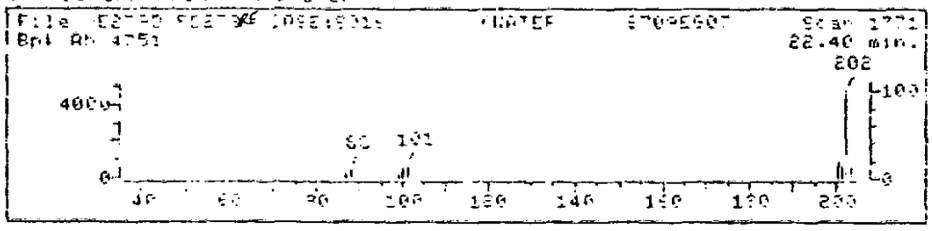
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNSUBTRACTED)

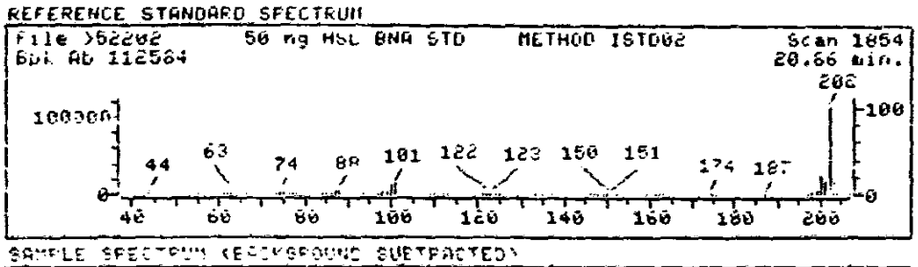


Data File:)E279D::D3 Quant Output File: (E279D::QT
Name: FD273RE CASE:5016
Misc: (WATER) 8709EG07 INST 7002E BTL# 2
Quant Time: 871006 12:22 Quant ID File: ID_SV::DB
Injected at: 871006 11:43 Last Calibration: 871006 10:55

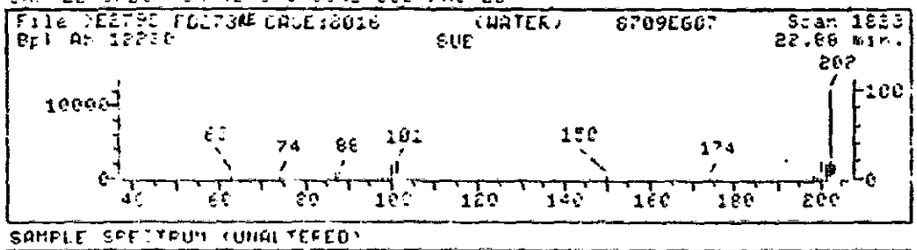
Compound No: 60
Compound Name: Fluoranthene
Scan Number: 1771
Retention Time: 22.40 min.
Quant Ion: 202.1
Area: 108443
Concentration: 2.69 ng/ul
q-value: 99

005096

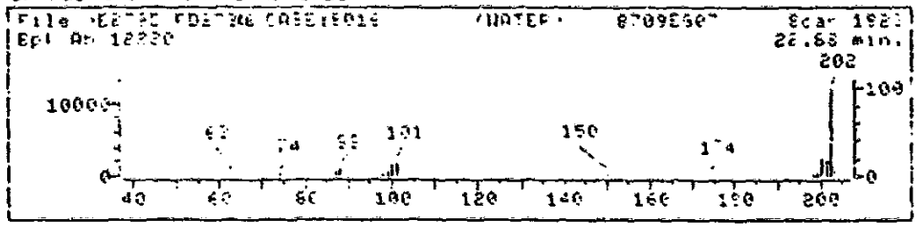
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

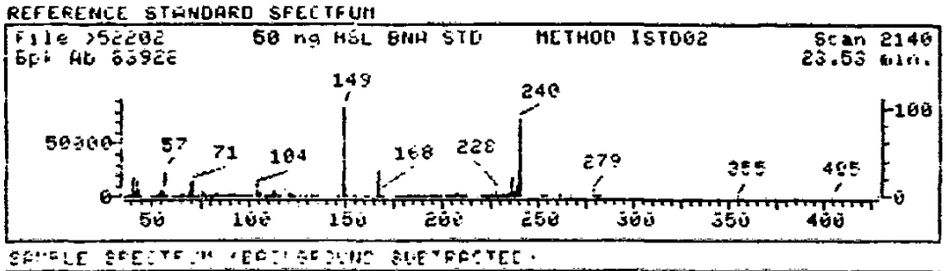


Data File: >E279D::D7 Quant Output File: ^E279D::DT
Name: FD273RE CASE:8016
Misc: (WATER) 8709EG07 INST 7002E BTL# 2
Quant Time: 871006 12:22 Quant ID File: ID_SV::DB
Injected at: 871006 11:43 Last Calibration: 871006 10:55

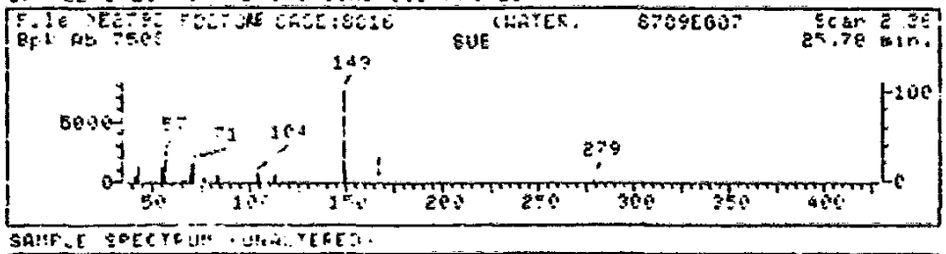
Compound No: 63
Compound Name: Pyrene
Scan Number: 1323
Retention Time: 22.88 min.
Quant Ion: 202.1
Area: 27503
Concentration: 6.41 ng/ul
q-value: 98

005097

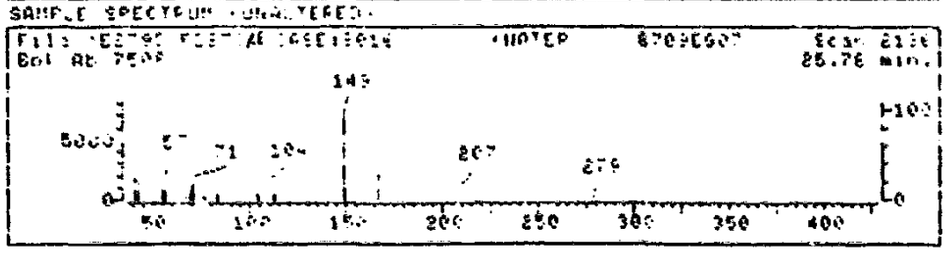
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



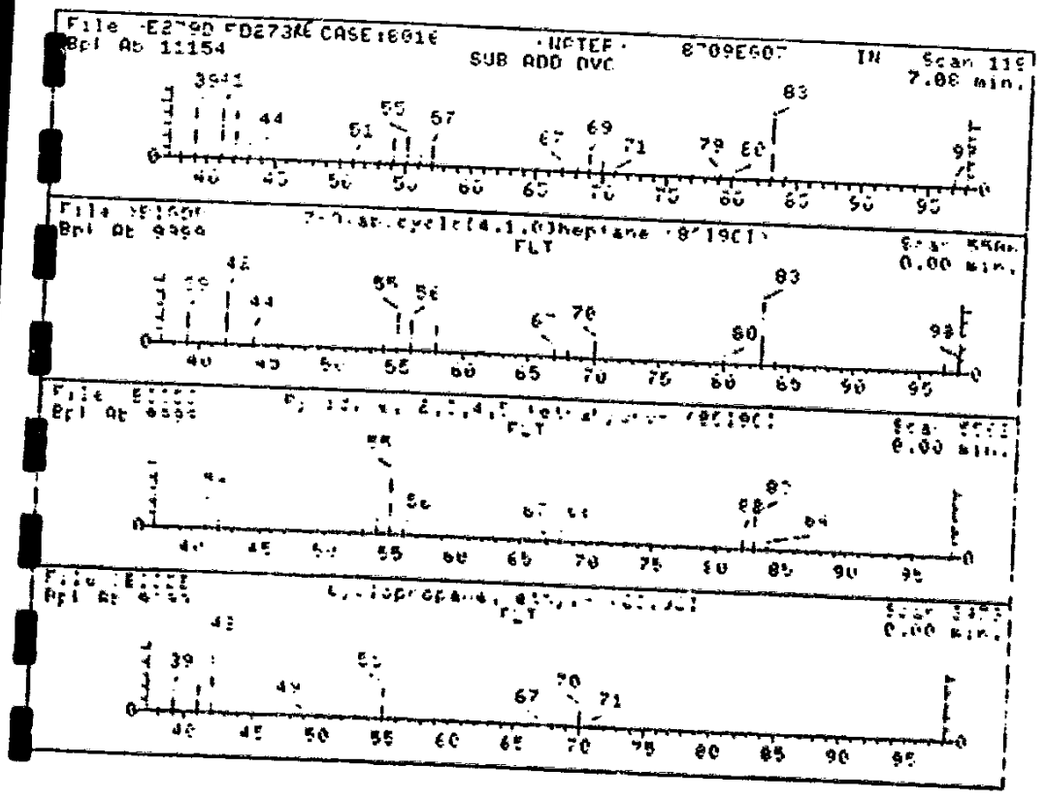
SAMPLE SPECTRUM (UNALTERED)



Data File: E279D::07 Quant Output File: ^E279D::07
Name: FD273A6 CASE:8016
Misc: (WATER) 8709EG07 INST 7002E BTL# 2
Quant Time: 871006 12:22 Quant ID File: ID_S::DB
Injected at: 871006 11:47 Last Calibration: 871006 10:55

Compound No: 68
Compound Name: bis(2-Ethylhexyl)phthalate
Scan Number: 2136
Retention Time: 25.78 min.
Quant Ion: 149.0
Area: 13333
Concentration: 3.31 ng/ul
q-value: 81

005098



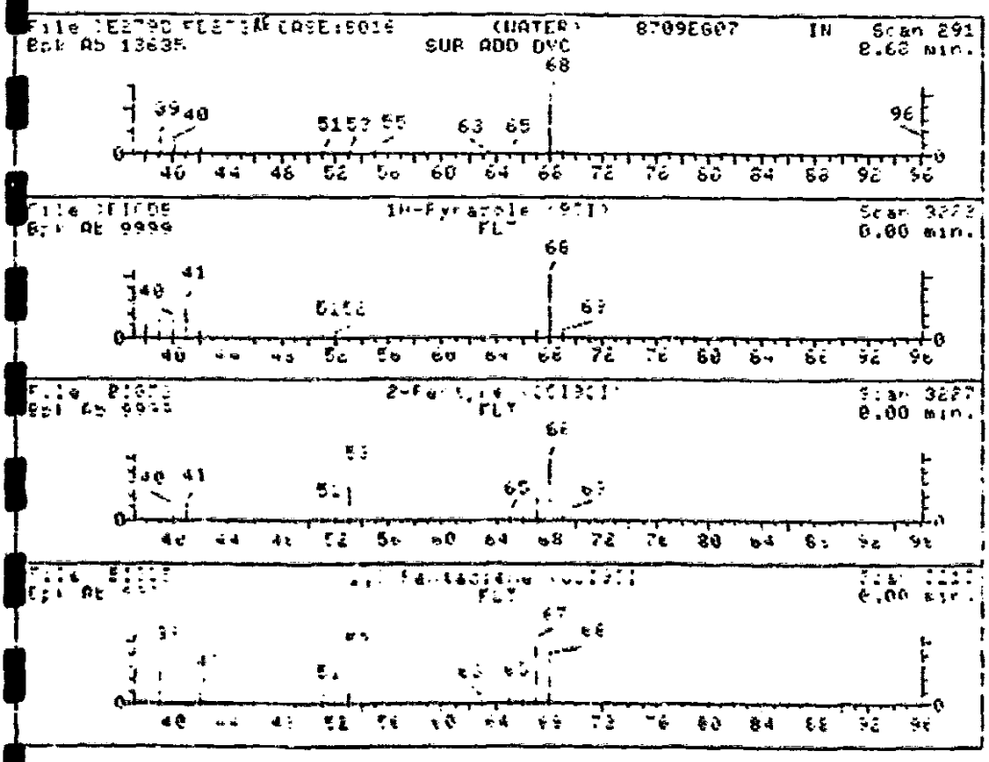
Unknown 8.1
Area = 257[illegible].0 Tentative Concentration is 37.00

1. 7-Oxabicyclo[4.1.0]heptane (8C19C1)
2. Pyridine, 2,3,4,5-tetrahydro- (8C19C1)
3. Cyclopropane, ethyl- (8C19C1)
4. Propane, 1-isocyano- (9C1)
5. 1-Pentene (8C19C1)

93 C6H10O
83 C5H9N
70 C5H10
69 C4H7N
70 C5H10

Sample file: >E279D Spectrum #: 118
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DI	#FLG	TILT	%	CON	C_I	R_IV
1.	35	286204	5586	"BIGDB	72	43	3	0	72	30	14	12
2.	15*	505180	5562	"BIGDB	38	55	2	0	179	57	3	18
3.	11*	1191964	3479	"BIGDB	32	54	1	0	72	64	2	17
4.	11*	627361	734	"BIGDB	23	64	3	0	169	64	2	12
5.	11*	109671	3465	"BIGDB	22	64	1	0	60	65	2	14



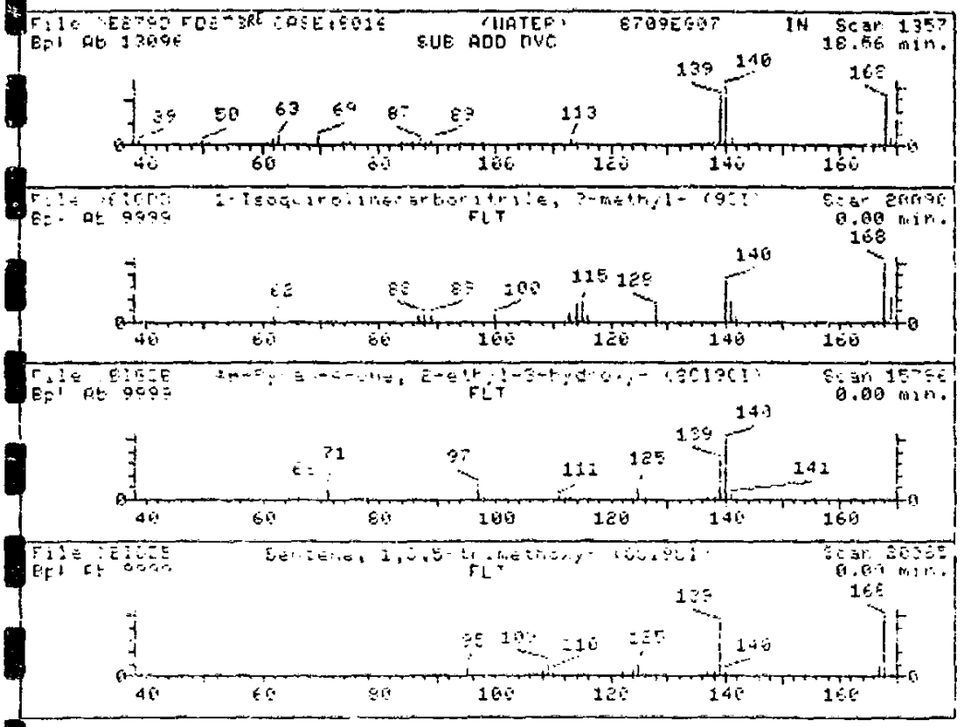
Unknown 8.7
Area = 8590 (1.0) Tentative Concentration is 12.00

1. 1H-Pyrazole (9C1) 68 C3H4N2
2. 2-Pentene (8C19C1) 68 C5H8
3. 1,3-Pentadiene (8C19C1) 68 C5H8

Sample file: 9E2790 Spectrum #: 291
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DI	#FLG	TILT	%	CON	C_I	R_IV
1.	45*	288131	3222	"BIGDB	34	58	2	0	70	25	17	16
2.	43*	627214	3227	"BIGDB	27	64	2	0	83	22	17	14
3.	15*	504609	3213	"BIGDB	36	52	2	0	44	57	3	18

005100



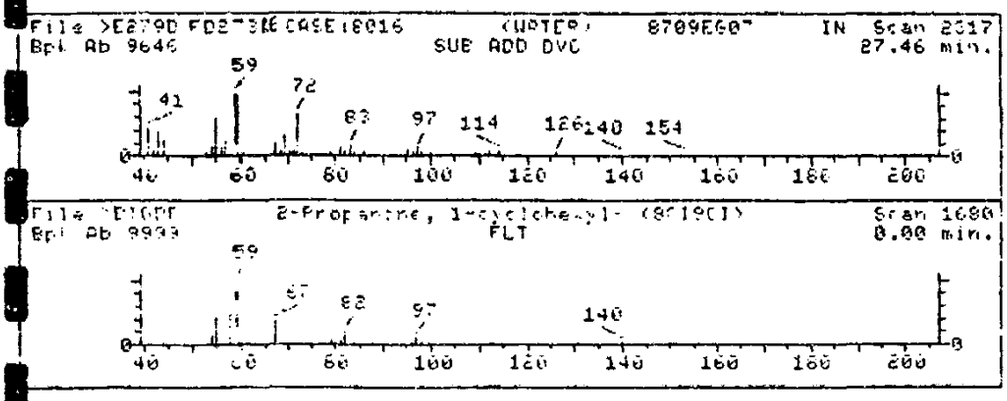
Unknown #4
Area = 12+3e4.0 Tentative Concentration is 13.00

1. 1-Isoquinolinecarbonitrile, 3-methyl- (9CI)	168	C11H8N2
2. 4H-Pyran-4-one, 2-ethyl-3-hydroxy- (8CI9CI)	140	C7H8O3
3. Benzene, 1,3,5-trimethoxy- (8CI9CI)	168	C9H12O3
4. 2-Quinolinecarbonitrile, 4-methyl- (9CI)	168	C11H8N2
5. 9H-Pyrido[3,4-b]indole (8CI9CI)	168	C11H8N2

Sample file: >E2790 Spectrum #: 1357
Search speed: 1 Tilting option: S No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	26*	22381528	20090	"BIGDB	24	106	3	0	79	40	10	12
2.	25*	4940118	15796	"BIGDB	29	70	3	0	100	42	8	13
3.	25*	621238	20065	"BIGDB	26	87	3	0	79	41	8	13
4.	25*	10590699	20094	"BIGDB	22	100	3	0	79	48	7	12
5.	15*	244633	20060	"BIGDB	32	62	2	0	79	59	3	14

005101



005102

Unknown #.5
Area = 162100.0 Tentative Concentration is 27.00

1. 2-Propanone, 1-cyclohexyl- (8019LI) 140 C9H16O

Sample file: >E279D Spectrum #: 2317
Search speed: 1 Tilting option: 5 No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	103786	1680	"BIGDB	38	58	3	0	100	44	8	13

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD610

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276E

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

005103

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

118

FD610

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276E

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

005104

FORM I SV-2 1/87 Rev.

EPA SAMPLE NO.

119

FD610

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276E

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0000

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. - -	UNKNOWN	7.05	30.	J
2. - -	UNKNOWN	17.95	10.	J
3. 119-61-9	Benzophenone (8CI)	18.15	80.	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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21.				
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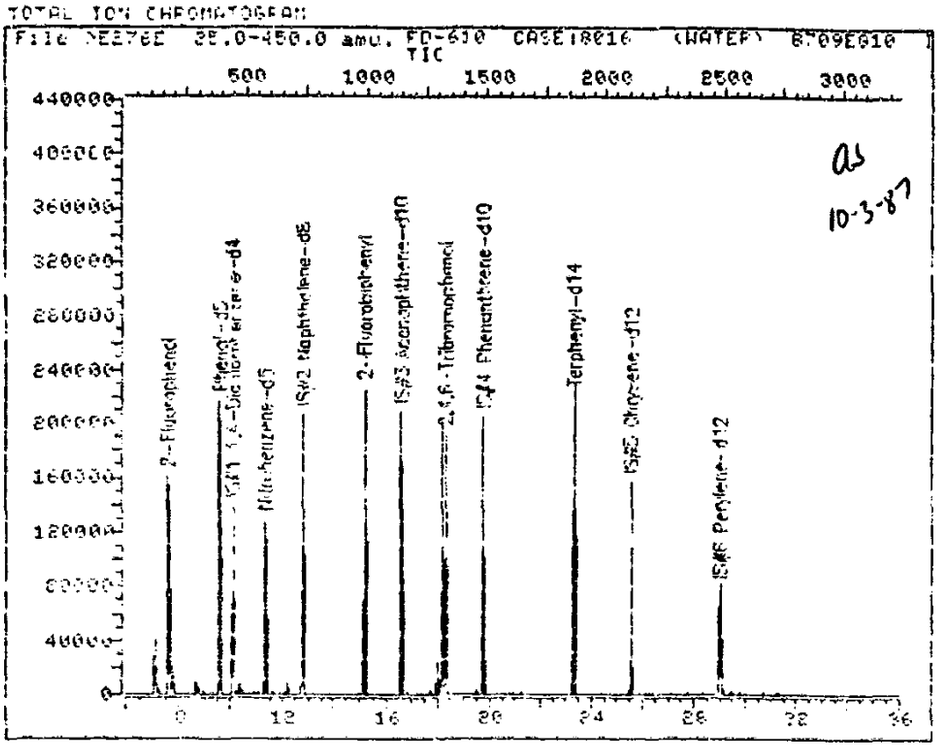
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

005105

FORM I SV-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



as
10-3-87

005106

Data File: >E276E::D3 Quant Output File: >E276E::DT
Name: FD-610 CASE:8016
Misc: (WATER) 8709E610 INST 7002E BTL# 3

Id File: ID_SV::DE
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

Operator ID: SAVOY
Quant Time: 871003 12:32
Injected at: 871003 11:53

QUANT REPORT

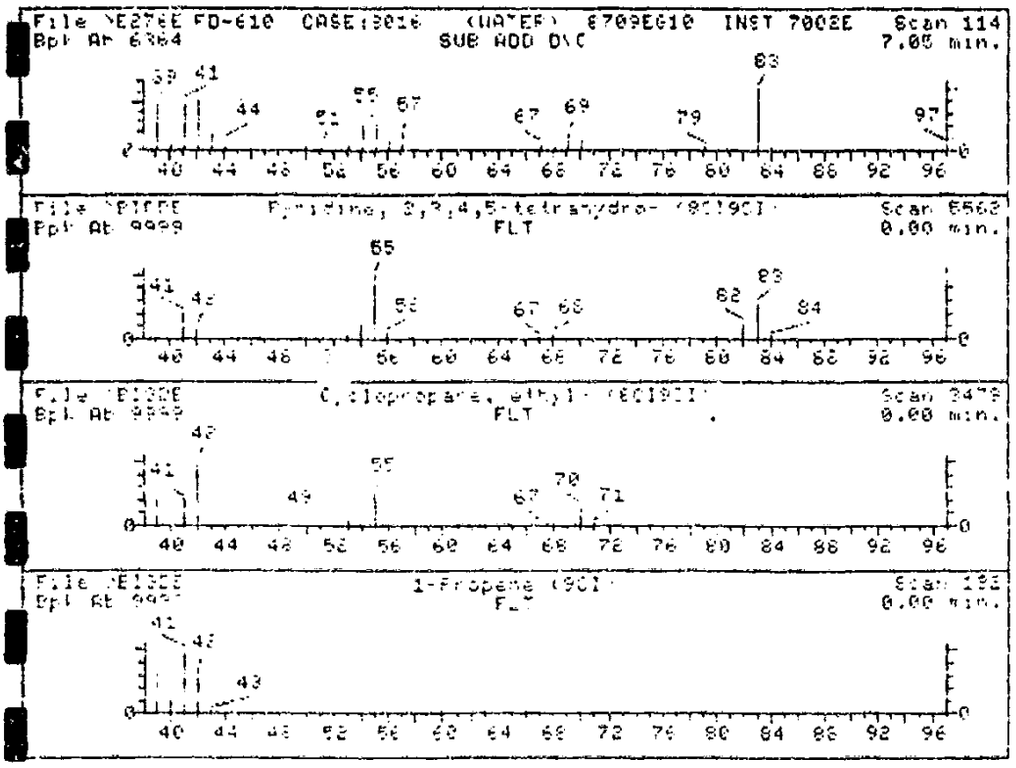
Operator ID: SAVOY Quant Rev: 6 Quant Time: 871003 12:32
Output File: ^E276E::QT Injected at: 871003 11:53
Data File: >E276E::D3 Dilution Factor: 1.00000
Name: FD-610 CASE:8016
Misc: (WATER) 8709EG10 INST 7002E BTL# 3

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.10	443	49193	40.00	ng/ul	97
2)	Phenol-d5	9.56	385	162141	87.30	ng/ul	59
3)	2-Fluorophenol	7.55	168	130064	84.93	ng/ul	64
16)	*IS#2 Naphthalene-d8	12.78	732	173700	40.00	ng/ul	97
17)	Nitrobenzene-d5	11.31	574	85337	43.45	ng/ul	82
31)	*IS#3 Acenaphthene-d10	16.57	1141	88670	40.00	ng/ul	98
35)	2-Fluorobiphenyl	15.16	989	121138	42.51	ng/ul	93
51)	2,4,6-Tribromophenol	18.28	1326	44579	74.75	ng/ul	85
52)	*IS#4 Phenanthrene-d10	19.74	1497	162006	40.00	ng/ul	89
62)	*IS#5 Chrysene-d12	25.50	2105	137895	40.00	ng/ul	96
64)	Terphenyl-d14	27.26	1963	152299	50.98	ng/ul	99
70)	*IS#6 Perylene-d12	28.97	2479	115618	40.00	ng/ul	100

* Compound is ISTD

005107



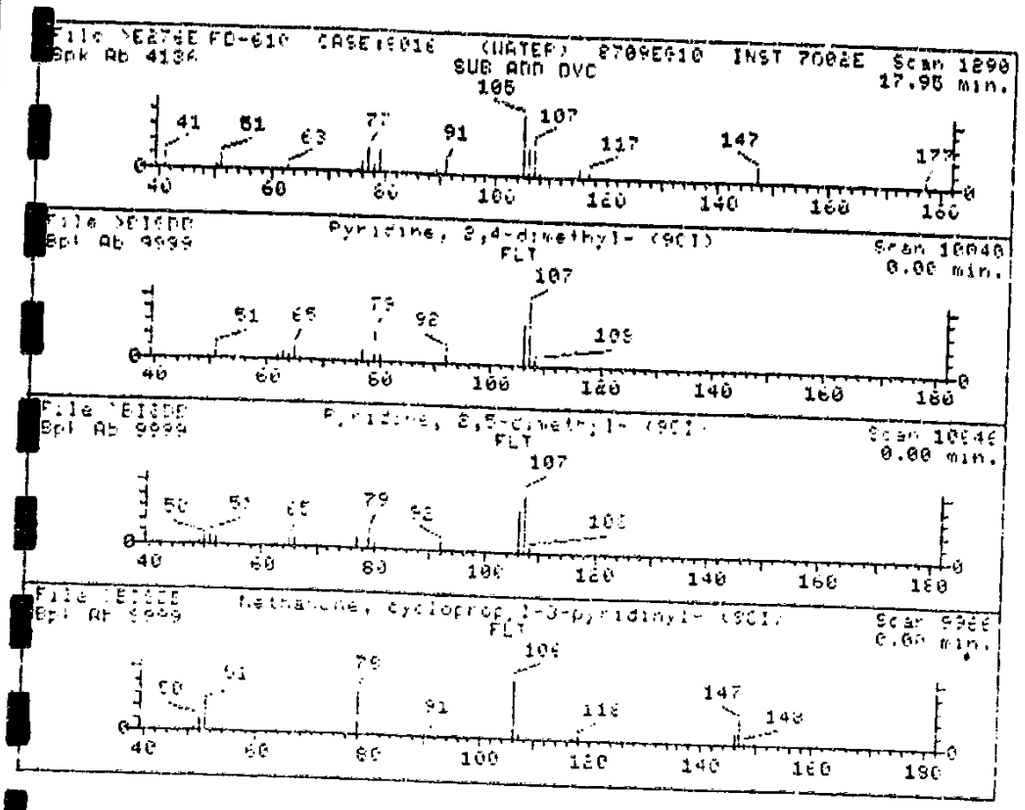
005108

Unknown #.1
Area = 135785.0 Tentative Concentration is 17.00

1. Pyridine, 2,3,4,5-tetrahydro- (8CI9CI) 83 C5H9N
2. Cyclopropane, ethyl- (8CI9CI) 70 C5H10
3. 1-Propene (9CI) 42 C3H6
4. 1-Pentene (8CI9CI) 70 C5H10

Sample file: >E276E Spectrum #: 114
Search speed: 1 Tilting option: S No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	505180	5562	"BIGDB	38	55	3	0	174	48	7	13
2.	15*	1191964	3479	"BIGDB	27	59	2	0	69	59	3	14
3.	15*	115071	182	"BIGDB	21	58	2	0	79	60	3	13
4.	15*	109671	3465	"BIGDB	22	64	2	0	58	59	3	13



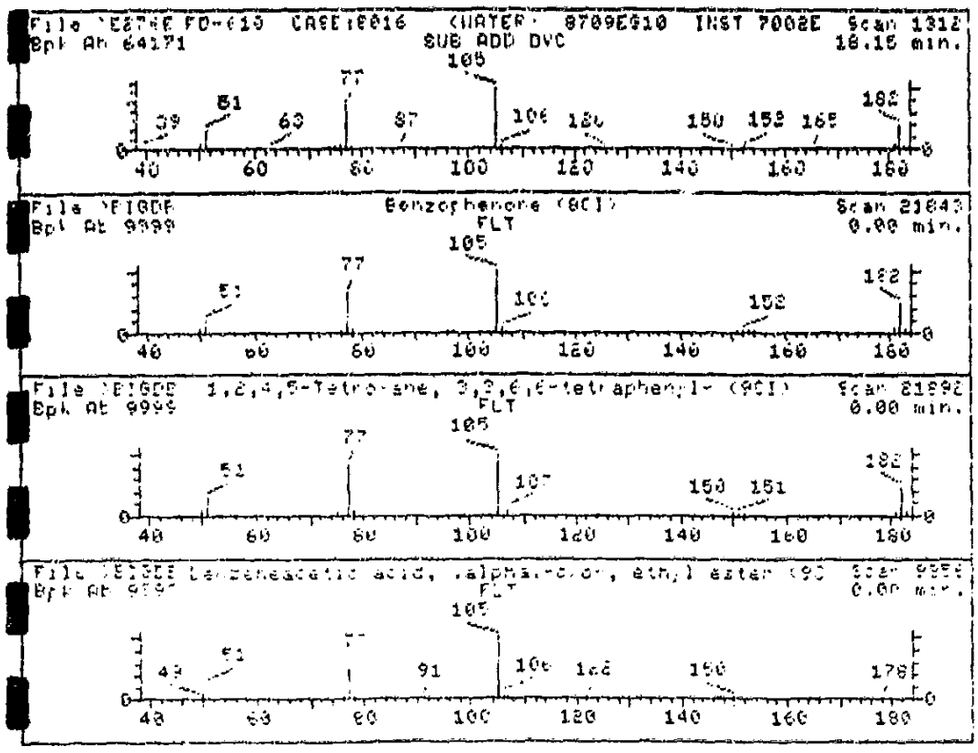
Unknown #3
Area = 53471.00 Tentative Concentration is 5.00

1. Pyridine, 2,4-dimethyl- (9CI) 107 C7H9N
2. Pyridine, 2,5-dimethyl- (9CI) 107 C7H9N
3. Methanone, cyclopropyl-3-pyridinyl- (9CI) 147 C9H9NO

Sample file: >E276E Spectrum #: 1290
Search speed: 1 Tilting option: S No. of ion ranges searched: 44

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IU
1.	25*	108474	10040	"BIGDB	39	79	3	0	57	48	7	13
2.	25*	589975	10046	"BIGDB	30	78	3	0	57	48	7	13
3.	15*	24966130	9966	"BIGDB	24	62	3	0	45	58	3	12

005109



Unknown #.4
Area = 382491.0 Tentative Concentration is 38.00

1. Benzophenone (8CI) 182 C13H10O
2. 1,2,4,5-Tetroxane, 3,3,6,6-tetraphenyl- (9CI) 396 C26H20O4
3. Benzeneacetic acid, .alpha.-oxo-, ethyl ester (9CI) 178 C10H10O3
4. Benzenamine, N-(4-pyridinylmethylene)- (9CI) 182 C12H10N2
5. Ethanone, 2-chloro-1-phenyl- (9CI) 154 C8H7ClO

Sample file: >E276E Spectrum #: 1312
Search speed: 1 Tilting option: S No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	89*	119619	21843	"BIGDB	82	20	1	1	86	2	66	69
2.	78	16204367	21892	"BIGDB	49	35	2	0	84	4	55	17
3.	41	1603798	9856	"BIGDB	39	48	2	0	100	25	17	12
4.	31*	27768463	21904	"BIGDB	35	56	2	0	40	40	10	17
5.	30*	532274	9851	"BIGDB	22	56	2	0	100	33	12	13

005110

SEMIVOLATILES

STANDARDS DATA

005111

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 7002E Calibration Date(s): 10/ 2/87 10/ 2/87

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 20= E275E RRF 50= E275B
RRF 80= E275F RRF120= E275G RRF160= E275H

COMPOUND	RRF 20	RRF 50	RRF 80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	1.974	1.978	1.920	2.030	2.013	1.983	2.1*
bis(2-Chloroethyl)ether	1.774	1.747	1.836	1.759	1.775	1.778	1.9
2-Chlorophenol	1.501	1.502	1.503	1.452	1.449	1.482	1.9
1,3-Dichlorobenzene	1.527	1.526	1.523	1.468	1.402	1.489	3.7
1,4-Dichlorobenzene *	1.558	1.524	1.522	1.440	1.419	1.455	4.0*
Benzyl alcohol	.948	.963	.961	.931	.900	.941	2.8
1,2-Dichlorobenzene	1.508	1.486	1.444	1.303	1.240	1.396	8.5
2-Methylphenol	1.310	1.289	1.309	1.288	1.244	1.288	2.1
bis(2-Chloroisopropyl)ether	2.296	2.079	2.348	2.322	2.359	2.281	5.1
4-Methylphenol	1.368	1.337	1.305	1.253	1.208	1.294	5.0
N-Nitroso-di-n-propylamine #	1.338	1.274	1.353	1.304	1.144	1.283	6.5#
Hexachloroethane	.745	.727	.737	.674	.625	.702	7.3
Nitrobenzene	.515	.511	.545	.503	.520	.519	3.1
Isophorone	.977	.944	1.029	.939	.958	.969	3.8
2-Nitrophenol *	.224	.229	.240	.231	.238	.232	2.8*
2,4-Dimethylphenol	.417	.422	.415	.398	.401	.411	2.6
Benzoic acid	.113	.141	.203	.196	.207	.172	24.8
bis(2-Chloroethoxy)methane	.574	.551	.583	.557	.574	.568	2.3
2,4-Dichlorophenol *	.316	.309	.312	.290	.292	.304	3.9*
1,2,4-Trichlorobenzene	.345	.335	.334	.300	.304	.324	6.3
Naphthalene	1.137	1.101	1.116	1.024	.974	1.071	6.4
4-Chloroaniline	.471	.479	.498	.457	.469	.475	3.1
Hexachlorobutadiene *	.187	.180	.178	.165	.164	.175	5.8*
4-Chloro-3-methylphenol *	.377	.383	.391	.361	.368	.376	3.2*
2-Methylnaphthalene	.634	.596	.614	.566	.560	.594	5.3
Hexachlorocyclopentadiene #	.292	.307	.330	.322	.327	.316	5.0#
2,4,6-Trichlorophenol *	.391	.405	.410	.398	.411	.403	2.1*
2,4,5-Trichlorophenol	.435	.436	.418	.379	.387	.411	6.5
2-Chloronaphthalene	1.244	1.255	1.230	1.153	1.134	1.203	4.6
2-Nitroaniline	.556	.593	.644	.651	.682	.625	8.0
Dimethylphthalate	1.527	1.591	1.684	1.612	1.618	1.606	3.5
Acenaphthylene	2.008	1.988	1.940	1.884	1.836	1.931	3.7
2,6-Dinitrotoluene	.356	.384	.406	.370	.399	.383	5.4
3-Nitroaniline	.388	.435	.451	.429	.439	.428	5.6
Acenaphthene *	1.228	1.252	1.216	1.143	1.166	1.201	3.8*
2,4-Dinitrophenol #	.081	.106	.188	.218	.247	.158	42.6#
4-Nitrophenol #	.185	.239	.272	.276	.280	.250	15.9#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 7002E Calibration Date(s): 10/ 2/87 10/ 2/87 0520-1

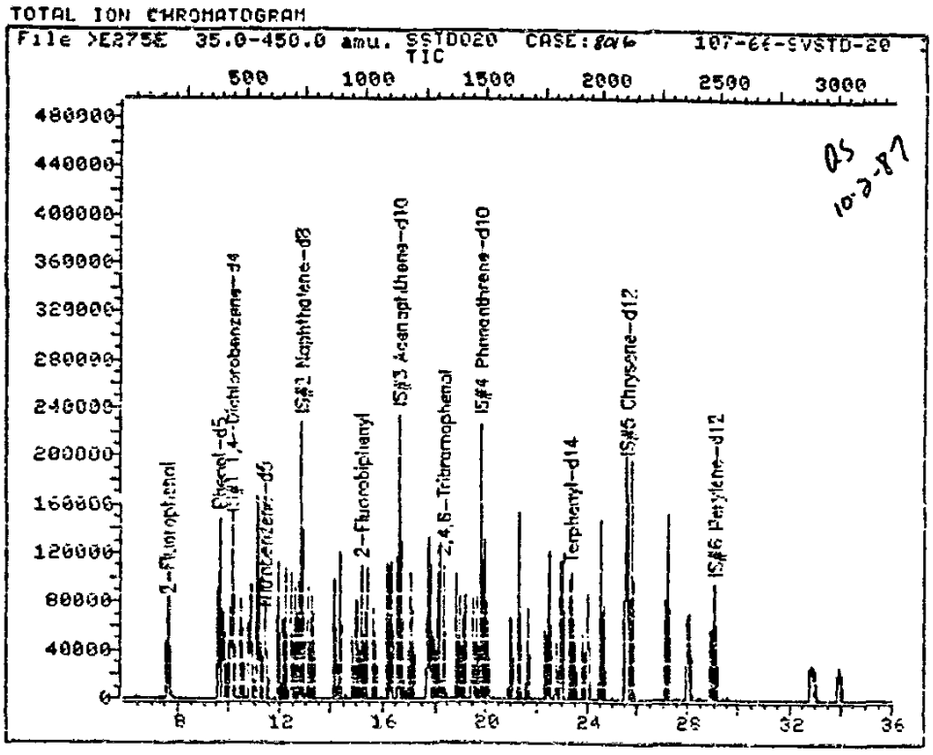
Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF 20= E275E RRF 50= E275B
RRF 80= E275F RRF120= E275G RRF160= E275H

COMPOUND	RRF 20	RRF 50	RRF 80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.715	1.664	1.778	1.658	1.678	1.699	2.9
2,4-Dinitrotoluene	.518	.572	.608	.577	.598	.574	6.1
Diethylphthalate	1.847	1.837	1.806	1.648	1.618	1.751	6.3
4-Chlorophenyl-phenylether	.642	.645	.626	.574	.574	.612	5.8
Fluorene	1.385	1.384	1.334	1.190	1.080	1.275	10.6
4-Nitroaniline	.360	.412	.459	.456	.481	.434	11.1
4,6-Dinitro-2-methylphenol	.107	.123	.156	.156	.167	.142	18.1
N-Nitrosodiphenylamine (1) *	.522	.531	.537	.463	.468	.504	7.1*
4-Bromophenyl-phenylether	.224	.215	.210	.199	.198	.209	5.3
Hexachlorobenzene	.260	.268	.249	.227	.231	.247	7.1
Pentachlorophenol *	.122	.138	.157	.151	.157	.145	10.4*
Phenanthrene	1.097	1.128	1.045	.945	.933	1.030	8.6
Anthracene	1.135	1.133	1.060	.938	.891	1.031	10.9
Di-n-butylphthalate	1.638	1.688	1.554	1.234	1.053	1.433	19.3
Fluoranthene *	1.183	1.159	1.115	1.001	.982	1.088	8.4*
Pyrene	1.529	1.441	1.442	1.317	1.287	1.403	7.1
Butylbenzylphthalate	.957	.948	.957	.876	.854	.918	5.4
3,3'-Dichlorobenzidine	.379	.328	.330	.287	.264	.318	14.0
Benzo(a)anthracene	1.305	1.221	1.163	1.002	.901	1.118	14.7
Chrysene	1.250	1.154	1.206	1.101	1.042	1.151	7.2
bis(2-Ethylhexyl)phthalate	1.417	1.364	1.403	1.263	1.151	1.320	8.5
Di-n-octylphthalate *	2.762	2.708	2.711	2.050	1.747	2.336	19.5*
Benzo(b)fluoranthene	1.560	1.568	1.563	1.361	1.424	1.495	6.4
Benzo(k)fluoranthene	1.283	1.206	1.124	1.070	.963	1.129	10.9
Benzo(a)pyrene *	1.360	1.370	1.295	1.242	1.222	1.298	5.2*
Indeno(1,2,3-cd)pyrene	1.339	1.386	1.426	1.347	1.360	1.372	2.5
Dibenz(a,h)anthracene	1.013	1.042	1.094	1.039	1.029	1.043	2.9
Benzo(g,h,i)perylene	1.134	1.188	1.212	1.130	1.131	1.159	3.3
Nitrobenzene-d5	.453	.465	.480	.461	.471	.466	2.2
2-Fluorobiphenyl	1.273	1.306	1.216	1.146	1.166	1.221	5.6
Terphenyl-d14	.901	.890	.835	.739	.716	.816	10.4
Phenol-d5	1.637	1.600	1.584	1.509	1.492	1.564	3.9
2-Fluorophenol	1.207	1.246	1.266	1.248	1.225	1.239	1.8
2,4,6-Tribromophenol	.232	.228	.231	.226	.236	.231	1.6

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



005114

Data File: >E275E::D3 Quant Output File: ^E275E::QT
Name: SSTD020 CASE: 8016
Misc: 107-66-SVSTD-20 INST 7002E BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 16:11

Operator ID: SAVOY
Quant Time: 871002 17:37
Injected at: 871002 16:58

QUANT REPORT

Operator ID: SAVOY Quant Rev: 6 Quant Time: 871002 19:02
Output File: ^E275E::QT Injected at: 871002 16:58
Data File: >E275E::D3 Dilution Factor: 1.00000
Name: SSTD020 CASE: 806
Misc: 107-66-SVSTD-20 INST 7002E BTL# 1

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 18:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.11	152.1	53634	40.00	ng/ul	98
2)	Phenol-d5	9.58	99.0	87781	40.91	ng/ul	61
3)	2-Fluorophenol	7.56	112.0	64761	38.77	ng/ul	63
4)	Phenol	9.60	94.1	52934	19.96	ng/ul	100
5)	2-Chlorophenol	9.76	128.0	40265	19.99	ng/ul	97
6)	bis(2-Chloroethyl)ether	9.71	93.0	47582	20.31	ng/ul	99
7)	1,3-Dichlorobenzene	10.04	146.0	40942	20.01	ng/ul	98
8)	1,4-Dichlorobenzene	10.15	146.0	41772	20.44	ng/ul	98
9)	1,2-Dichlorobenzene	10.54	146.0	40443	20.29	ng/ul	99
10)	Benzyl alcohol	10.49	108.1	25430	19.70	ng/ul	97
11)	bis(2-Chloroisopropyl)ether	10.84	45.0	61573^	22.09	ng/ul	91
12)	2-Methylphenol	10.81	108.0	35134	20.33	ng/ul	95
13)	N-Nitroso-di-n-propylamine	11.12	70.0	35891	21.00	ng/ul	69
14)	Hexachloroethane	11.17	117.0	19988	20.51	ng/ul	91
15)	4-Methylphenol	11.11	108.1	36692	20.47	ng/ul	96
16)	*IS#2 Naphthalene-d8	12.80	136.1	191224	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.34	82.1	43359	19.49	ng/ul	84
18)	Nitrobenzene	11.37	77.0	49285	20.18	ng/ul	90
19)	Isophorone	11.87	82.0	93395	20.70	ng/ul	90
20)	2-Nitrophenol	12.05	139.0	21384	19.50	ng/ul	68
21)	2,4-Dimethylphenol	12.21	107.0	39889	19.77	ng/ul	95
22)	bis(2-Chloroethoxy)methane	12.40	93.1	54928	20.85	ng/ul	93
23)	2,4-Dichlorophenol	12.55	162.0	30193	20.44	ng/ul	95
24)	Benzoic acid	12.39	122.0	10762	15.99	ng/ul	92
25)	1,2,4-Trichlorobenzene	12.73	179.9	33022	20.60	ng/ul	99
26)	Naphthalene	12.84	128.1	108756	20.66	ng/ul	99
27)	4-Chloroaniline	13.03	127.0	45035	19.65	ng/ul	93
28)	Hexachlorobutadiene	13.27	224.8	17877	20.77	ng/ul	97
29)	4-Chloro-3-methylphenol	14.11	107.1	36048	19.69	ng/ul	99
30)	2-Methylnaphthalene	14.32	142.1	60585	21.25	ng/ul	96
31)	*IS#3 Acenaphthene-d10	16.60	164.2	97137	40.00	ng/ul	98
32)	Hexachlorocyclopentadiene	14.83	236.8	14202	19.07	ng/ul	99
33)	2,4,6-Trichlorophenol	15.00	195.9	19002	19.30	ng/ul	96
34)	2,4,5-Trichlorophenol	15.07	196.0	21147	19.96	ng/ul	96
35)	2-Fluorobiphenyl	15.19	172.1	61837	19.49	ng/ul	90
36)	2-Chloronaphthalene	15.35	162.0	60442	19.83	ng/ul	93
37)	2-Nitroaniline	15.67	65.0	27002	18.74	ng/ul	91
38)	Dimethylphthalate	16.17	163.1	74185	19.20	ng/ul	93
39)	2,6-Dinitrotoluene	16.29	165.0	17274	18.54	ng/ul	76
40)	Acenaphthylene	16.25	152.1	97509	20.19	ng/ul	98
41)	3-Nitroaniline	16.56	138.0	18851	17.85	ng/ul	88
42)	Acenaphthene	16.66	153.1	59642	19.62	ng/ul	97
43)	2,4-Dinitrophenol	16.78	184.1	3946	15.31	ng/ul	100

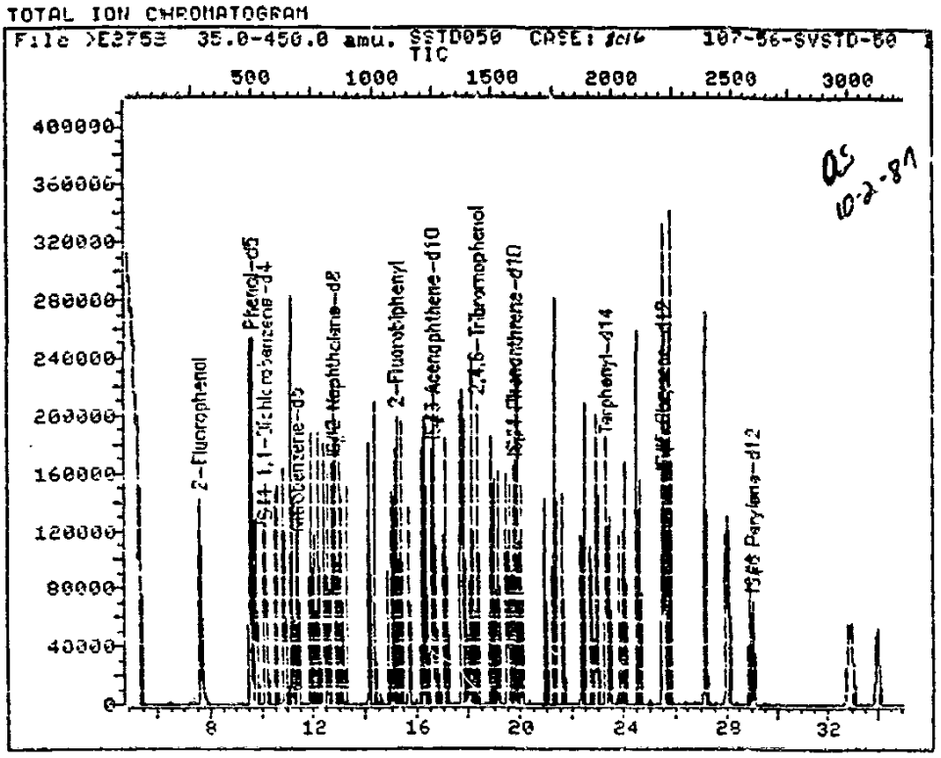
005115

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	17.00	168.1	83291	20.61	ng/ul	97
45)	4-Nitrophenol	16.97	109.1	8998	15.50	ng/ul	86
46)	2,4-Dinitrotoluene	17.11	165.0	25148	18.11	ng/ul	88
47)	Diethylphthalate	17.71	149.0	89706	20.11	ng/ul	68
48)	4-Chlorophenyl-phenylether	17.79	204.1	31181	19.91	ng/ul	96
49)	Fluorene	17.75	166.0	67252	20.02	ng/ul	99
50)	4-Nitroaniline	17.88	138.1	17495	17.48	ng/ul	84
51)	2,4,6-Tribromophenol	18.31	329.7	22581	40.71	ng/ul	97
52)	*IS#4 Phenanthrene-d10	19.77	188.2	183053	40.00	ng/ul	87
53)	4,6-Dinitro-2-methylphenol	17.98	198.1	9748	17.28	ng/ul	95
54)	N-Nitrosodiphenylamine (1)	18.06	169.1	47745	19.63	ng/ul	95
55)	4-Bromophenyl-phenylether	18.83	248.0	20547	20.91	ng/ul	89
56)	Hexachlorobenzene	19.12	283.8	23787	19.43	ng/ul	89
57)	Pentachlorophenol	19.51	265.8	11164	17.68	ng/ul	88
58)	Phenanthrene	19.82	178.1	100387	19.44	ng/ul	97
59)	Anthracene	19.91	178.1	103922	20.05	ng/ul	99
60)	Fluoranthene	22.40	202.1	108305	20.42	ng/ul	99
61)	Di-n-butylphthalate	21.23	149.0	149881	19.40	ng/ul	93
62)	*IS#5 Chrysene-d12	25.54	240.2	143773	40.00	ng/ul	97
63)	Pyrene	22.88	202.1	109919	21.23	ng/ul	98
64)	Terphenyl-d14	23.29	244.2	64792	20.25	ng/ul	96
65)	Butylbenzylphthalate	24.46	149.0	68819	20.20	ng/ul	86
66)	3,3'-Dichlorobenzidine	25.50	252.1	27274	23.12	ng/ul	97
67)	Benzo(a)anthracene	25.50	228.0	93833	21.38	ng/ul	99
68)	bis(2-Ethylhexyl)phthalate	25.78	149.0	101851	20.77	ng/ul	83
69)	Chrysene	25.60	228.0	89861	21.66	ng/ul	98
70)	*IS#6 Perylene-d12	29.03	264.2	119377	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.12	149.0	164886	20.40	ng/ul	94
72)	Benzo(b)fluoranthene	27.98	252.1	93091	19.89	ng/ul	93
73)	Benzo(k)fluoranthene	28.03	252.1	76554	21.29	ng/ul	96
74)	Benzo(a)pyrene	28.86	252.1	81184	19.85	ng/ul	91
75)	Indeno(1,2,3-cd)pyrene	32.83	276.1	79952	19.33	ng/ul	100
76)	Dibenz(a,h)anthracene	32.93	278.2	60473	19.44	ng/ul	100
77)	Benzo(g,h,i)perylene	33.95	276.2	67686	19.10	ng/ul	100

* Compound is ISTD

005116

TOTAL ION CHROMATOGRAM



005117

Data File: >E275B::D3 Quant Output File: ^E275B::QT
Name: SSTD050 CASE: 8016
Misc: 107-56-SVSTD-50 INST 7002E BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 16:11

Operator ID: SAVOY
Quant Time: 871002 16:11
Injected at: 871002 14:27

QUANT REPORT

Operator ID: SAVOY Quant Rev: 6 Quant Time: 871002 18:47
Output File: ^E275B::QT Injected at: 871002 14:27
Data File: >E275B::D3 Dilution Factor: 1.00000
Name: SSTD050 CASE: 8016
Misc: 107-56-SVSTD-50 INST 7002E BTL# 1

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 18:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.12	152.1	38885	40.00	ng/ul	99
2)	Phenol-d5	9.59	99.0	155549	100.00	ng/ul	64
3)	2-Fluorophenol	7.57	112.0	121107	100.00	ng/ul	58
4)	Phenol	9.61	94.1	96127	50.00	ng/ul	100
5)	2-Chlorophenol	9.76	128.0	73029	50.00	ng/ul	95
6)	bis(2-Chloroethyl)ether	9.72	93.0	84910	50.00	ng/ul	99
7)	1,3-Dichlorobenzene	10.04	146.0	74185	50.00	ng/ul	95
8)	1,4-Dichlorobenzene	10.16	146.0	74072	50.00	ng/ul	97
9)	1,2-Dichlorobenzene	10.54	146.0	72248	50.00	ng/ul	99
10)	Benzyl alcohol	10.50	108.1	46803	50.00	ng/ul	97
11)	bis(2-Chloroisopropyl)ether	10.85	45.0	101032^	50.00	ng/ul	91
12)	2-Methylphenol	10.82	108.0	62636	50.00	ng/ul	97
13)	N-Nitroso-di-n-propylamine	11.13	70.0	61946	50.00	ng/ul	68
14)	Hexachloroethane	11.17	117.0	35334	50.00	ng/ul	90
15)	4-Methylphenol	11.11	108.1	64969	50.00	ng/ul	95
16)	*IS#2 Naphthalene-d8	12.80	136.1	136758	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.34	82.1	79536	50.00	ng/ul	80
18)	Nitrobenzene	11.38	77.0	87319	50.00	ng/ul	89
19)	Isophorone	11.88	82.0	161364	50.00	ng/ul	89
20)	2-Nitrophenol	12.05	139.0	39222	50.00	ng/ul	69
21)	2,4-Dimethylphenol	12.21	107.0	72164	50.00	ng/ul	99
22)	bis(2-Chloroethoxy)methane	12.41	93.1	94194	50.00	ng/ul	91
23)	2,4-Dichlorophenol	12.55	162.0	52830	50.00	ng/ul	97
24)	Benzoic acid	12.45	122.0	24072	50.00	ng/ul	88
25)	1,2,4-Trichlorobenzene	12.73	179.9	57329	50.00	ng/ul	99
26)	Naphthalene	12.84	128.1	188267	50.00	ng/ul	98
27)	4-Chloroaniline	13.03	127.0	81962	50.00	ng/ul	97
28)	Hexachlorobutadiene	13.27	224.8	30777	50.00	ng/ul	96
29)	4-Chloro-3-methylphenol	14.11	107.1	65463	50.00	ng/ul	99
30)	2-Methylnaphthalene	14.32	142.1	101970	50.00	ng/ul	98
31)	*IS#3 Acenaphthene-d10	16.60	164.2	67993	40.00	ng/ul	87
32)	Hexachlorocyclopentadiene	14.83	236.8	26059	50.00	ng/ul	99
33)	2,4,6-Trichlorophenol	15.00	195.9	34455	50.00	ng/ul	93
34)	2,4,5-Trichlorophenol	15.08	196.0	37073	50.00	ng/ul	91
35)	2-Fluorobiphenyl	15.19	172.1	111016	50.00	ng/ul	95
36)	2-Chloronaphthalene	15.35	162.0	106663	50.00	ng/ul	97
37)	2-Nitroaniline	15.67	65.0	50429	50.00	ng/ul	92
38)	Dimethylphthalate	16.17	163.1	135221	50.00	ng/ul	94
39)	2,6-Dinitrotoluene	16.30	165.0	32611	50.00	ng/ul	66
40)	Acenaphthylene	16.26	152.1	168991	50.00	ng/ul	99
41)	3-Nitroaniline	16.57	138.0	36964	50.00	ng/ul	87
42)	Acenaphthene	16.66	153.1	106371	50.00	ng/ul	99
43)	2,4-Dinitrophenol	16.78	184.1	9021	50.00	ng/ul	100

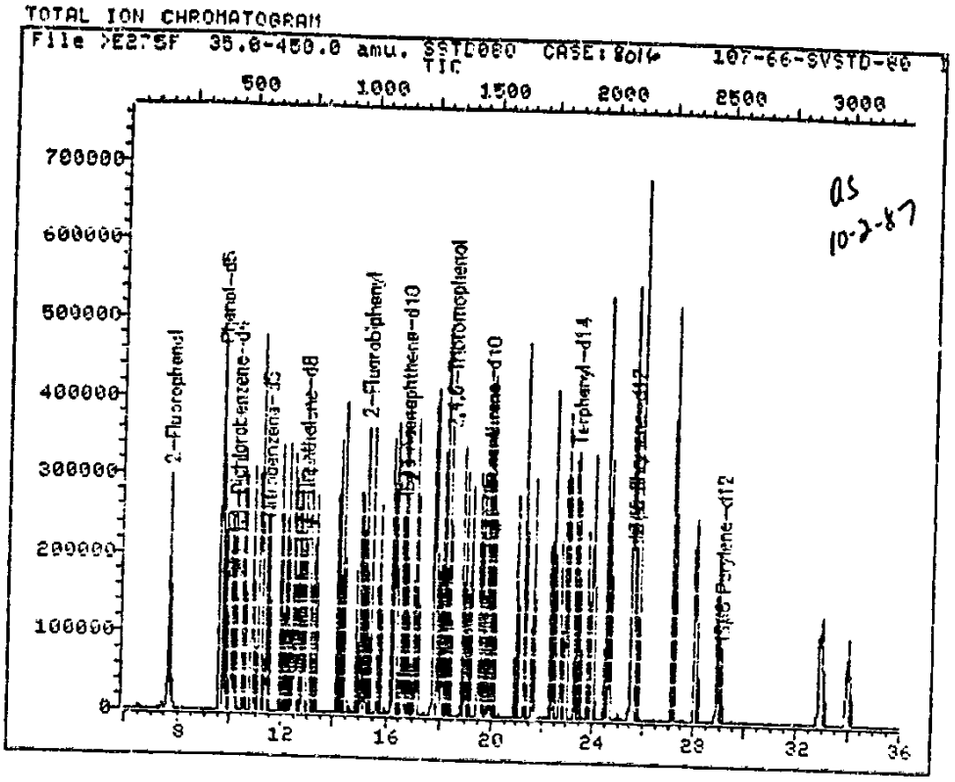
005118

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	17.01	168.1	141427	50.00	ng/ul	97
45)	4-Nitrophenol	16.97	109.1	20314	50.00	ng/ul	97
46)	2,4-Dinitrotoluene	17.13	165.0	48608	50.00	ng/ul	75
47)	Diethylphthalate	17.71	149.0	156128	50.00	ng/ul	68
48)	4-Chlorophenyl-phenylether	17.78	204.1	54823	50.00	ng/ul	97
49)	Fluorene	17.76	166.0	117594	50.00	ng/ul	92
50)	4-Nitroaniline	17.90	138.1	35037	50.00	ng/ul	91
51)	2,4,6-Tribromophenol	18.31	329.7	38822	100.00	ng/ul	97
52)	*IS#4 Phenanthrene-d10	19.77	188.2	129435	40.00	ng/ul	90
53)	4,6-Dinitro-2-methylphenol	17.99	198.1	19948	50.00	ng/ul	97
54)	N-Nitrosodiphenylamine (1)	18.06	169.1	85977	50.00	ng/ul	99
55)	4-Bromophenyl-phenylether	18.83	248.0	34742	50.00	ng/ul	86
56)	Hexachlorobenzene	19.12	233.8	43284	50.00	ng/ul	93
57)	Pentachlorophenol	19.51	265.8	22325	50.00	ng/ul	99
58)	Phenanthrene	19.82	178.1	182557	50.00	ng/ul	99
59)	Anthracene	19.91	178.1	183278	50.00	ng/ul	99
60)	Fluoranthene	22.41	202.1	187519	50.00	ng/ul	97
61)	Di-n-butylphthalate	21.24	149.0	273139	50.00	ng/ul	93
62)	*IS#5 Chrysene-d12	25.54	240.2	103651	40.00	ng/ul	98
63)	Pyrene	22.88	202.1	186652	50.00	ng/ul	96
64)	Terphenyl-d14	23.29	244.2	115330	50.00	ng/ul	99
65)	Butylbenzylphthalate	24.46	149.0	122818	50.00	ng/ul	88
66)	3,3'-Dichlorobenzidine	25.50	252.1	42530	50.00	ng/ul	98
67)	Benzo(a)anthracene	25.50	228.0	158193	50.00	ng/ul	94
68)	bis(2-Ethylhexyl)phthalate	25.78	149.0	176772	50.00	ng/ul	87
69)	Chrysene	25.59	228.0	149553	50.00	ng/ul	97
70)	*IS#6 Perylene-d12	29.03	264.2	86022	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.11	149.0	291170	50.00	ng/ul	95
72)	Benzo(b)fluoranthene	27.99	252.1	168589	50.00	ng/ul	97
73)	Benzo(k)fluoranthene	28.04	252.1	129657M	50.04	ng/ul	97
74)	Benzo(a)pyrene	28.86	252.1	147353	50.00	ng/ul	95
75)	Indeno(1,2,3-cd)pyrene	32.84	276.1	149027	50.00	ng/ul	100
76)	Dibenz(a,h)anthracene	32.95	278.2	112067	50.00	ng/ul	100
77)	Benzo(g,h,i)perylene	33.97	276.2	127708	50.00	ng/ul	100

* Compound is ISTD

005119

TOTAL ION CHROMATOGRAM



AS
10-2-87

Data File: >E275F::D3
Name: SSTD080 CASE: 8016
Misc: 107-66-SVSTD-80 INST 7002E

Quant Output File: ^E275F::QT

BTL# 2

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 16:11

Operator ID: SAVOY
Quant Time: 871002 18:27
Injected at: 871002 17:48

005120

QUANT REPORT

Operator ID: SAVDY Quant Rev: 6 Quant Time: 871002 19:10
Output File: ^E275F::QT Injected at: 871002 17:48
Data File: >E275F::D3 Dilution Factor: 1.00000
Name: SSTD080 CASE: 8016
Misc: 107-66-SVSTD-80 INST 7002E BTL# 2

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 18:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.12	152.1	46206	40.00	ng/ul	97
2)	Phenol-d5	9.60	99.0	292671	158.34	ng/ul	60
3)	2-Fluorophenol	7.58	112.0	234031	162.63	ng/ul	52
4)	Phenol	9.62	94.1	177440	77.67	ng/ul	100
5)	2-Chlorophenol	9.76	128.0	138917	80.04	ng/ul	94
6)	bis(2-Chloroethyl)ether	9.72	93.0	169657	84.07	ng/ul	97
7)	1,3-Dichlorobenzene	10.04	146.0	140701	79.81	ng/ul	99
8)	1,4-Dichlorobenzene	10.16	146.0	140685	79.92	ng/ul	98
9)	1,2-Dichlorobenzene	10.54	146.0	133431	77.71	ng/ul	98
10)	Benzyl alcohol	10.51	108.1	88774	79.81	ng/ul	98
11)	bis(2-Chloroisopropyl)ether	10.85	45.0	216958^	90.36	ng/ul	90
12)	2-Methylphenol	10.82	108.0	120949	81.25	ng/ul	97
13)	N-Nitroso-di-n-propylamine	11.14	70.0	125046	84.94	ng/ul	66
14)	Hexachloroethane	11.17	117.0	68149	81.16	ng/ul	84
15)	4-Methylphenol	11.12	108.1	120566	78.09	ng/ul	90
16)	*IS#2 Naphthalene-d8	12.80	136.1	164768	40.00	ng/ul	99
17)	Nitrobenzene-d5	11.35	82.1	158203	82.55	ng/ul	79
18)	Nitrobenzene	11.38	77.0	179649	85.38	ng/ul	89
19)	Isophorone	11.89	82.0	339205	87.24	ng/ul	84
20)	2-Nitrophenol	12.06	139.0	78998	83.59	ng/ul	69
21)	2,4-Dimethylphenol	12.22	107.0	136628	78.57	ng/ul	97
22)	bis(2-Chloroethoxy)methane	12.41	93.1	192137	84.65	ng/ul	91
23)	2,4-Dichlorophenol	12.56	162.0	102870	80.81	ng/ul	98
24)	Benzoic acid	12.52	122.0	66956	115.43	ng/ul	90
25)	1,2,4-Trichlorobenzene	12.73	179.9	109909	79.56	ng/ul	97
26)	Naphthalene	12.84	128.1	367623	81.04	ng/ul	98
27)	4-Chloroaniline	13.04	127.0	163947	83.01	ng/ul	94
28)	Hexachlorobutadiene	13.27	224.8	58516	78.90	ng/ul	97
29)	4-Chloro-3-methylphenol	14.11	107.1	128989	81.77	ng/ul	97
30)	2-Methylnaphthalene	14.33	142.1	202493	82.41	ng/ul	94
31)	*IS#3 Acenaphthene-d10	16.60	164.2	83635	40.00	ng/ul	98
32)	Hexachlorocyclopentadiene	14.83	236.8	55202	86.11	ng/ul	94
33)	2,4,6-Trichlorophenol	15.00	195.9	68621	80.96	ng/ul	94
34)	2,4,5-Trichlorophenol	15.08	196.0	69999	76.75	ng/ul	99
35)	2-Fluorobiphenyl	15.19	172.1	203379	74.47	ng/ul	92
36)	2-Chloronaphthalene	15.36	162.0	205726	78.40	ng/ul	98
37)	2-Nitroaniline	15.68	65.0	107685	86.80	ng/ul	87
38)	Dimethylphthalate	16.18	163.1	281655	84.67	ng/ul	92
39)	2,6-Dinitrotoluene	16.30	165.0	67958	84.71	ng/ul	74
40)	Acenaphthylene	16.26	152.1	324454	78.04	ng/ul	96
41)	3-Nitroaniline	16.58	138.0	75408	82.92	ng/ul	96
42)	Acenaphthene	16.67	153.1	203344	77.71	ng/ul	97
43)	2,4-Dinitrophenol	16.79	184.1	31384	141.42	ng/ul	100

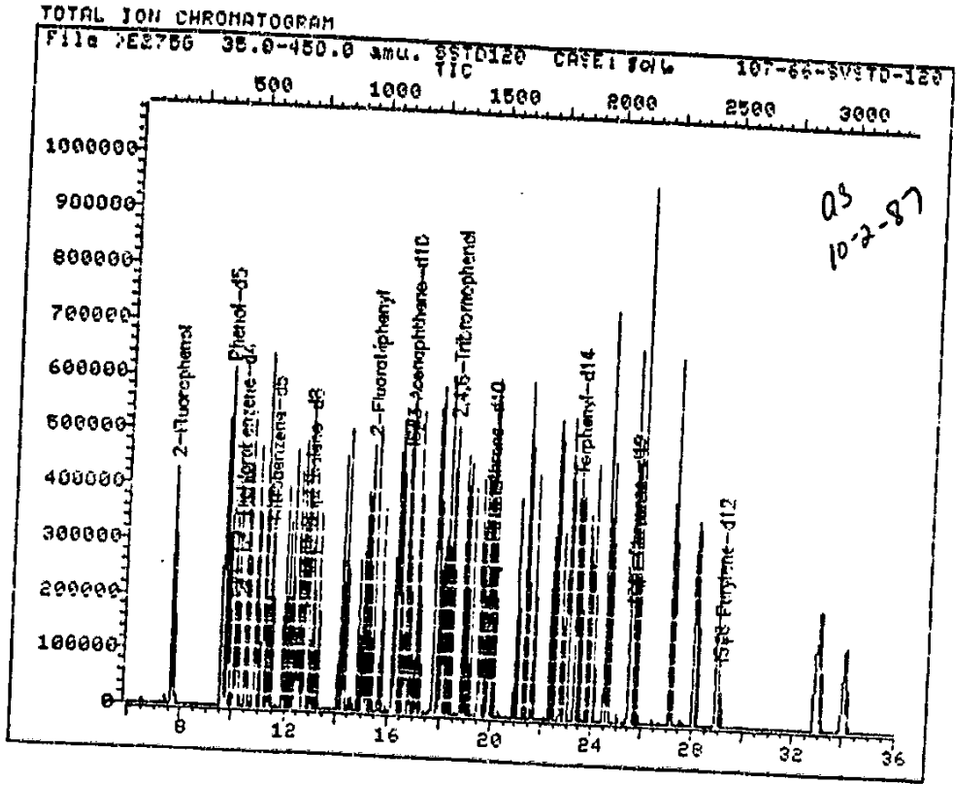
005121

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	17.02	168.1	297420	85.48	ng/ul	99
45)	4-Nitrophenol	16.98	109.1	45558	91.16	ng/ul	85
46)	2,4-Dinitrotoluene	17.13	165.0	101664	85.02	ng/ul	75
47)	Diethylphthalate	17.72	149.0	302171	78.67	ng/ul	69
48)	4-Chlorophenyl-phenylether	17.79	204.1	104689	77.62	ng/ul	99
49)	Fluorene	17.76	166.0	223164	77.14	ng/ul	95
50)	4-Nitroaniline	17.92	138.1	76733	89.02	ng/ul	94
51)	2,4,6-Tribromophenol	18.32	329.7	77319	161.91	ng/ul	94
52)	*IS#4 Phenanthrene-d10	19.78	188.2	167034	40.00	ng/ul	88
53)	4,6-Dinitro-2-methylphenol	18.00	198.1	51959	100.92	ng/ul	99
54)	N-Nitrosodiphenylamine (1)	18.08	169.1	179386	80.84	ng/ul	98
55)	4-Bromophenyl-phenylether	18.84	248.0	70083	78.16	ng/ul	89
56)	Hexachlorobenzene	19.13	283.8	83256	74.53	ng/ul	99
57)	Pentachlorophenol	19.52	265.8	52431	90.99	ng/ul	92
58)	Phenanthrene	19.82	178.1	349179	74.11	ng/ul	98
59)	Anthracene	19.92	178.1	353991	74.83	ng/ul	99
60)	Fluoranthene	22.41	202.1	372632	76.99	ng/ul	99
61)	Di-n-butylphthalate	21.23	149.0	519010	73.62	ng/ul	94
62)	*IS#5 Chrysene-d12	25.55	240.2	129402	40.00	ng/ul	95
63)	Pyrene	22.89	202.1	373232	80.08	ng/ul	99
64)	Terphenyl-d14	23.30	244.2	216052	75.03	ng/ul	97
65)	Butylbenzylphthalate	24.47	149.0	247749	80.79	ng/ul	84
66)	3,3'-Dichlorobenzidine	25.50	252.1	85474	80.49	ng/ul	99
67)	Benzo(a)anthracene	25.52	228.0	300875	76.17	ng/ul	97
68)	bis(2-Ethylhexyl)phthalate	25.78	149.0	362993	82.24	ng/ul	81
69)	Chrysene	25.61	228.0	312106	83.58	ng/ul	99
70)	*IS#6 Perylene-d12	29.04	264.2	113863	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.13	149.0	617352	80.09	ng/ul	95
72)	Benzo(b)fluoranthene	28.01	252.1	355912	79.75	ng/ul	95
73)	Benzo(k)fluoranthene	28.06	252.1	256042	74.66	ng/ul	94
74)	Benzo(a)pyrene	28.88	252.1	294976	75.62	ng/ul	93
75)	Indeno(1,2,3-cd)pyrene	32.88	276.1	324634	82.29	ng/ul	100
76)	Dibenz(a,h)anthracene	32.97	278.2	249175M	83.99	ng/ul	100
77)	Benzo(g,h,i)perylene	34.02	276.2	275986	81.63	ng/ul	100

* Compound is ISTD

005122

TOTAL ION CHROMATOGRAM



Data File: >E275G::D3
Name: SSTD120 CASE: 8016
Misc: 107-66-SVSTD-120

Quant Output File: ^E275G::QT

INST 7002E

BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS
Last Calibration: 871002 18:45

MAY86

Operator ID: SAVOY
Quant Time: 871002 19:16
Injected at: 871002 18:37

Q3
10-2-87

005123

QUANT REPORT

Operator ID: SAVOY
Output File: ^E275G::QT
Data File: >E275G::D3
Name: SSTD120 CASE: 8016
Misc: 107-66-SVSTD-120

Quant Rev: 6

Quant Time: 871002 19:16
Injected at: 871002 18:37
Dilution Factor: 1.00000

INST 7002E

BTL# 1

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS
Last Calibration: 871002 18:45

MAY86

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.12	152.1	45621	40.00	ng/ul	98
2)	Phenol-d5	9.61	99.0	413108	226.37	ng/ul	60
3)	2-Fluorophenol	7.58	112.0	341675	240.47	ng/ul	49
4)	Phenol	9.63	94.1	277764	123.15	ng/ul	100
5)	2-Chlorophenol	9.77	128.0	198679	115.94	ng/ul	96
6)	bis(2-Chloroethyl)ether	9.73	93.0	240768	120.84	ng/ul	99
7)	1,3-Dichlorobenzene	10.04	146.0	200907	115.42	ng/ul	94
8)	1,4-Dichlorobenzene	10.16	146.0	197068	113.38	ng/ul	99
9)	1,2-Dichlorobenzene	10.53	146.0	178308	105.18	ng/ul	98
10)	Benzyl alcohol	10.51	108.1	127473	116.07	ng/ul	98
11)	bis(2-Chloroisopropyl)ether	10.85	45.0	317809^	134.06	ng/ul	97
12)	2-Methylphenol	10.82	108.0	176306	119.96	ng/ul	98
13)	N-Nitroso-di-n-propylamine	11.16	70.0	178529	122.82	ng/ul	66
14)	Hexachloroethane	11.17	117.0	92257	111.27	ng/ul	83
15)	4-Methylphenol	11.14	108.1	171550	112.53	ng/ul	95
16)	*IS#2 Naphthalene-d8	12.81	136.1	169925	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.35	82.1	234844	118.82	ng/ul	84
18)	Nitrobenzene	11.39	77.0	256498	118.21	ng/ul	88
19)	Isophorone	11.91	82.0	478530	119.34	ng/ul	86
20)	2-Nitrophenol	12.07	139.0	117952	121.02	ng/ul	68
21)	2,4-Dimethylphenol	12.22	107.0	202807	113.09	ng/ul	96
22)	bis(2-Chloroethoxy)methane	12.42	93.1	284026	121.34	ng/ul	89
23)	2,4-Dichlorophenol	12.57	162.0	148028	112.75	ng/ul	97
24)	Benzoic acid	12.54	122.0	99942M	167.07	ng/ul	90
25)	1,2,4-Trichlorobenzene	12.73	179.9	152946	107.36	ng/ul	96
26)	Naphthalene	12.85	128.1	522063	111.59	ng/ul	99
27)	4-Chloroaniline	13.04	127.0	233078	114.43	ng/ul	96
28)	Hexachlorobutadiene	13.26	224.8	83871	109.66	ng/ul	99
29)	4-Chloro-3-methylphenol	14.12	107.1	184218	113.24	ng/ul	98
30)	2-Methylnaphthalene	14.33	142.1	288703	113.93	ng/ul	94
31)	*IS#3 Acenaphthene-d10	16.60	164.2	85800	40.00	ng/ul	99
32)	Hexachlorocyclopentadiene	14.83	236.8	82815	125.92	ng/ul	93
33)	2,4,6-Trichlorophenol	15.01	195.9	102381	117.74	ng/ul	98
34)	2,4,5-Trichlorophenol	15.08	196.0	97601	104.31	ng/ul	98
35)	2-Fluorobiphenyl	15.19	172.1	295034	105.30	ng/ul	92
36)	2-Chloronaphthalene	15.37	162.0	296665	110.20	ng/ul	92
37)	2-Nitroaniline	15.68	65.0	167561	131.66	ng/ul	83
38)	Dimethylphthalate	16.19	163.1	414847	121.56	ng/ul	91
39)	2,6-Dinitrotoluene	16.31	165.0	95279	115.77	ng/ul	61
40)	Acenaphthylene	16.27	152.1	485018	113.72	ng/ul	97
41)	3-Nitroaniline	16.59	138.0	110304	118.24	ng/ul	95
42)	Acenaphthene	16.68	153.1	294084	109.55	ng/ul	95
43)	2,4-Dinitrophenol	16.80	184.1	56215	246.91	ng/ul	100

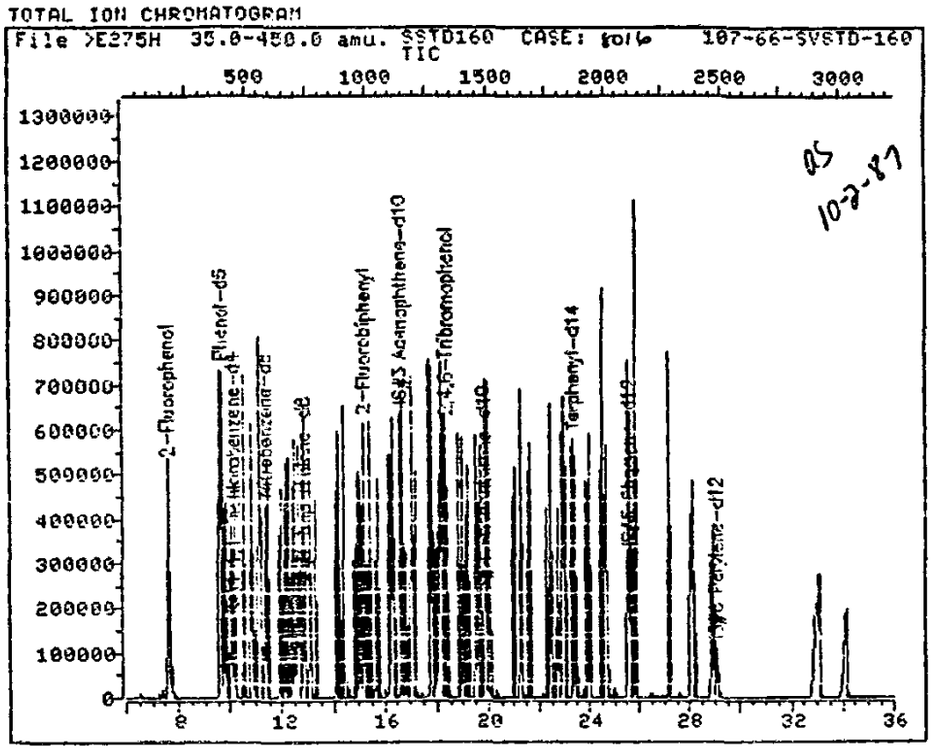
005124

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	17.02	168.1	426832	119.58	ng/ul	98
45)	4-Nitrophenol	16.99	109.1	71066	138.62	ng/ul	91
46)	2,4-Dinitrotoluene	17.14	165.0	148446	121.01	ng/ul	73
47)	Diethylphthalate	17.73	149.0	424281	107.68	ng/ul	73
48)	4-Chlorophenyl-phenylether	17.80	204.1	147831	106.84	ng/ul	98
49)	Fluorene	17.76	166.0	306336	103.22	ng/ul	95
50)	4-Nitroaniline	17.94	138.1	117401	132.77	ng/ul	88
51)	2,4,6-Tribromophenol	18.33	329.7	116502	23[illegible].81	ng/ul	95
52)	*IS#4 Phenanthrene-d10	19.78	188.2	179589	40.00	ng/ul	87
53)	4,6-Dinitro-2-methylphenol	18.02	198.1	83942	151.64	ng/ul	98
54)	N-Nitrosodiphenylamine (1)	18.09	169.1	249328	104.50	ng/ul	96
55)	4-Bromophenyl-phenylether	18.84	248.0	107182	111.18	ng/ul	88
56)	Hexachlorobenzene	19.13	283.8	122452	101.95	ng/ul	90
57)	Pentachlorophenol	19.52	265.8	81552	131.64	ng/ul	98
58)	Phenanthrene	19.83	178.1	509071	100.49	ng/ul	99
59)	Anthracene	19.93	178.1	505344	99.36	ng/ul	99
60)	Fluoranthene	22.42	202.1	539066	103.59	ng/ul	96
61)	Di-n-butylphthalate	21.25	149.0	664591	87.68	ng/ul	96
62)	*IS#5 Chrysene-d12	25.56	240.2	137930	40.00	ng/ul	97
63)	Pyrene	22.90	202.1	544938	109.70	ng/ul	99
64)	Terphenyl-d14	23.30	244.2	305784	99.62	ng/ul	97
65)	Butylbenzylphthalate	24.48	149.0	362556	110.92	ng/ul	80
66)	3,3'-Dichlorobenzidine	25.52	252.1	118686	104.85	ng/ul	98
67)	Benzo(a)anthracene	25.53	228.0	414670	98.49	ng/ul	98
68)	bis(2-Ethylhexyl)phthalate	25.79	149.0	522698	111.10	ng/ul	83
69)	Chrysene	25.62	228.0	455770	114.51	ng/ul	99
70)	*IS#6 Perylene-d12	29.03	264.2	125923	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.12	149.0	774447	90.85	ng/ul	99
72)	Benzo(b)fluoranthene	28.00	252.1	514040	104.15	ng/ul	95
73)	Benzo(k)fluoranthene	28.08	252.1	404320M	106.60	ng/ul	95
74)	Benzo(a)pyrene	28.89	252.1	469323	108.79	ng/ul	92
75)	Indeno(1,2,3-cd)pyrene	32.90	276.1	508980	116.66	ng/ul	100
76)	Dibenz(a,h)anthracene	33.01	278.2	392548	119.64	ng/ul	100
77)	Benzo(g,h,i)perylene	34.07	276.2	426793	114.15	ng/ul	100

* Compound is ISTD

005125

TOTAL ION CHROMATOGRAM



Data File: >E275H::D3 Quant Output File: ^E275H::QT
Name: SSTD160 CASE: 8016
Misc: 107-66-SVSTD-160 INST 7002E BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 18:45

Operator ID: SAVOY
Quant Time: 871002 20:06
Injected at: 871002 19:27

005126

QUANT REPORT

Operator ID: SAVOY Quant Rev: 6 Quant Time: 871002 20:06
Output File: ^E275H::QT Injected at: 871002 19:27
Data File: >E275H::D3 Dilution Factor: 1.00000
Name: SSTD160 CASE: 8016
Misc: 107-66-SVSTD-160 INST 7002E BTL# 1

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871002 18:45

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.13	152.1	44305	40.00	ng/ul	97
2)	Phenol-d5	9.62	99.0	528837	298.39	ng/ul	61
3)	2-Fluorophenol	7.58	112.0	434184	314.65	ng/ul	56
4)	Phenol	9.64	94.1	356668	162.82	ng/ul	100
5)	2-Chlorophenol	9.77	128.0	256868	154.35	ng/ul	97
6)	bis(2-Chloroethyl)ether	9.74	93.0	314505	162.54	ng/ul	98
7)	1,3-Dichlorobenzene	10.04	146.0	248385	146.93	ng/ul	96
8)	1,4-Dichlorobenzene	10.16	146.0	251544	149.03	ng/ul	99
9)	1,2-Dichlorobenzene	10.54	146.0	219837	133.53	ng/ul	99
10)	Benzyl alcohol	10.52	108.1	159520	149.57	ng/ul	97
11)	bis(2-Chloroisopropyl)ether	10.86	45.0	418148^	181.62	ng/ul	92
12)	2-Methylphenol	10.83	108.0	220423	154.43	ng/ul	95
13)	N-Nitroso-di-n-propylamine	11.17	70.0	202821	143.68	ng/ul	65
14)	Hexachloroethane	11.18	117.0	110757	137.56	ng/ul	83
15)	4-Methylphenol	11.14	108.1	214054	144.58	ng/ul	94
16)	*IS#2 Naphthalene-d8	12.81	136.1	164432	40.00	ng/ul	99
17)	Nitrobenzene-d5	11.36	82.1	309969	162.07	ng/ul	83
18)	Nitrobenzene	11.40	77.0	342230	162.98	ng/ul	85
19)	Isophorone	11.91	82.0	630427	162.47	ng/ul	87
20)	2-Nitrophenol	12.07	139.0	156705	166.15	ng/ul	66
21)	2,4-Dimethylphenol	12.22	107.0	263698	151.96	ng/ul	91
22)	bis(2-Chloroethoxy)methane	12.43	93.1	377570	166.69	ng/ul	88
23)	2,4-Dichlorophenol	12.57	162.0	191752	150.94	ng/ul	96
24)	Benzoic acid	12.62	122.0	135983M	234.91	ng/ul	90
25)	1,2,4-Trichlorobenzene	12.74	179.9	199894	145.00	ng/ul	95
26)	Naphthalene	12.85	128.1	640890	141.56	ng/ul	95
27)	4-Chloroaniline	13.05	127.0	308785	156.67	ng/ul	95
28)	Hexachlorobutadiene	13.27	224.8	107551	145.32	ng/ul	99
29)	4-Chloro-3-methylphenol	14.12	107.1	241732	153.56	ng/ul	98
30)	2-Methylnaphthalene	14.33	142.1	368479	150.27	ng/ul	94
31)	*IS#3 Acenaphthene-d10	16.60	164.2	83436	40.00	ng/ul	98
32)	Hexachlorocyclopentadiene	14.83	236.8	109238	170.80	ng/ul	97
33)	2,4,6-Trichlorophenol	15.01	195.9	137002	162.02	ng/ul	97
34)	2,4,5-Trichlorophenol	15.09	196.0	129325	142.14	ng/ul	90
35)	2-Fluorobiphenyl	15.20	172.1	388997	142.77	ng/ul	94
36)	2-Chloronaphthalene	15.37	162.0	378478	144.58	ng/ul	98
37)	2-Nitroaniline	15.69	65.0	227671	183.95	ng/ul	82
38)	Dimethylphthalate	16.19	163.1	540118	162.75	ng/ul	91
39)	2,6-Dinitrotoluene	16.32	165.0	133258	166.50	ng/ul	70
40)	Acenaphthylene	16.27	152.1	612748	147.74	ng/ul	99
41)	3-Nitroaniline	16.60	138.0	146546	161.54	ng/ul	98
42)	Acenaphthene	16.68	153.1	389079	149.04	ng/ul	96
43)	2,4-Dinitrophenol	16.81	184.1	82432	372.32	ng/ul	100

005127

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	17.03	168.1	560075	161.36	ng/ul	95
45)	4-Nitrophenol	17.00	109.1	93287	187.11	ng/ul	84
46)	2,4-Dinitrotoluene	17.15	165.0	199606	167.32	ng/ul	70
47)	Diethylphthalate	17.74	149.0	539949	140.91	ng/ul	70
48)	4-Chlorophenyl-phenylether	17.80	204.1	191554	142.37	ng/ul	97
49)	Fluorene	17.77	166.0	360574	124.94	ng/ul	92
50)	4-Nitroaniline	17.96	138.1	160545	186.70	ng/ul	86
51)	2,4,6-Tribromophenol	18.33	329.7	157524	330.66	ng/ul	88
52)	*IS#4 Phenanthrene-d10	19.78	188.2	179124	40.00	ng/ul	90
53)	4,6-Dinitro-2-methylphenol	18.03	198.1	119800	216.98	ng/ul	99
54)	N-Nitrosodiphenylamine (1)	18.09	169.1	335020	140.79	ng/ul	94
55)	4-Bromophenyl-phenylether	18.84	248.0	141714	147.38	ng/ul	87
56)	Hexachlorobenzene	19.13	283.8	165589	138.22	ng/ul	90
57)	Pentachlorophenol	19.52	265.8	112706	182.40	ng/ul	99
58)	Phenanthrene	19.84	178.1	668529	132.31	ng/ul	96
59)	Anthracene	19.93	178.1	638412	125.85	ng/ul	98
60)	Fluoranthene	22.43	202.1	703920	135.63	ng/ul	98
61)	Di-n-butylphthalate	21.25	149.0	754552	99.81	ng/ul	98
62)	*IS#5 Chrysene-d12	25.56	240.2	139478	40.00	ng/ul	99
63)	Pyrene	22.91	202.1	718203	142.97	ng/ul	98
64)	Terphenyl-d14	23.32	244.2	399674	128.77	ng/ul	98
65)	Butylbenzylphthalate	24.48	149.0	476240	144.08	ng/ul	79
66)	3,3'-Dichlorobenzidine	25.52	252.1	147250	128.65	ng/ul	94
67)	Benzo(a)anthracene	25.54	228.0	502548	118.04	ng/ul	97
68)	bis(2-Ethylhexyl)phthalate	25.79	149.0	642031	134.95	ng/ul	88
69)	Chrysene	25.63	228.0	581568	144.49	ng/ul	95
70)	*IS#6 Perylene-d12	29.04	264.2	129703	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.12	149.0	906261M	103.21	ng/ul	97
72)	Benzo(b)fluoranthene	28.03	252.1	738854	145.33	ng/ul	97
73)	Benzo(k)fluoranthene	28.10	252.1	499817M	127.94	ng/ul	97
74)	Benzo(a)pyrene	28.91	252.1	633969	142.67	ng/ul	94
75)	Indeno(1,2,3-cd)pyrene	32.93	276.1	705526M	156.99	ng/ul	100
76)	Dibenz(a,h)anthracene	33.06	278.2	533661M	157.91	ng/ul	100
77)	Benzo(g,h,i)perylene	34.09	276.2	586602	152.32	ng/ul	100

* Compound is ISTD

005128

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 7002E Calibration Date: 10/ 3/87 Time: 9:15

Lab File ID: E276B Init. Calib. Date(s): 10/ 2/87 10/ ~~3~~ 2/87 bs 10-9-87

Min RRF50 for SPCC(#) = .050

Max %D for CCC(*) is 25.0%

COMPOUND	RRF	RRF50	%D
Phenol	1.983	1.871	5.6 *
bis(2-Chloroethyl)ether	1.778	1.707	4.0
2-Chlorophenol	1.482	1.467	1.0
1,3-Dichlorobenzene	1.489	1.549	4.0
1,4-Dichlorobenzene	1.493	1.531	2.6 *
Benzyl alcohol	.941	.939	.2
1,2-Dichlorobenzene	1.396	1.466	5.0
2-Methylphenol	1.288	1.270	1.4
bis(2-Chloroisopropyl)ether	2.281	2.150	5.8
4-Methylphenol	1.294	1.290	.3
N-Nitroso-di-n-propylamine #	1.283	1.228	4.3 #
Hexachloroethane	.702	.731	4.2
Nitrobenzene	.519	.489	5.8
Isophorone	.969	.946	2.4
2-Nitrophenol	.232	.236	1.6 *
2,4-Dimethylphenol	.411	.393	4.3
Benzoic acid	.172	.170	1.3
bis(2-Chloroethoxy)methane	.568	.549	3.3
2,4-Dichlorophenol	.304	.315	3.7 *
1,2,4-Trichlorobenzene	.324	.349	7.9
Naphthalene	1.071	1.111	3.8
4-Chloroaniline	.475	.470	1.0
Hexachlorobutadiene	.175	.195	11.8 *
4-Chloro-3-methylphenol	.376	.375	.2 *
2-Methylnaphthalene	.594	.606	2.0
Hexachlorocyclopentadiene #	.316	.309	2.1 #
2,4,6-Trichlorophenol	.403	.420	4.3 *
2,4,5-Trichlorophenol	.411	.441	7.1
2-Chloronaphthalene	1.203	1.198	.5
2-Nitroaniline	.625	.552	11.8
Dimethylphthalate	1.606	1.599	.5
Acenaphthylene	1.931	1.980	2.5
2,6-Dinitrotoluene	.383	.369	3.6
3-Nitroaniline	.428	.418	2.3
Acenaphthene	1.201	1.195	.5 *
2,4-Dinitrophenol #	.168	.153	9.2 #
4-Nitrophenol #	.250	.219	12.7 #

005129

FORM VII SV-1

1/87 Rev.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 7002E Calibration Date: 10/ 3/87 Time: 9:15

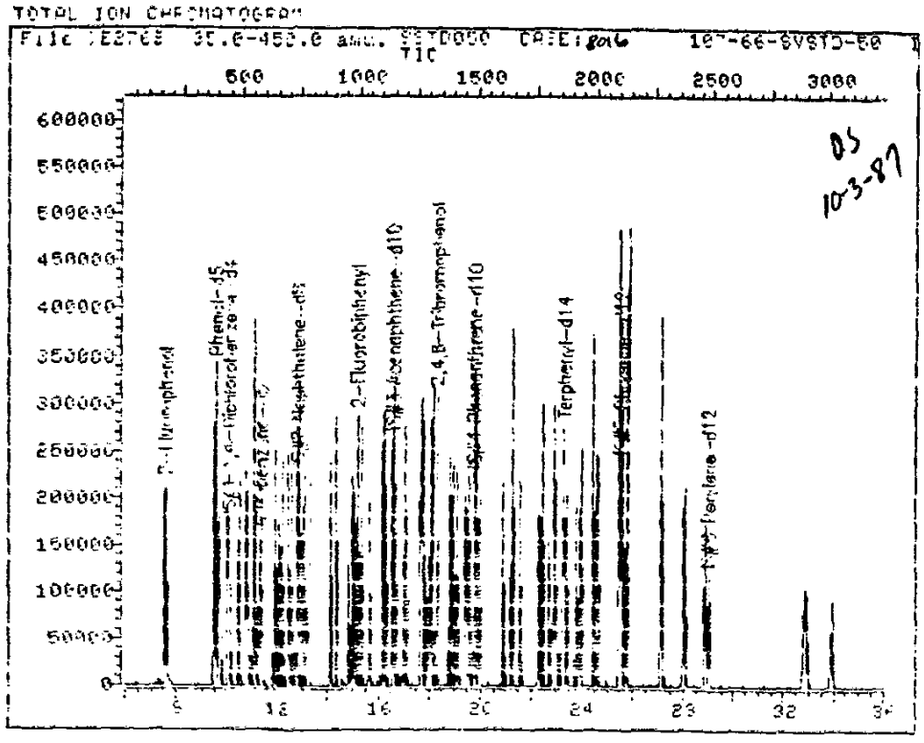
Lab File ID: E276B Init. Calib. Date(s): 10/ 2/87 10/ ~~3~~ 2/87 10-9-87

Min RRF50 for SPCC(#) = .050 Max %D for CCC(*) is 25.0%

COMPOUND	RRF	RRF50	%D
DibenzoFuran	1.699	1.715	1.0
2,4-Dinitrotoluene	.574	.556	3.3
Diethylphthalate	1.751	1.776	1.4
4-Chlorophenyl-phenylether	.612	.652	6.5
Fluorene	1.275	1.328	4.2
4-Nitroaniline	.434	.406	6.5
4,6-Dinitro-2-methylphenol	.142	.148	4.5
N-Nitrosodiphenylamine (1) *	.504	.542	7.4 *
4-Bromophenyl-phenylether	.209	.233	11.5
Hexachlorobenzene	.247	.287	16.2
Pentachlorophenol *	.145	.165	13.7 *
Phenanthrene	1.030	1.116	8.4
Anthracene	1.031	1.148	11.3
Di-n-butylphthalate	1.433	1.698	18.5
Fluoranthene *	1.088	1.170	7.6 *
Pyrene	1.403	1.403	.0
Butylbenzylphthalate	.918	.884	3.7
3,3'-Dichlorobenzidine	.318	.353	11.2
Benzo(a)anthracene	1.118	1.205	7.8
Chrysene	1.151	1.206	4.8
bis(2-Ethylhexyl)phthalate	1.320	1.239	6.1
Di-n-octylphthalate *	2.396	2.433	1.6 *
Benzo(b)fluoranthene	1.495	1.513	1.2
Benzo(k)fluoranthene	1.129	1.167	3.4
Benzo(a)pyrene *	1.298	1.319	1.6 *
Indeno(1,2,3-cd)pyrene	1.372	1.479	7.8
Dibenz(a,h)anthracene	1.043	1.100	5.4
Benzo(g,h,i)perylene	1.159	1.261	8.8
Nitrobenzene-d5	.466	.452	3.0
2-Fluorobiphenyl	1.221	1.286	5.3
Terphenyl-d14	.816	.867	6.2
Phenol-d5	1.564	1.510	3.5
2-Fluorophenol	1.239	1.245	.5
2,4,6-Tribromophenol	.231	.269	16.5

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



05
10-3-87

005131

Data File: :E276B::D3 Quant Output File: :E276E::QT
Name: SSTD050 CASE: 8016
Misc: 107-66-SVSTD-50 INST 7002E BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

Operator ID: SAVOY
Quant Time: 871003 10:22
Injected at: 871003 09:15

QUANT REPORT

Operator ID: SAVOY Quant Rev: 6 Quant Time: 871003 10:22
Output File: ^E276B::QT Injected at: 871003 09:15
Data File: >E276B::D3 Dilution Factor: 1.00000
Name: SSTD050 CASE: 8016
Misc: 107-66-SVSTD-50 INST 7002E BTL# 1

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.10	152.1	55405	40.00	ng/ul	99
2)	Phenol-d5	9.57	99.0	209170	100.00	ng/ul	62
3)	2-Fluorophenol	7.56	112.0	172474	100.00	ng/ul	59
4)	Phenol	9.59	94.1	129563	50.00	ng/ul	100
5)	2-Chlorophenol	9.74	128.0	101592	50.00	ng/ul	97
6)	bis(2-Chloroethyl)ether	9.70	93.0	118235	50.00	ng/ul	99
7)	1,3-Dichlorobenzene	10.02	146.0	107256	50.00	ng/ul	94
8)	1,4-Dichlorobenzene	10.17	146.0	106038	50.00	ng/ul	95
9)	1,2-Dichlorobenzene	10.51	146.0	101549	50.00	ng/ul	97
10)	Benzyl alcohol	10.48	108.1	65010	50.00	ng/ul	96
11)	bis(2-Chloroisopropyl)ether	10.83	45.0	148873	50.00	ng/ul	88
12)	2-Methylphenol	10.80	108.0	87927	50.00	ng/ul	96
13)	N-Nitroso-di-n-propylamine	11.11	70.0	85033	50.00	ng/ul	69
14)	Hexachloroethane	11.15	117.0	50621	50.00	ng/ul	83
15)	4-Methylphenol	11.09	108.1	89339	50.00	ng/ul	94
16)	*IS#2 Naphthalene-d8	12.77	136.1	196145	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.32	82.1	110899	50.00	ng/ul	78
18)	Nitrobenzene	11.35	77.0	119862	50.00	ng/ul	92
19)	Isophorone	11.86	82.0	232051	50.00	ng/ul	91
20)	2-Nitrophenol	12.03	139.0	57922	50.00	ng/ul	66
21)	2,4-Dimethylphenol	12.19	107.0	96346	50.00	ng/ul	99
22)	bis(2-Chloroethoxy)methane	12.39	93.1	134633	50.00	ng/ul	91
23)	2,4-Dichlorophenol	12.53	162.0	77242	50.00	ng/ul	98
24)	Benzoic acid	12.45	122.0	41607	50.00	ng/ul	91
25)	1,2,4-Trichlorobenzene	12.71	179.9	85597	50.00	ng/ul	96
26)	Naphthalene	12.82	128.1	272363	50.00	ng/ul	98
27)	4-Chloroaniline	13.02	127.0	115330	50.00	ng/ul	96
28)	Hexachlorobutadiene	13.25	224.8	47819	50.00	ng/ul	94
29)	4-Chloro-3-methylphenol	14.09	107.1	92058	50.00	ng/ul	97
30)	2-Methylnaphthalene	14.30	142.1	148640	50.00	ng/ul	95
31)	*IS#3 Acenaphthene-d10	16.57	164.2	100143	40.00	ng/ul	98
32)	Hexachlorocyclopentadiene	14.81	236.8	38664	50.00	ng/ul	98
33)	2,4,6-Trichlorophenol	14.98	195.9	52605	50.00	ng/ul	96
34)	2,4,5-Trichlorophenol	15.06	196.0	55159	50.00	ng/ul	97
35)	2-Fluorobiphenyl	15.16	172.1	160922	50.00	ng/ul	96
36)	2-Chloronaphthalene	15.34	162.0	149930	50.00	ng/ul	96
37)	2-Nitroaniline	15.65	65.0	69045	50.00	ng/ul	93
38)	Dimethylphthalate	16.15	163.1	200116	50.00	ng/ul	93
39)	2,6-Dinitrotoluene	16.27	165.0	46218	50.00	ng/ul	75
40)	Acenaphthylene	16.23	152.1	247860	50.00	ng/ul	96
41)	3-Nitroaniline	16.55	138.0	52372	50.00	ng/ul	94
42)	Acenaphthene	16.64	153.1	149597	50.00	ng/ul	97
43)	2,4-Dinitrophenol	16.76	184.1	19102	50.00	ng/ul	100

005132

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	16.99	168.1	214720	50.00	ng/ul	96
45)	4-Nitrophenol	16.95	109.1	27362	50.00	ng/ul	91
46)	2,4-Dinitrotoluene	17.10	165.0	69538	50.00	ng/ul	77
47)	Diethylphthalate	17.69	149.0	222378	50.00	ng/ul	67
48)	4-Chlorophenyl-phenylether	17.77	204.1	81594	50.00	ng/ul	93
49)	Fluorene	17.73	166.0	166293	50.00	ng/ul	91
50)	4-Nitroaniline	17.88	138.1	50772	50.00	ng/ul	92
51)	2,4,6-Tribromophenol	18.30	329.7	67355	100.00	ng/ul	88
52)	*IS#4 Phenanthrene-d10	19.75	188.2	189157	40.00	ng/ul	90
53)	4,6-Dinitro-2-methylphenol	17.97	198.1	34996	50.00	ng/ul	97
54)	N-Nitrosodiphenylamine (1)	18.05	169.1	128060	50.00	ng/ul	97
55)	4-Bromophenyl-phenylether	18.81	248.0	55142	50.00	ng/ul	93
56)	Hexachlorobenzene	19.10	283.8	67875	50.00	ng/ul	85
57)	Pentachlorophenol	19.49	265.8	39023	50.00	ng/ul	97
58)	Phenanthrene	19.79	178.1	263938	50.00	ng/ul	97
59)	Anthracene	19.89	178.1	271329	50.00	ng/ul	98
60)	Fluoranthene	22.38	202.1	276733	50.00	ng/ul	98
61)	Di-n-butylphthalate	21.21	149.0	401489	50.00	ng/ul	93
62)	*IS#5 Chrysene-d12	25.52	240.2	166055	40.00	ng/ul	97
63)	Pyrene	22.86	202.1	291128	50.00	ng/ul	99
64)	Terphenyl-d 4	23.27	244.2	179885	50.00	ng/ul	97
65)	Butylbenzylphthalate	24.44	149.0	183517	50.00	ng/ul	98
66)	3,3'-Dichlorobenzidine	25.47	252.1	73356	50.00	ng/ul	95
67)	Benzo(a)anthracene	25.46	228.0	250154	50.00	ng/ul	95
68)	bis(2-Ethylhexyl)phthalate	25.76	149.0	257162	50.00	ng/ul	87
69)	Chrysene	25.57	229.0	250343	50.00	ng/ul	99
70)	*IS#6 Perylene-d12	28.98	264.2	147774	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.08	149.0	449376	50.00	ng/ul	97
72)	Benzo(b)fluoranthene	27.95	252.1	279388	50.00	ng/ul	96
73)	Benzo(k)fluoranthene	28.01	252.1	215623	50.00	ng/ul	97
74)	Benzo(a)pyrene	28.83	252.1	243704	50.00	ng/ul	98
75)	Indeno(1,2,3-cd)pyrene	32.78	276.1	273238	50.00	ng/ul	100
76)	Dibenz(a,h)anthracene	32.89	278.2	203181	50.00	ng/ul	100
77)	Benzo(g,h,i)perylene	33.91	276.2	232869	50.00	ng/ul	100

* Compound is ISTD

005133

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 7002E Calibration Date: 10/ 6/87 Time: 9:41

Lab File ID: E279B Init. Calib. Date(s): 10/ 2/87 10/ ~~3~~ 2/87 10-9-87

Min RRF50 for SPCC(#) = .050 Max %D for CCC(*) is 25.0%

COMPOUND	RRF	RRF50	%D
Phenol *	1.983	1.836	7.4 *
bis(2-Chloroethyl)ether	1.778	1.762	.9
2-Chlorophenol	1.482	1.475	.4
1,3-Dichlorobenzene	1.489	1.543	3.6
1,4-Dichlorobenzene *	1.493	1.518	1.7 *
Benzyl alcohol	.941	.911	3.2
1,2-Dichlorobenzene	1.396	1.426	2.1
2-Methylphenol	1.288	1.230	4.5
bis(2-Chloroisopropyl)ether	2.281	1.990	12.8
4-Methylphenol	1.294	1.244	3.9
N-Nitroso-di-n-propylamine #	1.283	1.206	6.0 #
Hexachloroethane	.702	.715	1.9
Nitrobenzene	.519	.515	.8
Isophorone	.969	.976	.7
2-Nitrophenol *	.232	.241	3.7 *
2,4-Dimethylphenol	.411	.361	12.0
Benzoic acid	.172	.142	17.5
bis(2-Chloroethoxy)methane	.568	.560	1.4
2,4-Dichlorophenol *	.304	.313	3.1 *
1,2,4-Trichlorobenzene	.324	.343	6.0
Naphthalene	1.071	1.138	6.3
4-Chloroaniline	.475	.464	2.3
Hexachlorobutadiene *	.175	.190	8.6 *
4-Chloro-3-methylphenol *	.376	.370	1.6 *
2-Methylnaphthalene	.594	.596	.2
Hexachlorocyclopentadiene #	.316	.203	35.6 #
2,4,6-Trichlorophenol *	.403	.415	3.1 *
2,4,5-Trichlorophenol	.411	.432	5.0
2-Chloronaphthalene	1.203	1.222	1.6
2-Nitroaniline	.625	.590	5.6
Dimethylphthalate	1.606	1.592	.9
Acenaphthylene	1.931	1.955	1.2
2,6-Dinitrotoluene	.383	.398	3.9
3-Nitroaniline	.428	.424	1.1
Acenaphthene *	1.201	1.195	.5 *
2,4-Dinitrophenol #	.168	.120	28.7 #
4-Nitrophenol #	.250	.209	16.6 #

005134

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Instrument ID: 7002E Calibration Date: 10/ 6/87 Time: 9:41

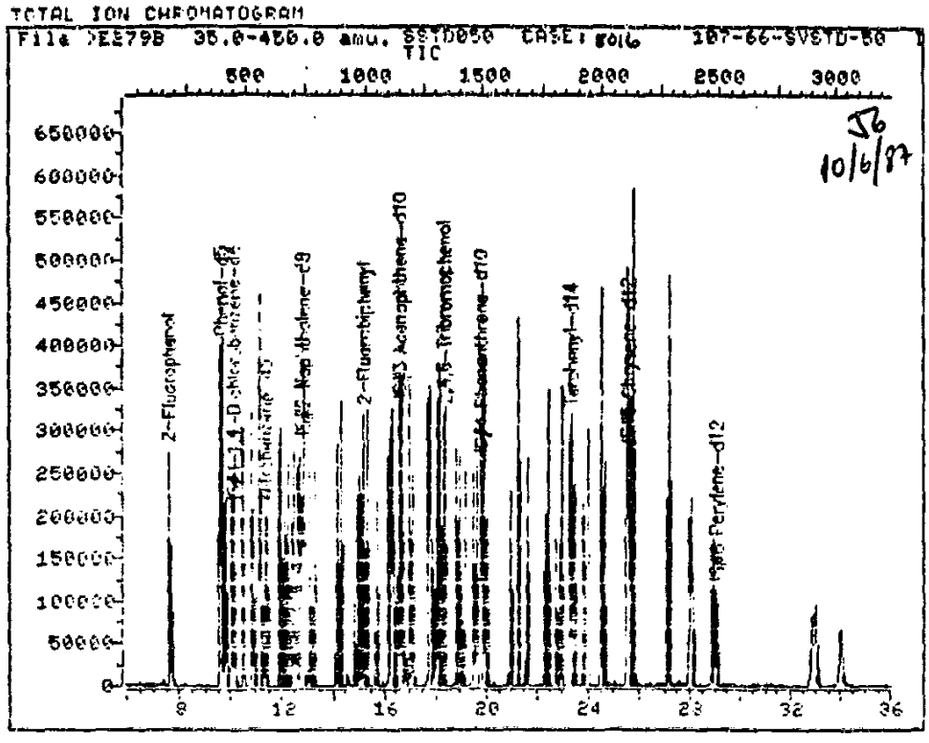
Lab File ID: E279B Init. Calib. Date(s): 10/ 2/87 10/ ~~3~~ 2/87 10/4/87

Min RRFSO for SPCC(#) = .050 Max %D for CCC(*) is 25.0%

COMPOUND	$\overline{RRF}$	RRFSO	%D
Dibenzofuran	1.699	1.642	3.4
2,4-Dinitrotoluene	.574	.571	.6
Diethylphthalate	1.751	1.759	.5
4-Chlorophenyl-phenylether	.612	.640	4.5
Fluorene	1.275	1.351	6.0
4-Nitroaniline	.434	.411	5.3
4,6-Dinitro-2-methylphenol	.142	.132	6.9
N-Nitrosodiphenylamine (1) *	.504	.558	10.7 *
4-Bromophenyl-phenylether	.209	.222	6.1
Hexachlorobenzene	.247	.271	9.8
Pentachlorophenol *	.145	.127	12.8 *
Phenanthrene	1.030	1.122	8.9
Anthracene	1.031	1.111	7.7
Di-n-butylphthalate	1.433	1.705	19.0
Fluoranthene *	1.088	1.146	5.4 *
Pyrene	1.403	1.537	9.6
Butylbenzylphthalate	.918	.993	8.1
3,3'-Dichlorobenzidine	.318	.353	11.2
Benzo(a)anthracene	1.118	1.272	13.8
Chrysene	1.151	1.284	11.6
bis(2-Ethylhexyl)phthalate	1.320	1.451	10.0
Di-n-octylphthalate *	2.396	2.973	24.1 *
Benzo(b)fluoranthene	1.495	1.763	17.9
Benzo(k)fluoranthene	1.129	1.141	1.0
Benzo(a)pyrene *	1.298	1.395	7.5 *
Indeno(1,2,3-cd)pyrene	1.372	1.292	5.8
Dibenz(a,h)anthracene	1.043	.972	6.9
Benzo(g,h,i)perylene	1.159	1.040	10.2
Nitrobenzene-d5	.466	.481	3.2
2-Fluorobiphenyl	1.221	1.270	4.0
Terphenyl-d14	.816	.928	13.6
Phenol-d5	1.564	1.558	.4
2-Fluorophenol	1.239	1.280	3.3
2,4,6-Tribromophenol	.231	.237	2.6

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



Data File: >E279B::D3 Quant Output File: ^E279B::QT
Name: SSTD050 CASE: 8016
Misc: 107-66-SVSTD-50 INST 7002E BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871006 10:55

Operator ID: JEANNETTE
Quant Time: 871006 11:54
Injected at: 871006 09:41

005136

Operator ID: JEANNETTE
Output File: ^E279B::QT
Data File: >E279B::D3
Name: SSTD050 CASE: 8016
Misc: 107-66-SUSTD-50 INST 7002E

QUANT REPORT
Quant Rev: 6

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS
Last Calibration: 871006 10:55

Quant Time: 871006 11:
Injected at: 871006 08:4
Dilution Factor: 1.0000

BTL# 1

MAY86

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.13	152.1	69016	40.00	ng/ul	94
2)	Phenol-d5	9.62	99.0	268896	100.00	ng/ul	61
3)	2-Fluorophenol	7.59	112.0	220786	100.00	ng/ul	61
4)	Phenol	9.63	94.1	158370	50.00	ng/ul	100
5)	2-Chlorophenol	9.77	128.0	127289	50.00	ng/ul	95
6)	bis(2-Chloroethyl)ether	9.73	93.0	151979	50.00	ng/ul	99
7)	1,3-Dichlorobenzene	10.04	146.0	133073	50.00	ng/ul	90
8)	1,4-Dichlorobenzene	10.16	146.0	130956	50.00	ng/ul	97
9)	1,2-Dichlorobenzene	10.54	146.0	123014	50.00	ng/ul	99
10)	Benzyl alcohol	10.52	108.1	78594	50.00	ng/ul	96
11)	bis(2-Chloroisopropyl)ether	10.86	45.0	171656	50.00	ng/ul	93
12)	2-Methylphenol	10.83	108.0	106102	50.00	ng/ul	91
13)	N-Nitroso-di-n-propylamine	11.15	70.0	104061	50.00	ng/ul	69
14)	Hexachloroethane	11.18	117.0	61684	50.00	ng/ul	88
15)	4-Methylphenol	11.14	108.1	107310	50.00	ng/ul	96
16)	*IS#2 Naphthalene-d8	12.81	136.1	237627	50.00	ng/ul	99
17)	Nitrobenzene-d5	11.35	82.1	142830	50.00	ng/ul	80
18)	Isophorone	11.39	77.0	152932	40.00	ng/ul	92
19)	2-Nitrophenol	11.90	82.0	289995	50.00	ng/ul	88
20)	2,4-Dimethylphenol	12.06	139.0	71629	50.00	ng/ul	67
21)	bis(2-Chloroethoxy)methane	12.22	107.0	107348	50.00	ng/ul	97
22)	2,4-Dichlorophenol	12.42	93.1	166319	50.00	ng/ul	90
23)	Benzoic acid	12.57	162.0	93038	50.00	ng/ul	96
24)	1,2,4-Trichlorobenzene	12.52	122.0	42140	50.00	ng/ul	85
25)	Naphthalene	12.74	179.9	101946	50.00	ng/ul	98
26)	4-Chloroaniline	12.85	128.1	337963	50.00	ng/ul	98
27)	Hexachlorobutadiene	13.05	127.0	137854	50.00	ng/ul	95
28)	4-Chloro-3-methylphenol	13.27	224.8	56309	50.00	ng/ul	97
29)	2-Methylnaphthalene	14.13	107.1	109919	50.00	ng/ul	98
30)	Hexachlorocyclopentadiene	14.33	142.1	176945	50.00	ng/ul	91
31)	2,4,6-Trichlorophenol	16.61	164.2	119008	50.00	ng/ul	99
32)	*IS#3 Acenaphthene-d10	14.83	236.8	30249	50.00	ng/ul	94
33)	2,4,5-Trichlorophenol	15.02	195.9	61794	40.00	ng/ul	
34)	2-Fluorobiphenyl	15.09	196.0	64262	50.00	ng/ul	
35)	2-Chloronaphthalene	15.20	172.1	188918	50.00	ng/ul	
36)	2-Nitroaniline	15.36	162.0	181764	50.00	ng/ul	
37)	Dimethylphthalate	15.69	65.0	87821	50.00	ng/ul	
38)	2,6-Dinitrotoluene	16.19	163.1	236844	50.00	ng/ul	
39)	Acenaphthylene	16.31	165.0	59221	50.00	ng/ul	100
40)	3-Nitroaniline	16.26	[illegible]	[illegible]	[illegible]		
41).	Acenaphthene	16.59	[illegible]	[illegible]	[illegible]		
42)	2,4-Dinitrophenol	16.67	[illegible]	[illegible]	[illegible]		
43)		16.79	[illegible]	[illegible]	[illegible]		

005 1 5 0 0

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Dibenzofuran	17.02	168.1	244213	50.00	ng/ul	81
45)	4-Nitrophenol	17.00	109.1	31065	50.00	ng/ul	97
46)	2,4-Dinitrotoluene	17.14	165.0	84952	50.00	ng/ul	76
47)	Diethylphthalate	17.73	149.0	261723	50.00	ng/ul	70
48)	4-Chlorophenyl-phenylether	17.80	204.1	95138	50.00	ng/ul	93
49)	Fluorene	17.76	166.0	200961	50.00	ng/ul	98
50)	4-Nitroaniline	17.92	138.1	61106	50.00	ng/ul	94
51)	2,4,6-Tribromophenol	18.33	329.7	70457	100.00	ng/ul	90
52)	*IS#4 Phenanthrene-d10	19.78	188.2	223258	40.00	ng/ul	89
53)	4,6-Dinitro-2-methylphenol	18.01	198.1	36805	50.00	ng/ul	98
54)	N-Nitrosodiphenylamine (1)	18.07	169.1	155739	50.00	ng/ul	97
55)	4-Bromophenyl-phenylether	18.84	248.0	61921	50.00	ng/ul	92
56)	Hexachlorobenzene	19.12	283.8	75659	50.00	ng/ul	92
57)	Pentachlorophenol	19.52	265.8	35317	50.00	ng/ul	99
58)	Phenanthrene	19.83	178.1	313066	50.00	ng/ul	99
59)	Anthracene	19.92	178.1	309967	50.00	ng/ul	98
60)	Fluoranthene	22.42	202.1	319956	50.00	ng/ul	99
61)	Di-n-butylphthalate	21.25	149.0	475802	50.00	ng/ul	93
62)	*IS#5 Chrysene-d12	25.56	240.2	173580	40.00	ng/ul	96
63)	Pyrene	22.90	202.1	333539	50.00	ng/ul	99
64)	Terphenyl-d14	23.31	244.2	201291	50.00	ng/ul	97
65)	Butylbenzylphthalate	24.48	149.0	215449	50.00	ng/ul	85
66)	3,3'-Dichlorobenzidine	25.52	252.1	76664	50.00	ng/ul	94
67)	Benzo(a)anthracene	25.52	228.0	276076	50.00	ng/ul	96
68)	bis(2-Ethylhexyl)phthalate	25.79	149.0	314914	50.00	ng/ul	84
69)	Chrysene	25.61	228.0	278689	50.00	ng/ul	98
70)	*IS#6 Perylene-d12	29.05	264.2	145598	40.00	ng/ul	100
71)	Di-n-octylphthalate	27.12	149.0	541148	50.00	ng/ul	96
72)	Benzo(b)fluoranthene	28.01	252.1	320843	50.00	ng/ul	96
73)	Benzo(k)fluoranthene	28.07	252.1	207610	50.00	ng/ul	98
74)	Benzo(a)pyrene	28.89	252.1	253865	50.00	ng/ul	94
75)	Indeno(1,2,3-cd)pyrene	32.87	276.1	235135	50.00	ng/ul	100
76)	Dibenz(a,h)anthracene	32.97	278.2	176882	50.00	ng/ul	100
77)	Benzo(g,h,i)perylene	34.00	276.2	189332	50.00	ng/ul	100

* Compound is ISTD

005138

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID (Standard): E276B Date Analyzed: 10/ 3/87

Instrument ID: 7002E Time Analyzed: 9:15

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	55405.	10.10	196145.	12.77	100143.	16.57
	UPPER LIMIT	110810.	10.60	392290.	13.27	200286.	17.07
	LOWER LIMIT	27703.	9.60	98073.	12.27	50072.	16.07
	EPA SAMPLE NO.						
1	SBLK	54986.	10.09	188193.	12.77	101289.	16.56
2	FD610	49193.	10.10	173700.	12.78	88670.	16.57
3	FD272	44388.	10.11	150223.	12.78	76206.	16.57
4	FD272MS	45556.	10.11	152217.	12.78	78957.	16.58
5	FD272MSD	48841.	10.11	169622.	12.79	86321.	16.58
6							
7							
8							
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19							
20							
21							
22							

IS1 (DCB) = IS#1 1,4-Dichlorobenzene-d4
IS2 (NPT) = IS#2 Naphthalene-d8
IS3 (ANT) = IS#3 Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

005139

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID (Standard): E276B Date Analyzed: 10/ 3/87

Instrument ID: 7002E Time Analyzed: 9:15

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	189157.	19.75	166055.	25.52	147774.	28.98
	UPPER LIMIT	378314.	20.25	332110.	26.02	295548.	29.48
	LOWER LIMIT	94579.	19.25	83028.	25.02	73887.	28.48
	EPA SAMPLE NO.						
1	SBLK	188937.	19.73	148440.	25.51	126032.	28.97
2	FD610	162006.	19.74	137895.	25.50	115618.	28.97
3	FD272	141924.	19.74	121465.	25.51	100881.	28.99
4	FD272MS	141697.	19.74	114059.	25.51	99862.	28.99
5	FD272MSD	156385.	19.75	125512.	25.51	109472.	28.98
6							
7							
8							
9							
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11							
12							
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16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = IS#4 Phenanthrene-d10
IS5 (CRY) = IS#5 Chrysene-d12
IS6 (PRY) = IS#6 Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

005140

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID (Standard): E279B Date Analyzed: 10/ 6/87

Instrument ID: 7902E Time Analyzed: 9:41

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	69016.	10.13	237627.	12.81	119008.	16.61
	UPPER LIMIT	138032.	10.63	475254.	13.31	238016.	17.11
	LOWER LIMIT	34508.	9.63	118814.	12.31	59504.	16.11
	EPA SAMPLE NO.						
1	SBLK	53626.	10.12	179587.	12.80	89507.	16.60
2	FD273 RE	46916.	10.13	157052.	12.80	76470.	16.60
3							
4							
5							
6							
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19							
20							
21							
22							

IS1 (DCB) = IS#1 1,4-Dichlorobenzene-d4
IS2 (NPT) = IS#2 Naphthalene-d8
IS3 (ANT) = IS#3 Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

005141

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

Lab File ID (Standard): E279B

Date Analyzed: 10/ 6/87

Instrument ID: 7002E

Time Analyzed: 9:41

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	223258.	19.78	173580.	25.56	145598.	29.05
UPPER LIMIT	446516.	20.28	347160.	26.06	291196.	29.55
LOWER LIMIT	111629.	19.28	86790.	25.06	72799.	28.55
EPA SAMPLE NO.						
1 SBLK	155425.	19.77	120892.	25.54	87876.	29.04
2 FD273 RE	140598.	19.77	111593.	25.55	87242.	29.04
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = IS#4 Phenanthrene-d10
IS5 (CRY) = IS#5 Chrysene-d12
IS6 (PRY) = IS#6 Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2

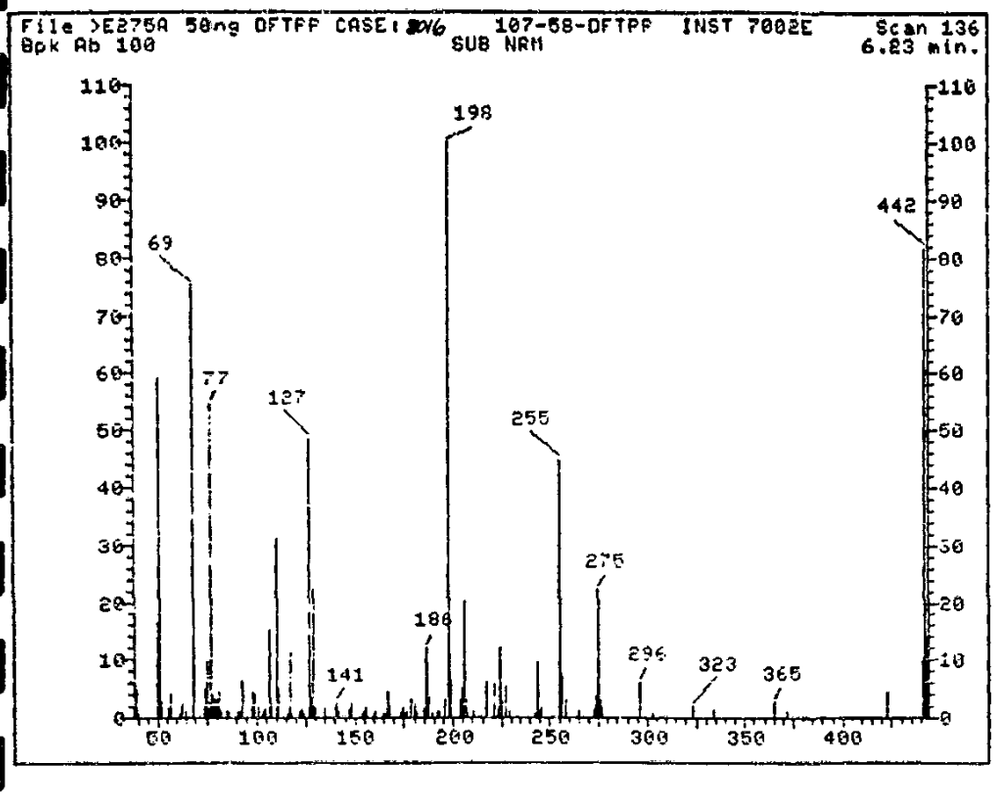
1/87 Rev.

005142

SEMIVOLATILES

RAW QC DATA

005143



Data Filename: >E275A::D3
Name: 50ng DFTPP CASE: 8016
Misc: 107-58-DFTPP INST 7002E BTL# 1

Operator ID: SAVOY MS
Analysis Date/Time : 10/02/87 14:03

005144

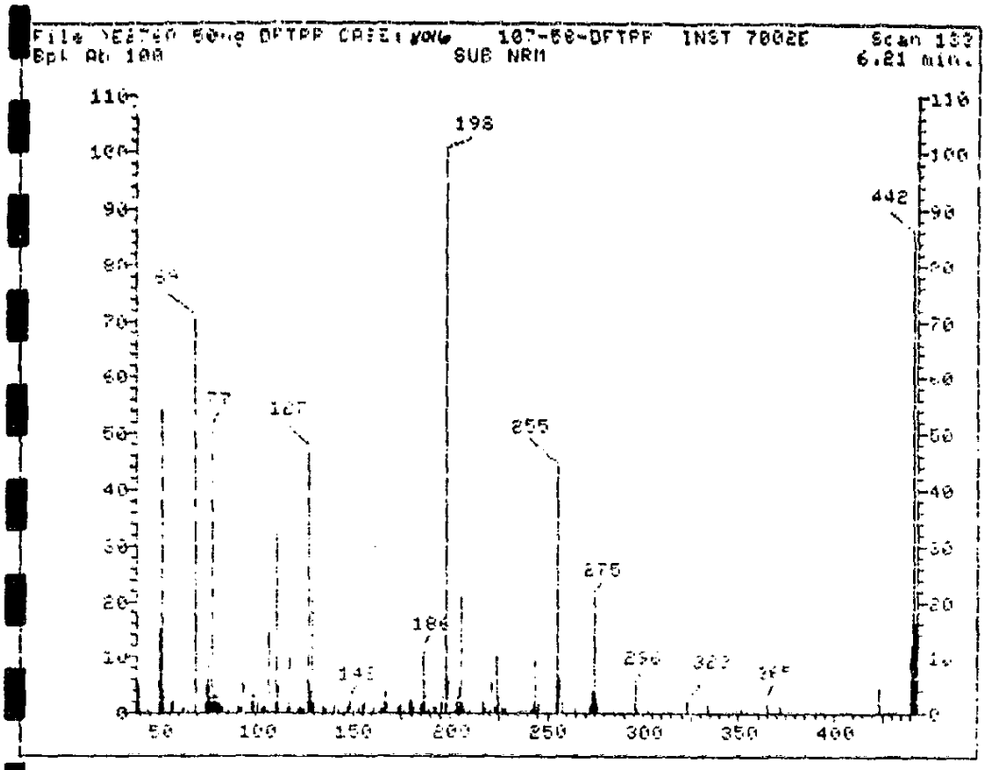
Analysis Date/Time: 10/02/87 14:03
Data Filename and Sample ID:

>E275A 50ng DFTPP CASE: 8016 107-58-DFTPP INST 7002E
136 SUB NRM

File: >E275A Scan #: 136 Retn. time: 6.23

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	.837	90.95	1.156	135.05	1.633	187.05	3.551	245.05	1.176
39.05	4.663	92.05	1.139	141.05	2.453	188.95	.735	245.95	1.867
40.05	.579	93.05	6.412	142.05	.922	192.05	1.013	255.00	44.705
50.05	16.639	98.05	4.351	147.05	1.230	193.05	.969	256.00	7.032
51.05	59.267	98.95	3.961	147.95	2.281	195.95	3.030	258.00	2.938
52.05	2.867	100.95	2.169	153.95	.657	197.95	100.000	265.00	.969
56.05	1.881	103.05	.752	155.05	1.112	198.95	6.469	273.00	1.284
56.95	4.114	103.95	1.406	156.05	1.745	203.95	2.969	274.00	3.741
62.00	.634	104.95	1.393	160.00	.749	205.00	5.198	275.00	22.146
63.10	2.247	106.95	15.039	161.00	1.128	206.00	20.333	275.90	3.006
65.10	1.159	107.95	2.291	165.00	.752	207.00	2.962	276.95	1.796
69.00	75.153	110.00	31.356	166.00	.661	208.00	.671	295.95	5.944
74.00	5.205	111.10	4.975	167.00	4.504	211.10	.908	303.00	.722
75.00	9.885	116.00	.840	168.00	1.938	217.00	6.174	323.00	1.915
76.10	2.728	117.00	11.091	174.00	.898	220.90	5.629	333.95	1.301
77.00	54.258	118.00	.807	175.00	1.627	223.00	1.339	365.00	2.575
78.00	3.667	121.90	.918	176.00	.569	224.00	12.047	372.05	.918
79.00	3.521	123.00	1.491	177.00	.932	225.00	2.711	423.05	4.551
80.00	2.986	124.00	.681	179.00	3.030	227.00	5.551	440.95	10.380
81.00	4.270	127.00	48.392	180.00	2.247	228.95	1.017	441.95	81.748
82.00	.993	128.00	3.277	181.05	.966	242.95	.617	442.95	13.901
85.05	.891	129.00	22.281	185.05	1.681	244.05	9.353	444.10	1.335
85.95	1.027	130.00	1.576	186.05	12.067				

005145



Data Filename: :E2760H::D3
Name: 50ng DFTPP CASE: 8016
Misc: 107-58-DFTPP INST 7002E BTL# 1

Operator ID: SAUDY MS
Analysis Date Time : 10/03/87 8:52

005146

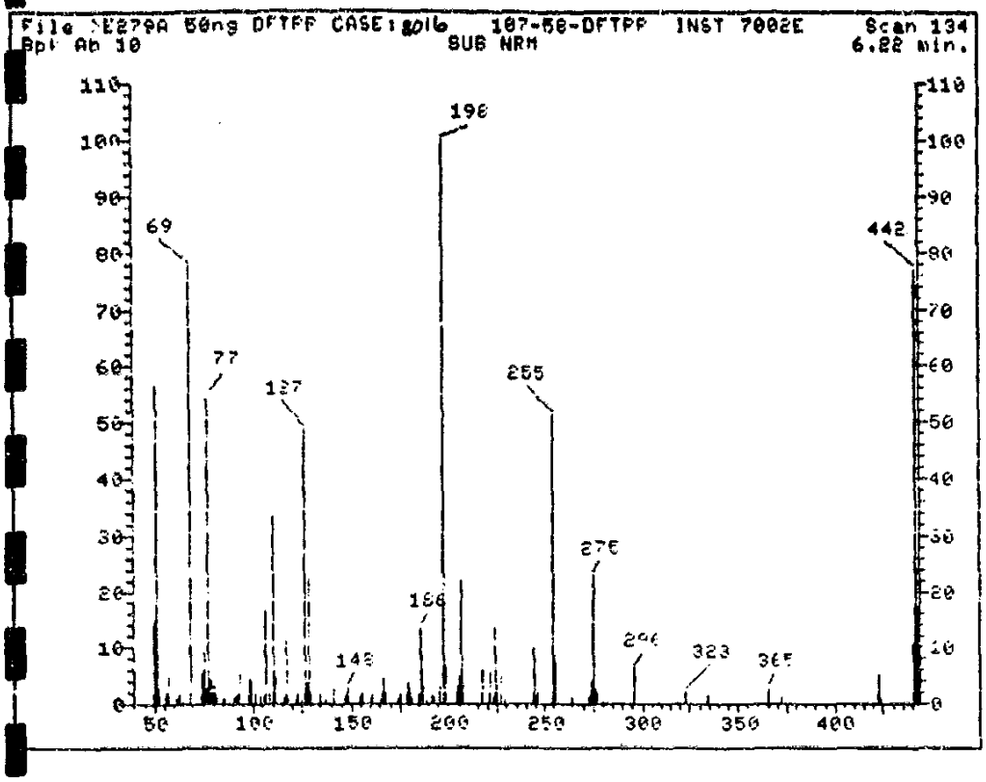
Analysis Date/Time: 10/03/87 8:52
Data Filename and Sample ID:

>E276M 50ng DFTPP CASE: 8016 107-58-DFTPP INST 7002E
133 SUB NPM

File: >E2764 Scan #: 133 Retn. time: 6.21

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	.735	92.05	.867	136.05	.563	193.05	.990	245.95	1.725
39.15	4.595	93.05	5.954	137.05	.741	196.05	2.925	255.00	43.938
40.05	.452	98.05	4.019	141.05	2.136	197.95	100.000	256.00	6.531
44.05	.640	99.05	3.448	142.05	.706	198.95	6.476	258.00	2.584
50.05	15.215	101.05	1.966	145.95	1.128	203.05	.537	265.00	.933
51.05	54.135	102.05	.614	147.95	2.216	203.95	2.753	272.90	1.349
52.05	2.599	104.05	1.097	153.05	.626	205.00	4.493	274.00	3.669
56.05	1.913	104.95	1.263	155.05	1.246	206.10	20.910	274.90	21.005
57.05	4.366	105.95	.465	156.05	1.656	207.10	2.787	276.00	2.615
62.10	.761	107.05	14.652	161.00	1.008	208.00	.689	277.05	1.651
63.10	2.242	109.05	1.952	165.00	.804	210.40	.468	295.95	5.018
65.00	.812	110.00	31.887	166.00	.669	211.00	.812	296.95	.807
69.00	70.749	111.00	4.970	167.10	3.933	217.00	4.869	303.00	.623
74.10	4.971	116.00	.844	168.00	1.628	218.00	.721	323.00	2.032
75.00	8.393	117.00	9.864	174.00	.884	221.00	5.302	334.05	1.214
76.10	2.791	119.00	.847	175.00	1.455	223.00	.962	352.00	.632
77.10	50.961	122.00	.765	177.00	.792	224.00	11.442	354.00	.603
78.10	2.974	123.00	1.319	179.00	3.505	225.00	2.693	364.90	2.420
79.00	3.697	124.00	.715	180.00	2.004	226.90	4.516	372.00	1.074
80.00	2.537	125.00	.614	181.05	.959	227.90	.603	423.05	4.478
81.00	4.772	127.00	46.981	185.05	1.441	229.05	.896	423.95	1.065
82.00	1.143	128.10	2.821	186.05	11.207	242.05	.528	440.95	12.183
83.00	1.048	129.00	21.227	187.05	3.301	243.05	.611	441.95	85.190
86.05	1.042	130.00	1.683	188.95	.571	244.05	9.347	442.95	16.156
91.05	.635	135.05	1.383	191.95	1.019	245.05	1.114	444.00	1.335

005147



Data Filename: >E279A::D3
Name: 50ng DFTPP CASE: 8016
Misc: 107-58-DFTPP INST 7002E BTL# 1

Operator ID: JEANNETTE MS
Analysis Date/Time : 10/06/87 9:12

005148

Analysis Date/Time: 10/06/87 9:12
Data Filename and Sample ID:

>E279A 50ng DFTPP CASE: 8016 107-58-DFTPP INST 7002E
134 SUB NRM

File: >E279A Scan #: 134 Retn. time: 6.22

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
39.10	4.658	91.00	1.031	130.00	1.961	188.95	.740	255.00	51.317
50.00	14.973	92.00	1.243	135.05	1.828	191.95	1.301	256.00	7.463
51.00	56.532	93.00	6.582	137.05	.565	193.05	1.147	258.00	3.241
52.00	2.697	98.05	4.505	140.95	2.780	195.95	2.992	264.95	.989
56.05	2.049	98.95	3.989	147.05	1.326	198.00	100.000	273.05	1.388
57.05	4.862	100.95	2.061	147.95	2.838	199.00	6.441	273.95	4.193
61.95	.906	103.95	1.330	154.95	1.301	204.00	3.059	275.05	22.856
63.05	1.986	105.05	1.263	156.10	1.820	205.00	4.866	276.05	2.689
65.05	1.247	106.95	16.589	161.00	1.351	206.00	21.696	276.95	1.966
68.95	77.560	107.95	2.419	166.00	.736	207.00	3.233	296.00	6.271
74.00	5.298	109.95	33.128	167.00	4.563	217.00	6.075	323.10	1.945
75.00	9.026	110.95	4.687	168.00	1.991	221.05	5.469	334.00	1.442
76.10	2.689	116.10	.889	174.00	.848	223.05	1.188	365.00	2.805
77.10	53.968	117.00	11.586	175.00	1.695	224.05	13.368	372.00	.989
78.10	3.960	118.00	.902	178.95	3.885	225.05	2.971	423.00	5.103
79.00	4.072	122.00	.823	180.05	2.319	227.05	4.808	424.05	1.085
80.00	2.971	123.00	1.949	181.05	1.114	228.95	1.126	441.05	10.821
81.00	4.496	125.00	.715	185.05	1.732	244.00	9.724	442.05	76.928
82.00	1.147	127.00	48.620	186.05	13.618	245.10	1.355	443.05	17.054
85.00	.819	128.00	3.715	187.05	3.453	246.00	1.999	444.05	1.554
86.00	1.313	129.00	22.241						

005149

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

005150

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

165

SBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 1/87 Rev.

005151

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK

166

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 1000. (g/mL) ML Lab File ID: E276C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0000

Number TICs Found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	931-17-9	1,2-Cyclohexanediol (8CI,9CI)	10.88	10.	J
2.					
3.					
4.					
5.					
6.					
7.					
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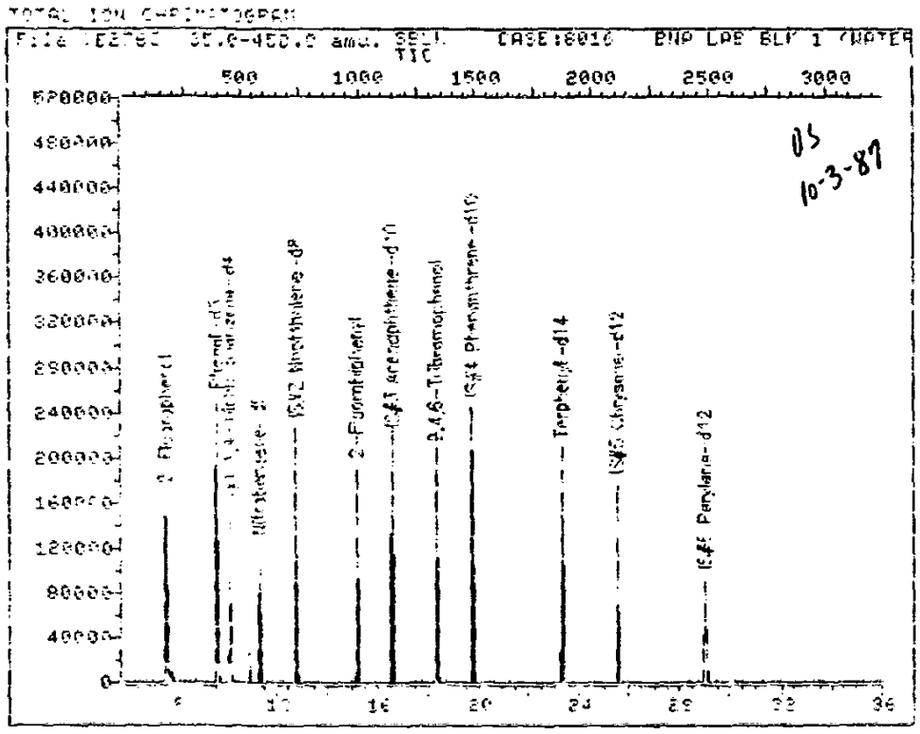
005152

FORM I SV-TIC 1/87 Rev.



DS
10-3-87

005153

Data File: :E276C::D3 Quant Output File: ^E276C::QT
Name: SAU CASE:8016
Misc: BNP LAB BLK 1 (WATER) 370ME5 INST 7002E BTL# 1

Id File: IS_SU::D8
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

Operator ID: SAUDY
Quant Time: 871003 10:56
Injected at: 871003 10:17

QUANT REPORT

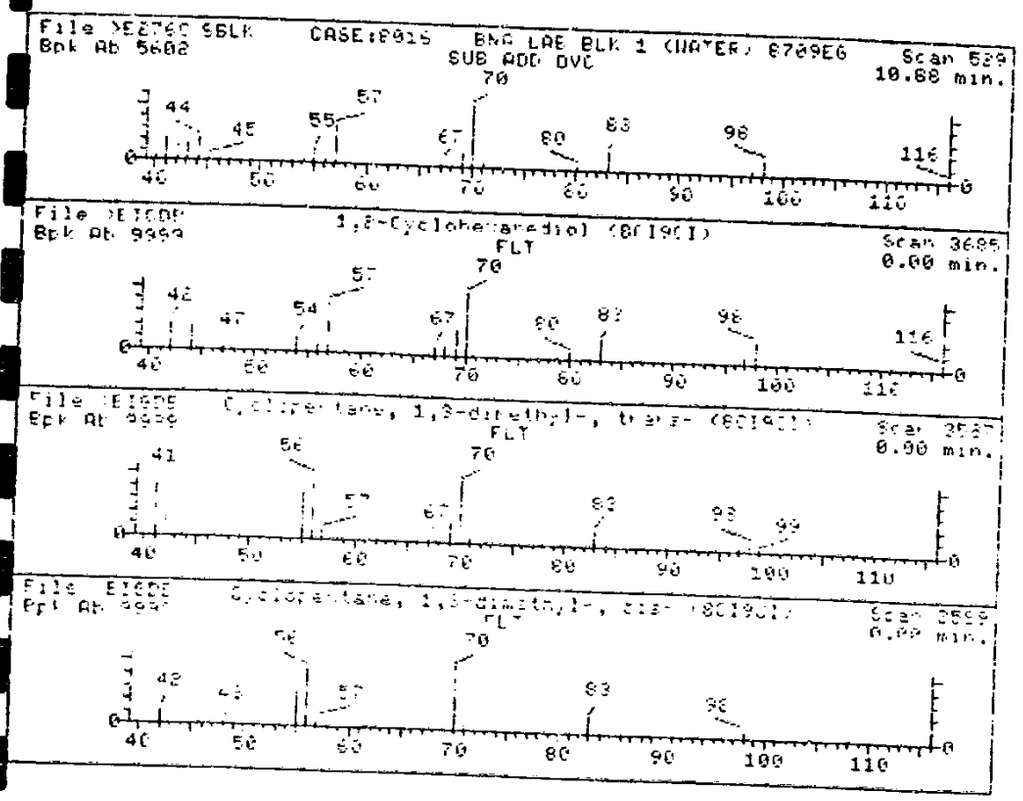
Operator ID: SAVOY Quant Rev: 6 Quant Time: 871003 10:56
Output File: ^E276C::OT Injected at: 871003 10:17
Data File: >E276C::D3 Dilution Factor: 1.00000
Name: SBLK CASE:8016
Misc: BNA LAB BLK 1 (WATER) 8709EG INST 7002E BTL# 1

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.09	152.1	54986	40.00	ng/ul	97
2)	Phenol-d5	5.56	99.0	188973	91.03	ng/ul	58
3)	2-Fluorophenol	7.55	112.0	135661	79.26	ng/ul	60
16)	*IS#2 Naphthalene-d8	12.77	136.1	188193	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.31	82.1	82135	38.60	ng/ul	79
31)	*IS#3 Acenaphthene-d10	16.56	164.2	101289	40.00	ng/ul	99
35)	2-Fluorobiphenyl	15.15	172.1	108988	33.49	ng/ul	87
51)	2,4,6-Tribromophenol	18.23	329.7	54068	79.36	ng/ul	77
52)	*IS#4 Phenanthrene-d10	19.73	188.2	188937	40.00	ng/ul	91
62)	*IS#5 Chrysene-d12	25.51	240.2	148440	40.00	ng/ul	96
64)	Terphenyl-d14	23.24	244.2	136041	42.70	ng/ul	96
70)	*IS#6 Perylene-d12	28.97	264.2	126032	40.00	ng/ul	100

* Compound is ISTD

005154



Unknown #.1
Area = 52996.00 Tentative Concentration is 0.00

1. 1,2-Cyclohexanediol (8CI9CI) — 116 C6H12O2
2. Cyclopentane, 1,3-dimethyl-, trans- (8CI9CI) — 98 C7H14
3. Cyclopentane, 1,3-dimethyl-, cis- (8CI9CI) — 98 C7H14
4. 2-Propenal, 2-methyl- (9CI) — 70 C4H6O
5. 2-Butenal (9CI) — 70 C4H6O

Sample file: >E276C Spectrum #: 529
Search speed: 1 Tilting option: S No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLS	TILT	%	CON	C_I	R_IV
1.	59*	931179	3685	"BIGDB	56	57	2	0	52	23	27	33
2.	25*	1759586	3587	"BIGDB	25	77	3	0	103	41	8	13
3.	24*	2532583	3589	"BIGDB	23	83	3	0	100	41	8	12
4.	11*	78853	3492	"BIGDB	23	65	3	0	120	61	2	12
5.	11*	4170303	3484	"BIGDB	22	72	3	0	129	61	2	12

005155

MS data file header from : >E276C

Sample: SBLK CASE:8016 Operator: SAUDY MS 10/03/87 10:17
Misc : BNA LAB BLK 1 (WATER) 8709EG INST 7002E BTL# 1
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: MSDBNA Tuning file: MTDFTP No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures : 35. 300. 0. 0. 0.
Chromatographic times, min. : 4.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 12.0 0.0 0.0 1.0 0.0

>E276C SBLK CASE:8016 BNA LAB BLK 1 (WATER) 8709EG INST 7002E

35.01 450.0 CLP ADF TIC
Upslope: .02 Area Reject: 31962. Max Peaks: 1 Bunching: 1
Dnslope: 0.00 Results File IE276C Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	10.83	525	529	539	27068	52996	52996	100.00	100.000

Sum of corrected areas: 52996.

Summary of Unknowns PEN Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	40.0	354021.	10.09	8.99 - 11.43
2	40.0	431862.	12.77	11.43 - 14.67
3	40.0	457145.	16.56	14.67 - 18.15
4	40.0	502016.	19.73	18.15 - 22.62
5	40.0	410478.	25.51	22.62 - 27.24
6	40.0	356982.	28.97	27.24 - 35.01

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = .99
Amount Method (AM) = 1000.00 Amount Used (AU) = 1000.00

Correction Factor = 1.01 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

9:49 AM MON., 5 OCT., 1987

005156

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

171

SBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E279C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 10/ 5/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/ 6/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

005157

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

172

SBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E279C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 10/ 5/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/ 6/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

005158

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

173

SBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E279C

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 10/ 5/87

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/ 6/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0000

Number TICs Found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	7.07	70.	J
2.	930-68-7	2-Cyclohexen-1-one (8CI9CI)	8.67	20.	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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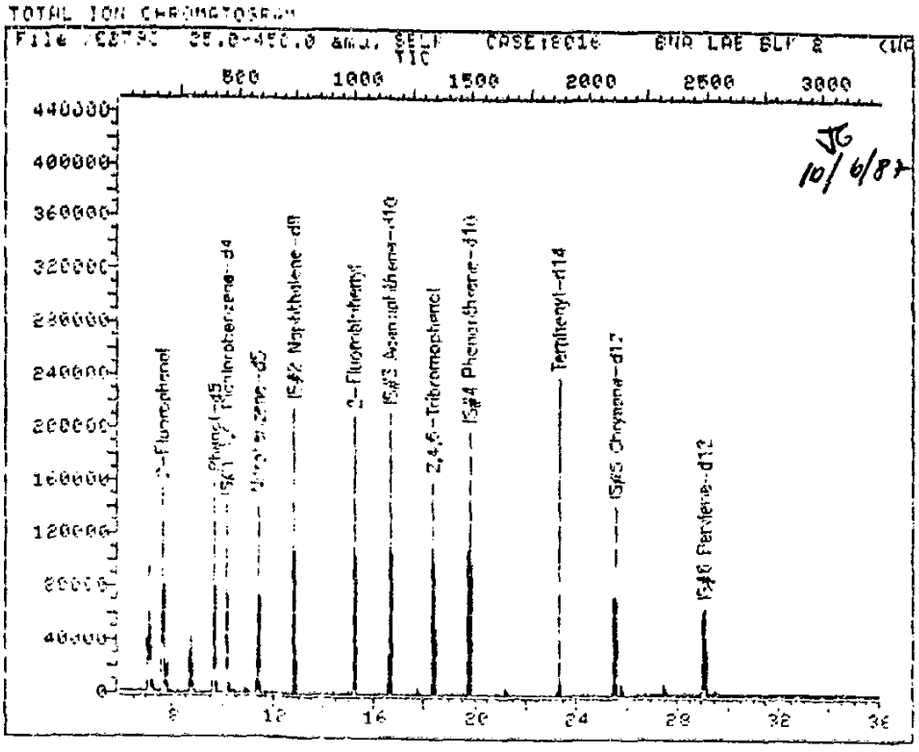
005159

FORM I SV-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



JG 10/6/87

005160

Data File: ^E279C::02 Quant Output File: ^E279C::QT
Name: SBLK CASE:8016
Misc: BNA LAB BLK 2 (WATER) 8709EG INST 7002E BTL# 1

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871006 10:59

Operator ID: JEANNETTE
Quant Time: 871006 11:34
Injected at: 871006 10:55

QUANT REPORT

Operator ID: JEANNETTE
Output File: ^E279C::QT
Data File: >E279C::D3
Name: SBLK CASE:8016
Misc: BNA LAB BLK 2 (WATER) 8709EG INST 7002E BTL# 1

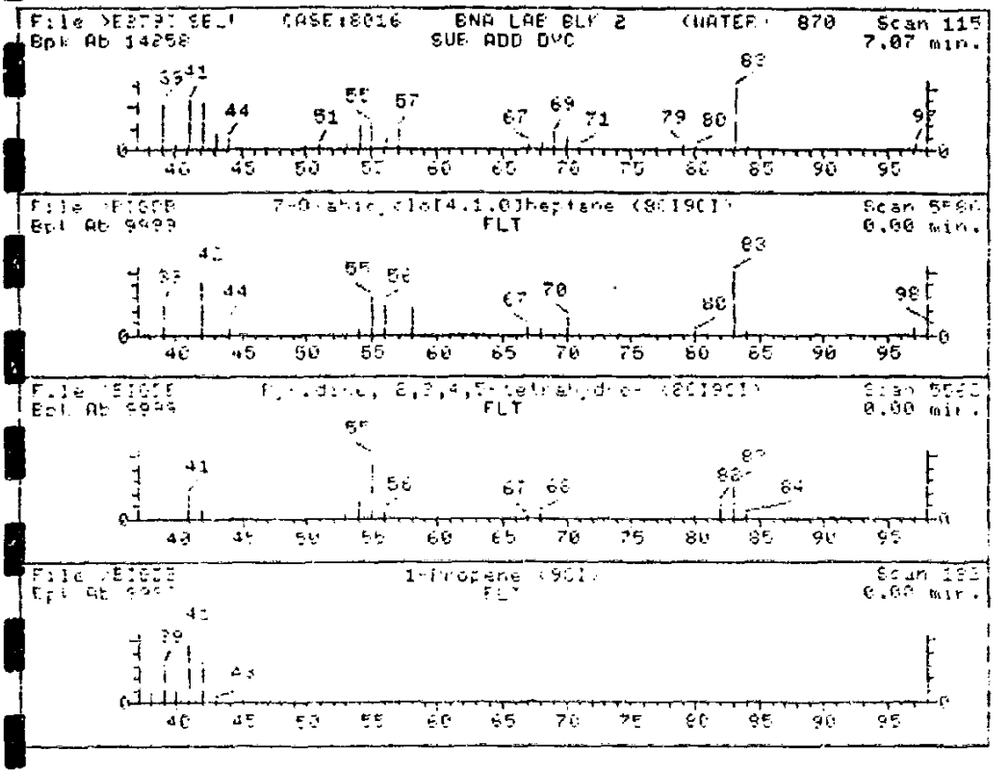
Quant Rev: 6 Quant Time: 871006 11:34
Injected at: 871006 10:55
Dilution Factor: 1.00000

ID File: IC_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871006 10:55

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.12	152.1	53626	40.00	ng/ul	99
2)	Phenol-d5	9.60	99.0	121571	58.19	ng/ul	59
3)	2-Fluorophenol	7.59	112.0	129602	75.55	ng/ul	63
16)	*IS#2 Naphthalene-d8	12.80	136.1	179587	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.34	82.1	96008	44.47	ng/ul	79
31)	*IS#3 Acenaphthene-d10	16.60	164.2	89507	40.00	ng/ul	97
35)	2-Fluorobiphenyl	15.18	172.1	121991	42.93	ng/ul	90
51)	2,4,6-Tribromophenol	18.32	329.7	38761	73.15	ng/ul	93
52)	*IS#4 Phenanthrene-d10	19.77	188.2	155425	40.00	ng/ul	90
62)	*IS#5 Chrysene-d12	25.54	240.2	120842	40.00	ng/ul	97
64)	Terphenyl-d14	23.30	244.2	141431	50.44	ng/ul	95
70)	*IS#6 Perylene-d12	29.04	264.2	87876	40.00	ng/ul	100

* Compound is ISTD

005161



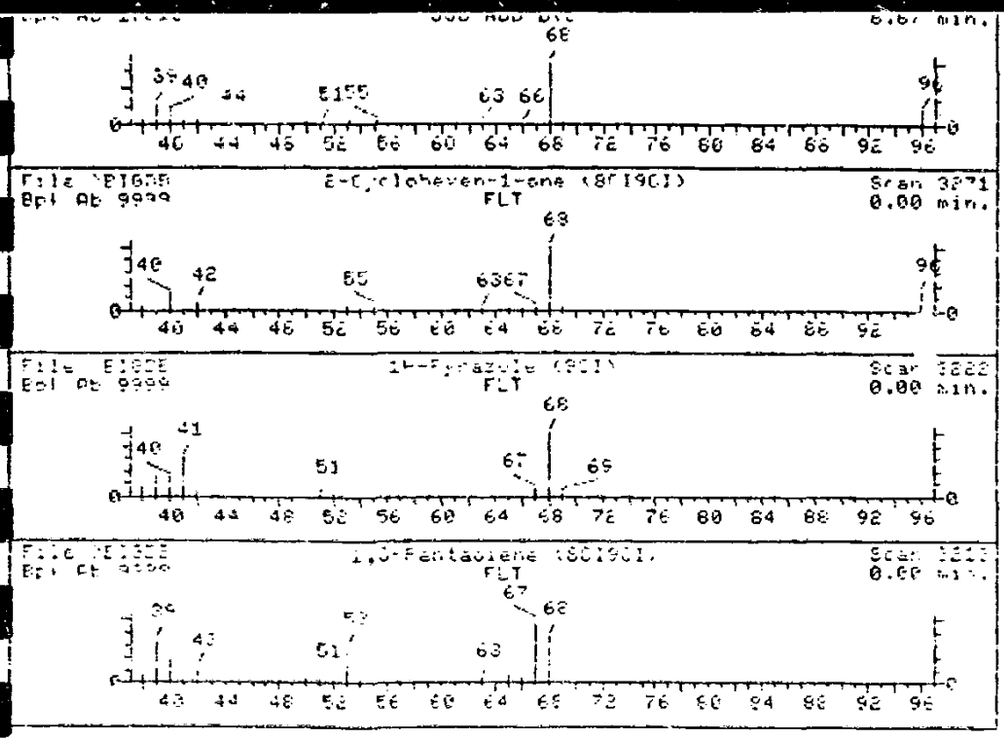
Unknown #.1
Area = 311984.0 Tentative Concentration is 36.00

1. 7-Oxabicyclo[4.1.0]heptane (8C19C1) 98 C6H10O
2. Pyridine, 2,3,4,5-tetrahydro- (8C19C1) 83 C5H9N
3. 1-Propene (9C1) 42 C3H6

Sample file: >E279C Spectrum #: 115
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	41	286204	5586	"BIGDB	72	43	3	0	68	24	17	12
2.	25*	505180	5562	"BIGDB	38	55	2	0	162	46	7	18
3.	15*	115071	182	"BIGDB	21	58	2	0	80	58	3	13

005162



005163

Unknown #.2
Area = 104690.0 Tentative Concentration is 12.00

1. 2-Cyclohexen-1-one (8CI9CI) 96 C6H8O
2. 1H-Pyrazole (9CI) 68 C3H4N2
3. 1,3-Pentadiene (8CI9CI) 68 C5H8
4. Furan (8CI9CI) 68 C4H4O

Sample file: BIGDB Spectrum #: 288
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IU
1.	98*	930497	3271	"BIGDB	64	21	2	0	83	5	65	53
2.	43*	289131	3222	"BIGDB	29	63	2	0	72	23	17	14
3.	15*	504609	3213	"BIGDB	36	52	2	0	46	60	3	18
4.	15*	110009	3221	"BIGDB	21	51	1	0	50	60	3	14

MS data file header from : >E279C

Sample: SBLK CASE:8016 Operator: JEANNETTE MS 10/06/87 10:55
Misc : BNA LAB BLK 2 (WATER) 8709EG INST 7002E ETL# 1
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: MSDBNA Tuning file: MTDFTP No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures :	35.	300.	0.	0.	0.
Chromatographic times, min. :	4.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	12.0	0.0	0.0	1.0	0.0

>E279C SBLK CASE:8016 BNA LAB BLK 2 (WATER) 8709EG INST

35.0 450.0 ULF ADC TIC
Upslope: .02 Area Reject: 22395. Max Peaks: 2 Bunching: 1
Dnslope: 0.0 Results File IE279C Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	7.07	105	116	128	93620	326099	311984	100.00	74.875
2	8.67	284	289	301	40730	111102	104696	33.56	25.125

Sum of corrected areas: 416674.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	40.0	349039.	10.12	6.01 - 11.46
2	40.0	411780.	12.80	11.46 - 14.70
3	40.0	403958.	16.60	14.70 - 18.19
4	40.0	427454.	19.77	18.19 - 22.66
5	40.0	337725.	25.54	22.66 - 27.29
6	40.0	248836.	29.04	27.29 - 36.05

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = .99
Amount Method (AM) = 1000.00 Amount Used (AU) = 1000.00

Correction Factor = 1.01 = (AM / AU) / (DF * FS)

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

8:08 AM WED., 7 OCT., 1987

005164

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MS

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E276K

Level: (low/med) LOW Date Received: ~~8/12/87~~ 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	140.	
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	140.	
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	73.	
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	71.	
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	88.	
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	130.	
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

005165

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

180

FD272MS

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E276K

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

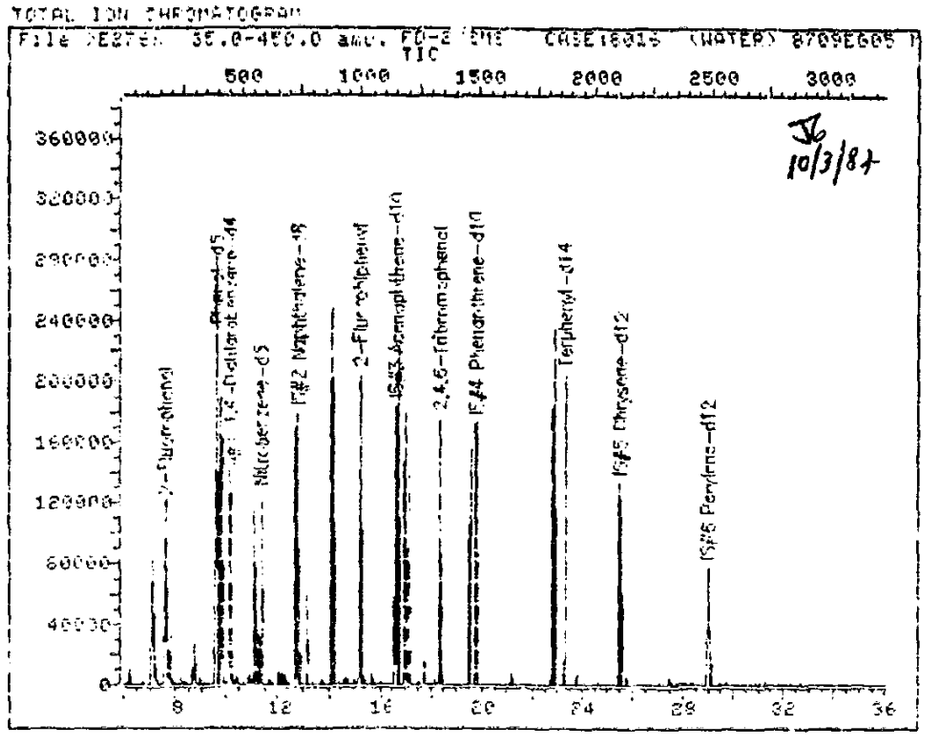
GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	94.	
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	190.	
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	85.	
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	120.	
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	110.	
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

005166

TOTAL ION CHROMATOGRAM



Data File: >E276K::D3 Quant Output File: >E276K::QT
Name: FD-272MS CASE:8016
Misc: (WATER) 8709EG05 MAT.SP. INST 7002E BTL# 9

Id File: ID_SU::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

Operator ID: SHUOY
Quant Time: 871003 17:22
Injected at: 871003 16:43

005167

QUANT REPORT

Operator ID: SAVOY
Output File: ^E276K::QT
Data File: >E276K::D3
Name: FD-272MS CASE:8016
Misc: (WATER) 8709EG05 MAT.SP. INST 7002E

Quant Rev: 6
Quant Time: 871003 17:22
Injected at: 871003 16:43
Dilution Factor: 1.00000

BTL# 9

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.11	445	45556	40.00	ng/ul	99
2)	Phenol-d5	9.58	388	137950	80.21	ng/ul	59
3)	2-Fluorophenol	7.56	170	107473	75.78	ng/ul	73
4)	Phenol	9.60	390	154323	72.43	ng/ul	100
5)	2-Chlorophenol	9.74	406	117693	70.45	ng/ul	94
8)	1,4-Dichlorobenzene	10.13	448	63708	36.53	ng/ul	99
13)	N-Nitroso-di-n-propylamine	11.11	553	49391	35.32	ng/ul	71
16)	*IS#2 Naphthalene-d8	12.78	733	152217	40.00	ng/ul	98
17)	Nitrobenzene-d5	11.32	576	82936	48.18	ng/ul	77
25)	1,2,4-Trichlorobenzene	12.71	726	58749	44.22	ng/ul	92
29)	4-Chloro-3-methylphenol	14.09	875	89485	62.63	ng/ul	99
31)	*IS#3 Acenaphthene-d10	16.58	1143	78957	40.00	ng/ul	99
35)	2-Fluorobiphenyl	15.17	991	114225	45.01	ng/ul	93
42)	Acenaphthene	16.64	1150	111145	47.12	ng/ul	99
45)	4-Nitrophenol	16.96	1184	40847	94.67	ng/ul	97
46)	2,4-Dinitrotoluene	17.11	1200	46726	42.61	ng/ul	78
51)	2,4,6-Tribromophenol	18.29	1328	38339	72.19	ng/ul	88
52)	*IS#4 Phenanthrene-d10	19.74	1484	141697	40.00	ng/ul	92
57)	Pentachlorophenol	19.49	1457	35895	61.40	ng/ul	96
62)	*IS#5 Chrysene-d12	25.51	2107	114059	40.00	ng/ul	98
63)	Pyrene	22.86	1821	213971	53.50	ng/ul	98
64)	Terphenyl-d14	23.27	1865	130292	52.72	ng/ul	97
70)	*IS#6 Perylene-d12	28.99	2482	99862	40.00	ng/ul	100

* Compound is ISTD

005168

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MSD

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E276L

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	130.	
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	130.	
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	69.	
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	73.	
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	79.	
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	110.	
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

005169

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MSD

184

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: FD211

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

Sample wt/vol: 500. (g/mL) ML Lab File ID: E276L

Level: (low/med) LOW Date Received: 9/12/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/ 3/87

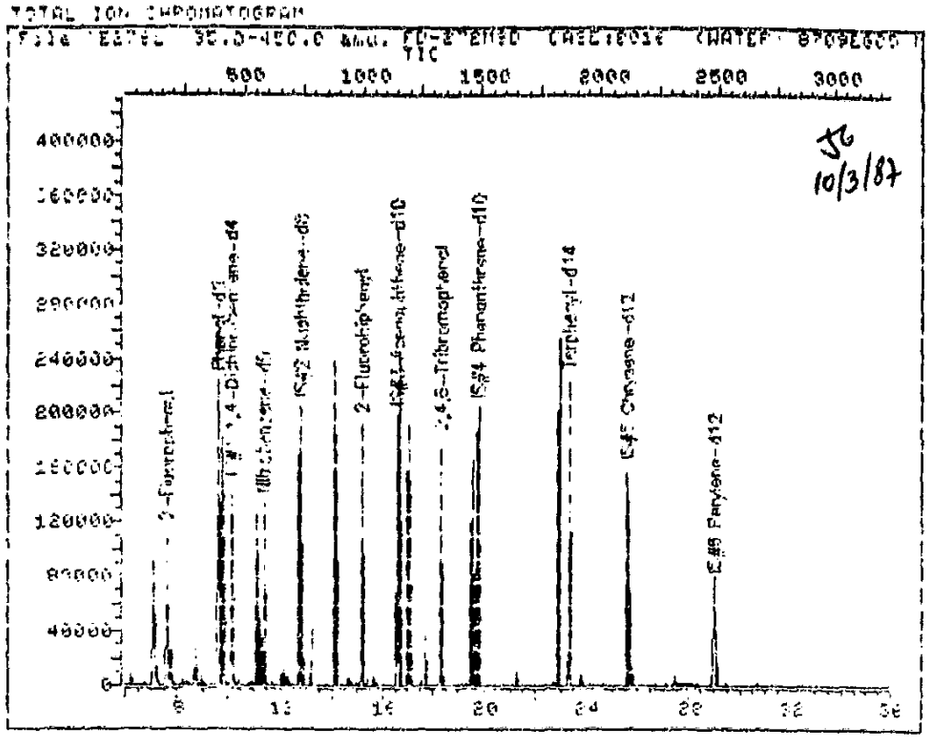
GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 2.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	93.	
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	190.	
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	88.	
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine (1)	50.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	120.	
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	110.	
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U
53-70-3	Dibenz(a,h)anthracene	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U

(1) - Cannot be separated from diphenylamine

005170

TOTAL ION CHROMATOGRAM



Date File: :E276L::D3 Quant Output File: ^E276L::D3
Name: FD-272MSD CASE:8016
Misc: (WATER) 8709EG05 MAT.SP.DUP. INST 7002E BTL#10

Id File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

Operator ID: SAUDY
Quant Time: 871003 18:11
Injected at: 871003 17:32

005171

QUANT REPORT

Operator ID: SAUDY Quant Rev: 6 Quant Time: 871003 18:11
Output File: ^E276L::QT Injected at: 871003 17:32
Data File: >E276L::D3 Dilution Factor: 1.00000
Name: FD-272MSD CASE:8016
Misc: (WATER) 8709EG05 MAT.SP.DUP. INST 7002E BTL#10

ID File: ID_SV::DB
Title: HSL SEMI-VOLATILE ORGANIC ANALYSIS MAY86
Last Calibration: 871003 10:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*IS#1 1,4-Dichlorobenzene-d4	10.11	445	48841	40.00	ng/ul	98
2)	Phenol-d5	9.58	388	129558	70.26	ng/ul	58
3)	2-Fluorophenol	7.57	171	100182	65.89	ng/ul	72
4)	Phenol	9.60	390	144880	63.43	ng/ul	100
5)	2-Chlorophenol	9.74	406	115365	64.41	ng/ul	95
8)	1,4-Dichlorobenzene	10.13	448	64062	34.27	ng/ul	95
13)	N-Nitroso-di-n-propylamine	11.11	553	54701	36.49	ng/ul	70
16)	*IS#2 Naphthalene-d8	12.79	734	169622	40.00	ng/ul	97
17)	Nitrobenzene-d5	11.32	576	88449	46.11	ng/ul	78
25)	1,2,4-Trichlorobenzene	12.71	726	58188	39.30	ng/ul	99
29)	4-Chloro-3-methylphenol	14.09	875	86838	54.54	ng/ul	94
31)	*IS#3 Acenaphthene-d10	16.58	1143	86321	40.00	ng/ul	96
35)	2-Fluorobiphenyl	15.17	991	107645	38.80	ng/ul	90
42)	Acenaphthene	16.64	1150	119819	46.46	ng/ul	97
45)	4-Nitrophenol	16.96	1184	44660	94.68	ng/ul	98
46)	2,4-Dinitrotoluene	17.11	1200	53019	44.23	ng/ul	81
51)	2,4,6-Tribromophenol	18.29	1328	39660	68.31	ng/ul	91
52)	*IS#4 Phenanthrene-d10	19.75	1485	156385	40.00	ng/ul	90
57)	Pentachlorophenol	19.49	1457	39266	60.85	ng/ul	97
62)	*IS#5 Chrysene-d12	25.51	2107	125512	40.00	ng/ul	99
63)	Pyrene	22.86	1821	242746	55.16	ng/ul	99
64)	Terphenyl-d14	23.27	1865	142893	52.55	ng/ul	98
70)	*IS#6 Perylene-d12	28.98	2481	109472	40.00	ng/ul	100

* Compound is ISTD

005172

PESTICIDE/PCB DATA

005173

PESTICIDE/PCB

QC SUMMARY

005174

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ F0211

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
1	PBLK	89	
2	FD273	91	
3	FD610	89	
4	FD272	104	
5	FD272MS	130	
6	FD272MSD	117	

ADVISORY QC LIMITS
~~(20-150)~~ 24-154 DB 10/12/87

S1 (DBC) = Dibutylchlorendate

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II PEST-1 1/87 Rev.

005175

3E
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Matrix Spike - EPA Sample No.: FD272

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	.20	.00	.29	146. *	56-123
Heptachlor	.20	.00	.24	118.	40-131
Aldrin	.20	.00	.13	65.	40-120
Dieldrin	.50	.00	.00	0. *	52-126
Endrin	.50	.00	.00	0. *	56-121
4,4'-DDT	.50	.00	.52	104.	38-127

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	.20	.30	150. *	3.	15	56-123
Heptachlor	.20	.22	109.	8.	20	40-131
Aldrin	.20	.16	79.	20.	22	40-120
Dieldrin	.50	.14	28. *	200. *	18	52-126
Endrin	.50	.00	0. *	*#NA	21	56-121
4,4'-DDT	.50	.53	107.	2.	27	38-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 1 out of 6 outside limits
Spike Recovery: 6 out of 12 outside limits

COMMENTS:

FORM III PEST-1 1/87 Rev.

005176

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.:

SDG No.: ~~FD272~~ FD611 10/9/87 kk

Lab Sample ID: Extraction Blank

Lab File ID: SEP2813

Matrix: (soil/water) WATER

Level:(low/med) LOW

Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed (1): 9/28/87

Date Analyzed (2): 10/ 2/87

Time Analyzed (1): 23: 9

Time Analyzed (2): 16:16

Instrument ID (1): 5890D

Instrument ID (2): 5880B

GC Column ID (1): MIXED

GC Column ID (2): SP2100

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	FD273	8709E606	9/28/87	
2	FD610	8709E611	9/29/87	
3	FD272	8709E604	9/29/87	10/ 2/87
4	FD272MS	8709E604MS	9/29/87	10/ 2/87
5	FD272MSD	8709E604MSD	9/29/87	10/ 2/87

Comments:

page 1 of 1

FORM IV PEST

1/87 Rev.

005177

PESTICIDE/PCB

SAMPLE DATA

005178

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~ED272~~ FD211

Matrix: (soil/water) WATER

Lab Sample ID: 8709EG0N 10/9/87

Sample wt/vol: 1000. (g/mL)ML

Lab File ID: SEP2917

Level: (low/med) LOW

Date Received: ~~9/14/87~~ 9/12/87

% Moisture: not dec. 0. dec. 0.

10/9/87

Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 9/29/87

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

Dilution factor: 1.0000

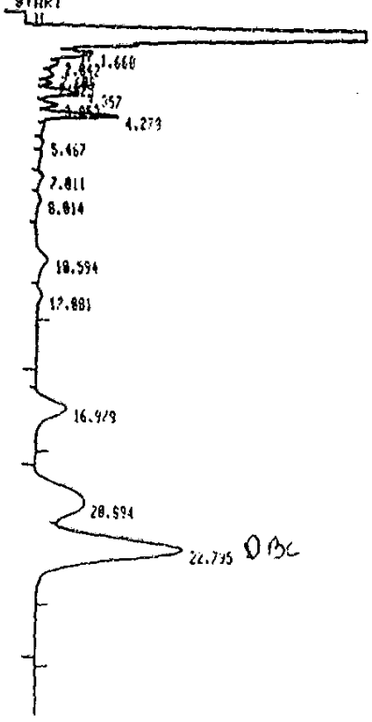
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.05	U
76-44-8	Heptachlor	.05	U
309-00-2	Aldrin	.05	U
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.05	U
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.1	U
1031-07-8	Endosulfan sulfate	.05	U
50-29-3	4,4'-DDT	.1	U
72-43-5	Methoxychlor	.1	U
53494-70-5	Endrin ketone	.5	U
5103-71-9	alpha-Chlordane	.1	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	.5	U
12674-11-2	Aroclor-1016	1.	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	.5	U
11096-82-5	Aroclor-1260	1.	U
		1.	U

005179

FORM I PEST

1/87 Rev.

RUN # 110 SEP 29, 1987 01:16:04
START



STOP

Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

RUN# 110 SEP 29, 1987 01:16:04

SAMPLE NAME: FD272 SAMPLE# 17
8709EG04

IDENTIFIER : RF 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.660	29474	BP	.222	1.65684
2.042	4744	PP	.233	.26666
2.609	7390	PP	.202	.41542
2.925	5016	PP	.134	.28188
3.357	53204	PP	.264	2.99530
3.857	17296	PV	.206	.97227
4.279	96915	VV	.224	5.44796
5.467	6366	PV	.332	.35784
7.011	11338	PV	.390	.63735
8.014	11808	VP	.508	.66327
10.594	56309	PV	.842	3.16534
12.881	18756	VB	.589	1.05475
16.979	140379	PB	.829	7.89073
20.894	383404	PV	1.393	21.55259
22.795	936365	VB	1.127	52.63662

TOTAL AREA=1778923
NUL FACTOR=1.0000E+00

005180

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD273

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211

Matrix: (soil/water) WATER Lab Sample ID: 8109EG06 10/9/87

Sample wt/vol: 1000. (g/mL)ML Lab File ID: SEP2814

Level: (low/med) LOW Date Received: ~~9/14/87~~ 9/12/87 10/9/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

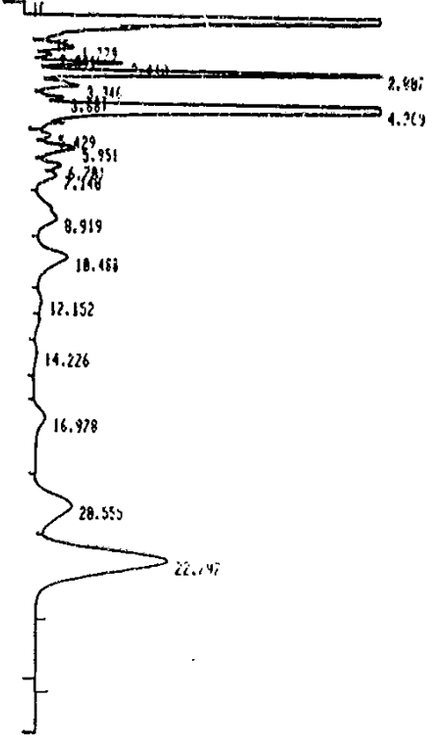
Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 9/28/87

GPC Cleanup: (Y/N) N pH: 7.3 Dilution factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.05	U
76-44-8	Heptachlor	.05	U
309-00-2	Aldrin	.05	U
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.05	U
1031-07-8	Endosulfan sulfate	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	Methoxychlor	.5	U
53494-70-5	Endrin ketone	.1	U
5103-71-9	alpha-Chlordane	.5	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	1.	U
12674-11-2	Aroclor-1016	.5	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	1.	U
11096-82-5	Aroclor-1260	1.	U

005181

RUN # 107 SEP 28, 1987 23141:02
START



STOP

Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

RUN# 107 SEP 28, 1987 23:41:02

SAMPLE NAME: FD273 SAMPLE# 11
8709EG06

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.779	40567	BV	.255	1.17166
2.091	7263	VP	.134	.20977
2.410	64649	PV	.143	1.86721
2.807	339090	VV	.182	9.79298
3.346	55450	VP	.267	1.60152
3.881	21113	PV	.184	.60979
4.269	1356848	VB	.308	39.18877
5.429	12955	BV	.243	.37417
5.951	69573	VV	.367	2.00912
6.701	41621	VV	.346	1.20211
7.140	41558	VP	.406	1.20029
8.919	104638	PV	.935	3.02218
10.488	141321	VV	.813	4.08140
12.152	30766	VV	.784	.88859
14.226	15298	VP	.794	.44184
16.978	68036	VV	1.042	1.96593
20.555	238292	VV	1.171	6.88240
22.797	813293	VB	1.119	23.48973

TOTAL AREA=3462339
MUL FACTOR=1.0000E+00

005182

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD610

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD611 10/9/87

Matrix: (soil/water) WATER Lab Sample ID: 8109EG11

Sample wt/vol: 1000. (g/mL)ML Lab File ID: SEP2915

Level: (low/med) LOW Date Received: ~~9/14/87~~ 9/12/87 10/9/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

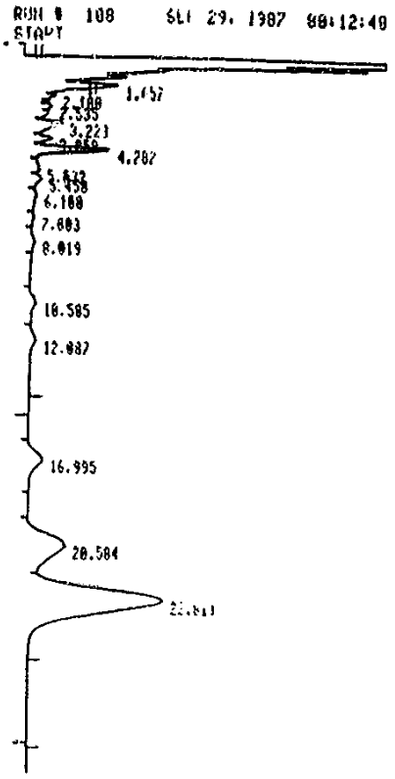
Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 9/29/87

GPC Cleanup: (Y/N) N pH: 8.4 Dilution factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.05	U
76-44-8	Heptachlor	.05	U
309-00-2	Aldrin	.05	U
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.05	U
1031-07-8	Endosulfan sulfate	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	Methoxychlor	.5	U
53494-70-5	Endrin ketone	.1	U
5103-71-9	alpha-Chlordane	.5	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	1.	U
12674-11-2	Aroclor-1016	.5	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	1.	U
11096-82-5	Aroclor-1260	1.	U

005183

RUN # 108 SEP 29, 1987 08:12:48



Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

RUN# 108 SEP 29, 1987 08:12:48

SAMPLE NAME: FD618 SAMPLE# 15
8709EG11

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.657	48199	BP	.208	3.56875
2.535	6398	VV	.205	.47372
3.223	17238	PV	.154	1.27634
3.859	12678	VV	.187	.93871
4.282	81040	VP	.212	6.00037
5.032	7260	PV	.383	.53815
5.453	10536	VV	.302	.78026
6.108	6603	VP	.423	.48859
8.019	9514	PV	.452	.70444
10.585	20729	PV	.596	1.53482
12.087	26124	VB	.749	1.93428
16.995	65704	PV	.835	4.86496
20.584	235849	PV	1.168	17.46275
22.811	802701	VB	1.128	59.43388

TOTAL AREA=1350563
MUL FACTOR=1.0000E+00

005184

005185

PESTICIDE/PCB

STANDARDS DATA

005185

8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Instrument ID: 5890D GC Column ID: MIXED

Dates of Analyses: 9/28/87 to 9/29/87

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
Aldrin	2857576.	2997420.	3134810.	4.6	
Endrin	1203247.	1239242.	1277971.	3.0	
4,4'-DDT	1495236.	1629476.	1733642.	7.4	(1)
DBC	1729301.	1720879.	1736760.	.5	

(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					
1	EVAL MIX B	9/28/87	17:19	.00	4.00	
2	EVAL MIX B	9/29/87	0:44	.00	5.26	

(2) See Form instructions.

FORM VIII PEST-1 1/87 Rev.

005186

8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Instrument ID: 5880B GC Column ID: SP2100

Dates of Analyses: 10/ 2/87 to 10/ 2/87

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (</= 10.0%)	
Aldrin	1230373.	1281482.	1290633.	2.6	
Endrin	735389.	763467.	765399.	2.2	
4,4'-DDT	846425.	774714.	823667.	4.5	(1)
DBC	807551.	791810.	773250.	2.2	

(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					
1	EVAL MIX B	10/ 2/87	14:45			6.16
2	EVAL MIX B	10/ 2/87	17:53			5.83

(2) See Form instructions.

FORM VIII PEST-1 1/87 Rev.

005187

8E
PESTICIDE EVALUATION STANDARDS SUMMARY
Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Instrument ID: 5890D GC Column ID: MIXED

Dates of Analyses: 9/28/87 to 9/29/87

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
1	EVALA	Eval Mix A	9/28/87	16:47	.0	
2	EVALB	Eval Mix B	9/28/87	17:19	.1	
3	EVALC	Eval Mix C	9/28/87	17:51	.1	
4	INDA	Pest Mix A	9/28/87	18:23	.5	
5	INDB	Pest Mix B	9/28/87	18:54	.5	
6	TOXAPH	Toxaphene	9/28/87	19:26	.5	
7	AR1660	PCB 1016/1260	9/28/87	19:58	.5	
8	AR1221	PCB 1221	9/28/87	20:30	.5	
9	AR1232	PCB 1232	9/28/87	21: 2	.5	
10	AR1242	PCB 1242	9/28/87	21:34	.5	
11	AR1248	PCB 1248	9/28/87	22: 5	.5	
12	AR1254	PCB 1254	9/28/87	22:37	.5	
13	PBLK	Extraction blank	9/28/87	23: 9	.3	
14	FD273	8709E6CC	9/28/87	23:41	.3	
15	FD610	8709E011	9/29/87	0:12	.3	
16	EVALB	Eval Mix B	9/29/87	0:44	.2	
17	FD272	8709E6C4	9/29/87	1:16	.3	
18	FD272MS	8709E6C4MS	9/29/87	1:47	.4	
19	FD272MSD	8709E6C4MSD	9/29/87	2:19	.4	
20	INDA	Pest A	9/29/87	2:51	.3	
21	INDB	Pest B	9/29/87	3:22	.3	

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

FORM VIII PEST-2 1/87 Re

005188

8E

PESTICIDE EVALUATION STANDARDS SUMMARY

Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Instrument ID: 5880B

GC Column ID: SP2100

Dates of Analyses: 10/ 2/87 to 10/ 2/87

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
1	EVALA	Eval Mix A	10/ 2/87	14:16	.0	
2	EVALB	Eval Mix B	10/ 2/87	14:45	.0	
3	EVALC	Eval Mix C	10/ 2/87	15:14	.0	
4	INDA	Pest Mix A	10/ 2/87	15:44	.3	
5	PBLK	Extraction Blank	10/ 2/87	16:16	.2	
6	~~FD272~~		~~10/ 2/87~~	~~16:47~~	~~1.0~~	MCR 10/5/87 see narrative
7	FD272MS	8709EG04MS	10/ 2/87	16:48	.0	
8	FD272MSD	8709EG04MSD	10/ 2/87	17:20	.1	
9	EVALB	Eval Mix B	10/ 2/87	17:53	.1	
10	INDA	Pest Mix A	10/ 2/87	18:25	.1	

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

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page 1 of 1

FORM VIII PEST-2

1/87 Rev.

204

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~ED272~~ FD211 10/9/87

Instrument ID: 5890 GC Column ID: MIXED

DATE(S) OF ANALYSIS	FROM:	9/28/87		DATE OF ANALYSIS	9/29/87			
	TO:	9/28/87		TIME OF ANALYSIS	2:51			
TIME(S) OF ANALYSIS	FROM:	18:23		EPA SAMPLE NO. (STANDARD)	INDA			
	TO:	22:37						

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC	2.18	2.16	2.20	2101660.	2.18	2101480.	Y	.0
beta-BHC	2.97	2.94	3.00	1409785.	2.96	1368985.	Y	2.9
delta-BHC	3.42	3.39	3.46	1886920.	3.42	1838160.	Y	2.6
gamma-BHC (Li	2.67	2.64	2.70	1880550.			Y	
Heptachlor	3.22	3.18	3.25	2406400.			Y	
Aldrin	3.83	3.79	3.86	2983720.	3.82	2839000.	Y	4.9
Hept. Epoxide	5.47	5.41	5.52	2319123.			Y	
Endosulfan I	6.78	6.71	6.84	2210410.			Y	
Dieldrin	8.15	8.07	8.23	2028176.			Y	
4,4'-DDE	7.64	7.56	7.71	1954895.	7.62	1856716.	Y	5.0
Endrin	9.80	9.70	9.90	1334553.	9.78	1394226.	Y	4.5
Endosulfan II	11.68	11.57	11.80	2347911.			Y	
4,4'-DDD	11.33	11.22	11.44	2269112.	11.30	2208376.	Y	2.7
Endo.Sulfate	17.74	17.56	17.92	1970973.			Y	
4,4'-DDT	13.55	13.41	13.68	1837808.	13.52	1795604.	Y	2.3
Methoxychlor	24.86	24.61	25.11	1262847.			Y	
Endrin ketone	24.08	23.84	24.33	2704152.	24.02	2661436.	Y	1.6
a. Chlordane	6.04	5.98	6.10	2596294.	6.03	2501720.	Y	3.6
g. Chlordane	6.54	6.48	6.61	2406734.	6.53	2297587.	Y	4.5
Toxaphene	11.91	11.79	12.03	168210.			Y	
Aroclor-1016	3.16	3.13	3.19	213068.			Y	
Aroclor-1221	2.04	2.01	2.06	69330.			Y	
Aroclor-1232	3.16	3.13	3.19	90964.			Y	
Aroclor-1242	3.15	3.12	3.19	172095.			Y	
Aroclor-1248	3.16	3.13	3.19	138156.			Y	
Aroclor-1254	8.36	8.28	8.44	217706.			Y	
Aroclor-1260	13.36	13.22	13.49	246457.			Y	

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 largest single 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

005190

005190

9

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Instrument ID: 5890 GC Column ID: MIXED

DATE(S) OF ANALYSIS	FROM:	9/28/87	DATE OF ANALYSIS	9/29/87			
	TO:	9/28/87	TIME OF ANALYSIS	3:22			
TIME(S) OF ANALYSIS	FROM:	18:23	EPA SAMPLE NO. (STANDARD)	INDB			
	TO:	22:37					

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC	2.18	2.16	2.20	2101660.			Y	
beta-BHC	2.97	2.94	3.00	1409785.			Y	
delta-BHC	3.42	3.39	3.46	1886920.			Y	
gamma-BHC (Li	2.67	2.64	2.70	1880550.	2.66	1853325.	Y	1.4
Heptachlor	3.22	3.18	3.25	2406400.	3.21	2357860.	Y	2.0
Aldrin	3.83	3.79	3.86	2983720.			Y	
Hept. Epoxide	5.47	5.41	5.52	2319123.	5.45	2178323.	Y	6.1
Endosulfan I	6.78	6.71	6.84	2210410.	6.76	2135450.	Y	3.4
Dieldrin	8.15	8.07	8.23	2028176.	8.13	1910224.	Y	5.8
4,4'-DDE	7.64	7.56	7.71	1954895.			Y	
Endrin	9.80	9.70	9.90	1334553.			Y	
Endosulfan II	11.68	11.57	11.80	2347911.	11.65	2226879.	Y	5.2
4,4'-DDD	11.33	11.22	11.44	2269112.			Y	
Endo.Sulfate	17.74	17.56	17.92	1970973.	17.69	2041096.	Y	3.6
4,4'-DDT	13.55	13.41	13.68	1837808.			Y	
Methoxychlor	24.86	24.61	25.11	1262847.	24.80	1273981.	Y	.9
Endrin ketone	24.08	23.84	24.33	2704152.			Y	
a. Chlordane	6.04	5.98	6.10	2596294.			Y	
g. Chlordane	6.54	6.48	6.61	2406734.			Y	
Toxaphene	11.91	11.79	12.03	168210.			Y	
Aroclor-1016	3.16	3.13	3.19	213068.			Y	
Aroclor-1221	2.04	2.01	2.06	69330.			Y	
Aroclor-1232	3.16	3.13	3.19	90964.			Y	
Aroclor-1242	3.15	3.12	3.19	172095.			Y	
Aroclor-1248	3.16	3.13	3.19	138156.			Y	
Aroclor-1254	8.36	8.28	8.44	217706.			Y	
Aroclor-1260	13.36	13.22	13.49	246457.			Y	

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 largest single 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

FORM IX PEST 1/87 Rev.

005191

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~ED272~~ FD411 10/9/87

Instrument ID: 5880 GC Column ID: SP2100

	DATE(S) OF ANALYSIS FROM: 10/ 2/87 TO: 10/ 2/87				DATE OF ANALYSIS 10/ 2/87			
	TIME(S) OF ANALYSIS FROM: 15:44 TO: 15:62				TIME OF ANALYSIS 18:25			
					EPA SAMPLE NO. (STANDARD) INDA			
COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC	1.83	1.81	1.85	1044500.			N	
beta-BHC	1.98	1.96	2.00	568897.			N	
delta-BHC	2.24	2.22	2.26	1189133.			N	
gamma-BHC (Li	2.24	2.22	2.26	0.			N	
heptachlor	2.24	2.22	2.26	0.			N	
Aldrin	4.23	4.19	4.27	1534033.			N	
Hept. Epoxide	4.23	4.19	4.27	0.			N	
Endosulfan I	4.23	4.19	4.27	0.			N	
Dieldrin	4.23	4.19	4.27	0.			N	
4,4'-DDE	7.58	7.50	7.66	1004772.			N	
Endrin	8.50	8.41	8.59	879219.			N	
Endosulfan II	8.50	8.41	8.59	0.			N	
4,4'-DDD	9.66	9.56	9.76	1146400.			N	
Endo.Sulfate	9.66	9.56	9.76	0.			N	
4,4'-DDT	12.59	12.46	12.72	845773.			N	
Methoxychlor	12.59	12.46	12.72	0.			N	
Endrin ketone	14.73	14.58	14.88	1096640.	14.71	1016033.	N	7.4
a. Chlordane	5.95	5.89	6.01	1220045.			N	
g. Chlordane	6.60	6.53	6.67	1115022.			N	
Toxaphene	6.60	6.53	6.67	0.			N	
Aroclor-1016	6.60	6.53	6.67	0.			N	
Aroclor-1221	6.60	6.53	6.67	0.			N	
Aroclor-1232	6.60	6.53	6.67	0.			N	
Aroclor-1242	6.60	6.53	6.67	0.			N	
Aroclor-1248	6.60	6.53	6.67	0.			N	
Aroclor-1254	6.60	6.53	6.67	0.			N	
Aroclor-1260	6.60	6.53	6.67	0.			N	

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 largest single 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

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO. 2017

FD272MS

Lab Name: EIRA

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Contract: 68-01-7414

GC Column ID (1): MIXED

GC Column ID (2): SP2100

Instrument ID (1): 5890D

Instrument ID (2): 5880B

Lab Sample ID: 8709EG2ms 04 mcn 10/2/87

Lab File ID:

(only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
1 Endrin ketone	Column 1	23.98	23.84	24.33	Y	N
2	Column 2	14.71	14.58	14.88	N	N

Comments:

page 1 of 1

FORM X PEST

1/87 Rev.

005193

10

PESTICIDE/PCB IDENTIFICATION

EPA SAMPLE NO.

FD272MSD

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87 AL

GC Column ID (1): MIXED

GC Column ID (2): SP2100

Instrument ID (1): 5890D

Instrument ID (2): 5880B

Lab Sample ID: 8709EG04MSD

Lab File ID:

(only if confirmed by GC/MS)

PESTICIDE/PCB	RETENTION TIME		RT WINDOW OF STANDARD FROM	TO	QUANT? (Y/N)	GC/MS? (Y/N)
1 Endrin ketone	Column 1	23.98	23.84	24.33	Y	N
2	Column 2	14.70	14.58	14.88	N	N

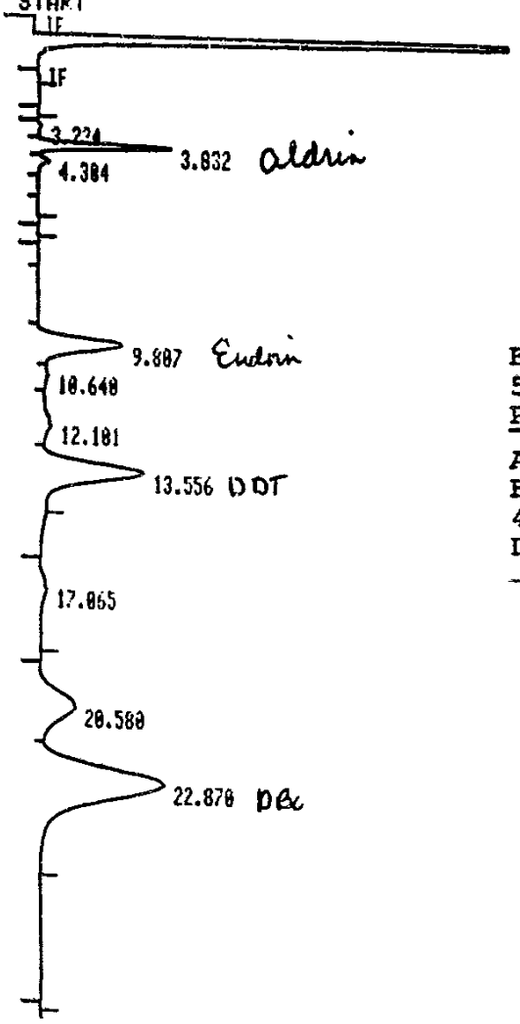
Comments:

FORM X PEST

1/87 Rev.

005194

RUN # 94 Sep 28, 1987 16:47:56



Instrument ID: INST D
Column: 1.5% SP-2250, 1.95% SP 240
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

Evaluation Mixes ng on Column
5 uL injection

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.033	0.067	0.100
Endrin	0.125	0.250	0.375
4,4'-DDT	0.167	0.333	0.500
DBC	0.333	0.666	1.000

005195

RUN# 94 SEP 28, 1987 16:47:56

SAMPLE NAME: EVAA SAMPLE# 1
Eval Mix A

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

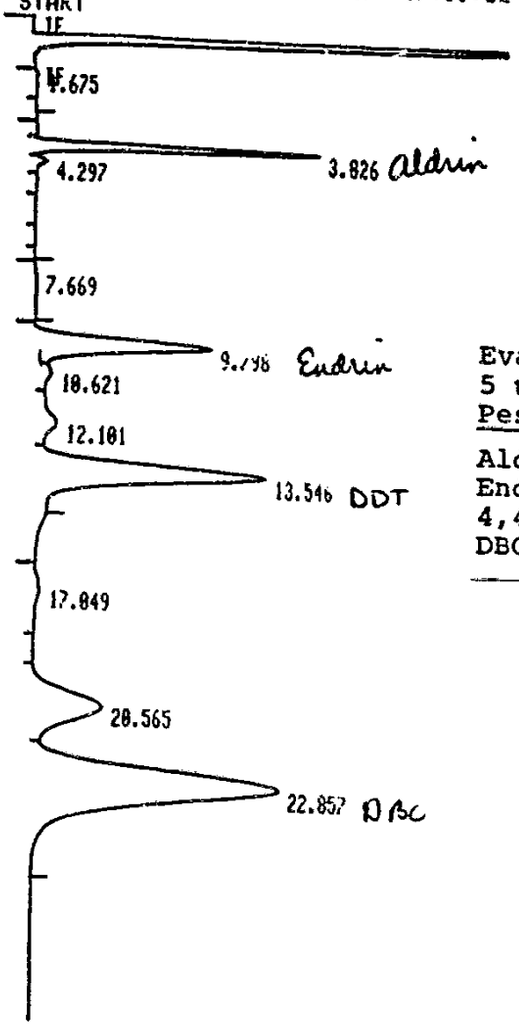
AREA%

RT	AREA	TYPE	WIDTH	AREA%
3.832	95243	PV	.177	7.37621
4.304	9095	VV	.211	.70437
9.807	152396	PV	.453	11.80250
10.640	16572	VV	.556	1.28314
12.101	33151	VV	.938	2.56742
13.556	249181	VB	.620	19.29814
17.065	20410	BB	.795	1.58063
20.580	136794	BV	.989	10.74900
22.870	576376	VB	1.151	44.63818

TOTAL AREA=1291218
MUL FACTOR=1.0000E+00

RUN # 95 SEP 28, 1987 17:19:32

START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Evaluation Mixes ng on Column
5 uL injection

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.033	0.067	0.100
Endrin	0.125	0.250	0.375
4,4'-DDT	0.167	0.333	0.500
DBC	0.333	0.666	1.000

005196

RUN# 95 SEP 28, 1987 17:19:32

SAMPLE NAME: EVALB SAMPLE# 2
Eval Mix B

IDENTIFIER : HP 5890 (D)

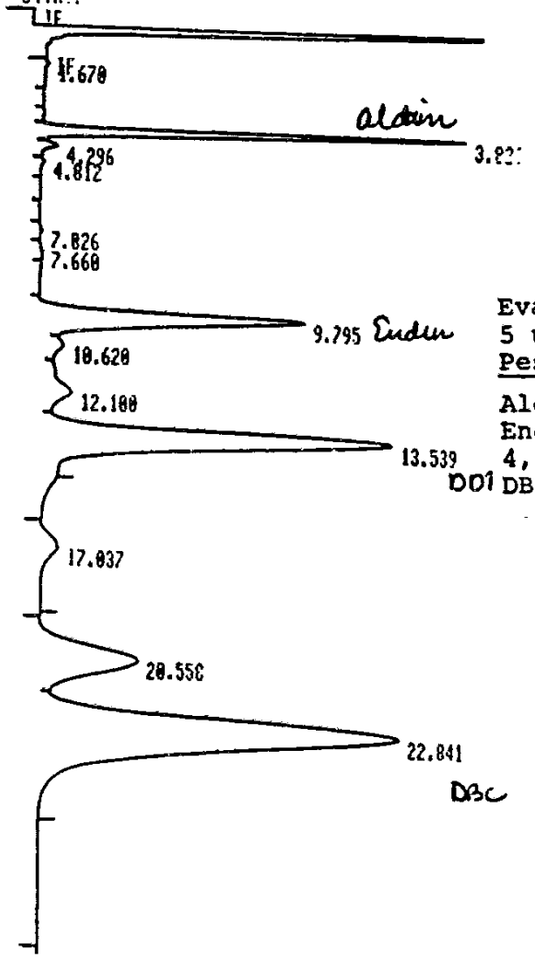
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
3.826	199823	PV	.174	7.67831
4.297	9567	VV	.217	.36762
7.669	5712	PB	.721	.21949
9.798	313934	PV	.445	12.06290
10.621	31283	VV	.555	1.20207
12.101	58698	VV	.881	2.25550
13.546	543146	VB	.605	20.87067
17.049	17564	BP	.760	.67491
20.565	275485	PV	.989	10.58566
22.857	1147224	VB	1.143	44.08270

TOTAL AREA=2602437
MUL FACTOR=1.0000E+00

RUN # 96 SEP 28, 1987 17:51:10



Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Evaluation Mixes ng on Column
5 uL injection

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.033	0.067	0.100
Endrin	0.125	0.250	0.375
4,4'-DDT	0.167	0.333	0.500
DBC	0.333	0.666	1.000

STOP

RUN# 96 SEP 28, 1987 17:51:10

SAMPLE NAME: EVALC SAMPLE# 3
Eval Mix C

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

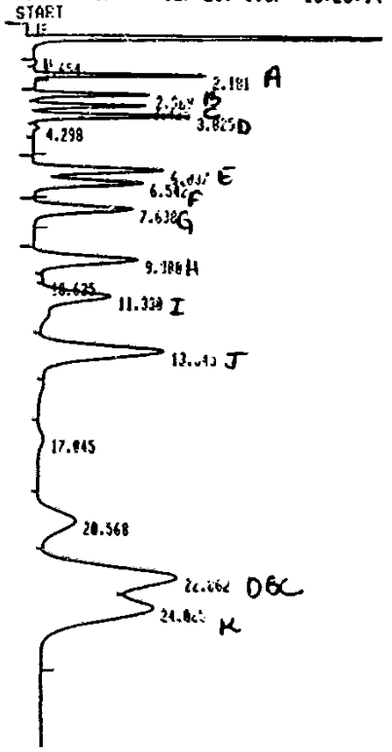
AREA%

RT	AREA	TYPE	WIDTH	AREA%
3.826	313481	PV	.174	7.79684
4.296	14625	VV	.216	.36375
4.812	2889	VP	.221	.07185
7.026	2977	PV	.303	.07404
7.660	4350	VV	.380	.10819
9.795	485629	PV	.436	12.07848
10.620	42950	VV	.542	1.06824
12.100	79546	VV	.836	1.97845
13.539	866821	VB	.600	21.55942
17.037	57749	BB	.797	1.43632
20.558	412836	BV	.983	10.26799
22.841	1736760	VB	1.132	43.19449

TOTAL AREA=4020613
MIN-FACTOR=1.00000E+00

005197

RUN # 97 SEP 28, 1987 10:23:14
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

	Individual Mix A Pesticide	5 uL injection ng on Column
A	alpha-BHC	0.0500
B	beta-BHC	0.0625
C	delta-BHC	0.0500
D	Aldrin	0.0500
E	alpha-Chlordane	0.0750
F	gamma-Chlordane	0.0750
G	4,4'-DDE	0.0938
H	Endrin	0.1875
I	4,4'-DDD	0.1250
J	4,4'-DDT	0.2500
K	Endrin Ketone	0.2500
DBC	Dibutylchlorendate	0.5000

RUN# 97 SEP 28, 1987 18:2[illegible]

SAMPLE NAME: INDA SAMPLE# 4
Pest Mix A

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

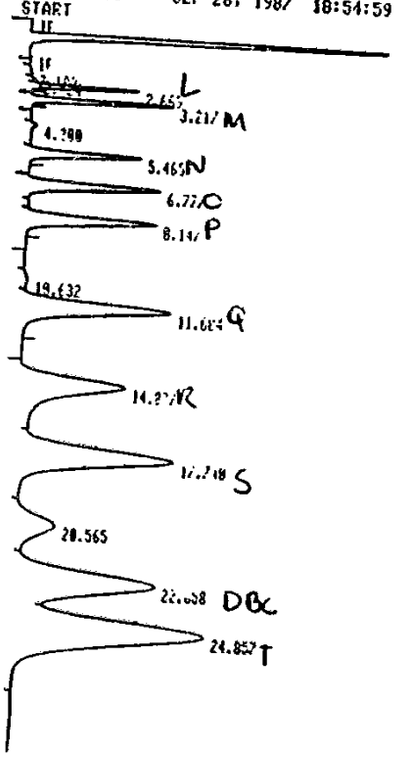
AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.181	105083	PB	.113	2.79520
2.969	91636	BV	.147	2.43751
3.425	94346	VV	.156	2.50960
3.825	149186	VV	.177	3.96[illegible]
4.298	6489	VP	.207	.17261
6.837	194722	PV	.276	5.17959
6.542	180505	VB	.305	4.80142
7.638	185710	PB	.347	4.94[illegible]
9.880	253565	BV	.458	6.74480
10.635	18427	VV	.348	.49016
11.330	283639	VV	.685	7.54477
13.545	459452	VV	.656	12.22138
17.845	45568	VV	1.130	1.21210
20.568	212567	VV	1.001	5.65426
22.862	802474	VV	1.060	21.34574
24.085	676038	VB	1.083	17.98254

TOTAL AREA=3759413
NUL FACTOR=1.0000E+00

005198

RUN # 98 SEP 28, 1987 18:54:59
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

	Individual Mix B Pesticide	5 uL injection ng on column
L	gamma-BHC	0.0375
M	Heptachlor	0.0500
N	Heptachlor Epoxide	0.0625
O	Endosulfan I	0.1000
P	Dieldrin	0.1250
Q	Endosulfan II	0.1875
R	Endrin Aldehyde	0.2500
S	Endosulfan Sulfate	0.3750
T	Methoxychlor	1.0000
DBC	Dibutylchlorendate	0.5000

RUN# 98 SEP 28, 1987 18:54:59

SAMPLE NAME: INDb
Pest Mix B SAMPLE# 5

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

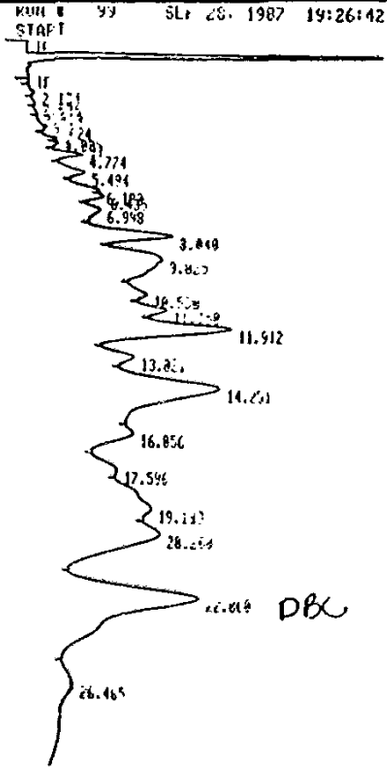
AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.183	5202	PV	.385	.10646
2.424	5174	VV	.164	.10588
2.669	75222	VB	.131	1.53937
3.217	120320	BB	.157	2.46244
4.380	8551	VP	.254	.17499
5.465	150743	PB	.251	3.08406
6.777	221041	BV	.318	4.52346
8.147	253522	VB	.364	5.18817
10.632	9426	PV	.459	.19290
11.684	446102	VB	.562	9.12931
14.877	516034	BV	.921	10.56030
17.740	739115	VV	.878	15.12551
20.565	225934	VV	1.041	4.62359
22.858	847303	VV	1.106	17.33531
24.857	1262847	VV	1.212	25.84335

TOTAL AREA=4886544
MUL FACTOR=1.0000E+00

005199

RUN # 99 SEP 28, 1987 19:26:42



Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

005200

RUN# 99 SEP 28, 1987 19:26:42

SAMPLE NAME: TOXAPH SAMPLE# 6
Toxaphene

IDENTIFIER : HP 5890 (D)

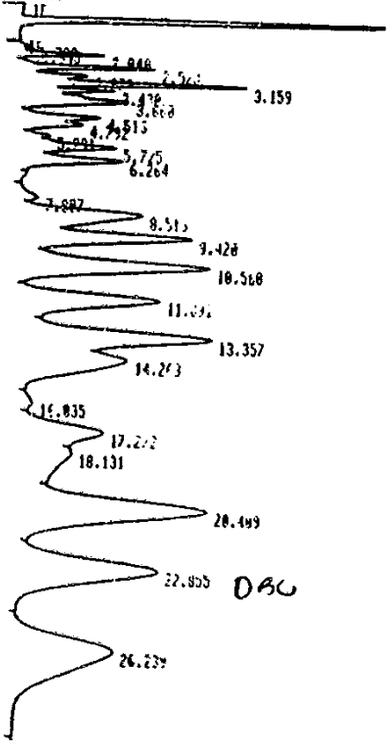
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.184	9329	PV	.255	.08747
2.606	12368	VV	.305	.11000
3.819	15993	VV	.320	.14233
3.624	50225	VV	.528	.44609
4.085	41431	VV	.279	.36872
4.291	41806	VV	.268	.37237
4.774	189360	VV	.396	.97059
5.494	163319	VV	.560	1.45346
6.192	151561	VV	.489	1.34832
6.435	150104	VV	.381	1.33595
6.948	272264	VV	.729	2.42320
8.040	498027	VV	.644	4.43270
9.025	977174	VV	1.367	8.69630
10.530	459329	VV	.732	4.08791
11.150	438085	VV	.595	3.89875
11.912	841046	VV	.780	7.48493
13.021	402619	VV	.730	3.58312
14.251	1559842	VV	1.545	13.87472
16.036	542850	VV	1.001	4.83111
17.596	412366	VV	.919	3.66941
19.189	1001652	VV	1.574	8.91423
20.268	993876	VV	1.458	8.84502
22.060	1489696	VV	1.699	13.25798
26.465	601925	I VH	3.146	5.35684

TOTAL AREA=1.1237E+07
MUL FACTOR=1.0000E+00

RUN # 100 SEP 28, 1987 19:50:35
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

RUN# 100 SEP 28, 1987 19:58:35

SAMPLE NAME: AR1060 SAMPLE# 2
PCBs 1016/1260

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

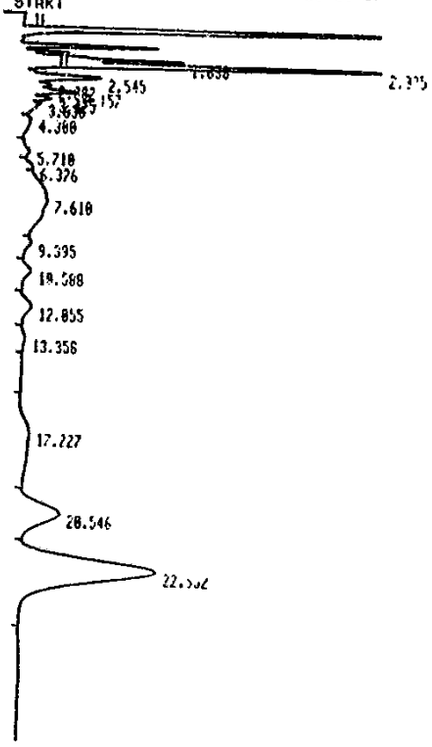
AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.730	5766	BV	.107	.06259
1.845	7515	VV	.104	.08[illegible]
2.040	60318	VV	.138	.71348
2.523	114311	VV	.164	1.36[illegible]3
2.879	75165	VV	.214	.89538
3.159	213668	VV	.179	2.53798
3.430	89435	VV	.181	1.06531
3.860	207759	VV	.366	2.47[illegible]4
4.513	111595	VV	.263	1.32929
4.792	86260	VV	.261	1.02759
5.291	36562	VV	.233	.43551
5.725	184294	VV	.361	2.19534
6.264	192140	VV	.353	2.28870
7.807	43035	VV	.428	.51[illegible]2
8.513	422331	VV	.658	5.03064
9.428	449181	VV	.491	5.35[illegible]
10.560	610611	VV	.684	7.27336
11.891	491363	VV	.657	5.85[illegible]
13.357	739371	VV	.721	8.80710
14.263	541213	VV	.930	6.44672
16.035	64111	VV	.766	.76366
17.272	423260	VV	.915	5.04171
18.131	361875	VV	1.225	4.31051
20.489	1112796	VV	1.898	13.25569
22.855	854598	VV	1.129	10.17954
26.239	897248	VP	1.693	10.687[illegible]

TOTAL AREA=8.3952E+06
MUL FACTOR=1.0000E+00

005201

RUN # 101 SEP 28, 1987 20:30:27
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

RUN# 101 SEP 28, 1987 20:30:27

SAMPLE NAME: AR1221 SAMPLE# 8
PCB1221

IDENTIFIER : HF 5690 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

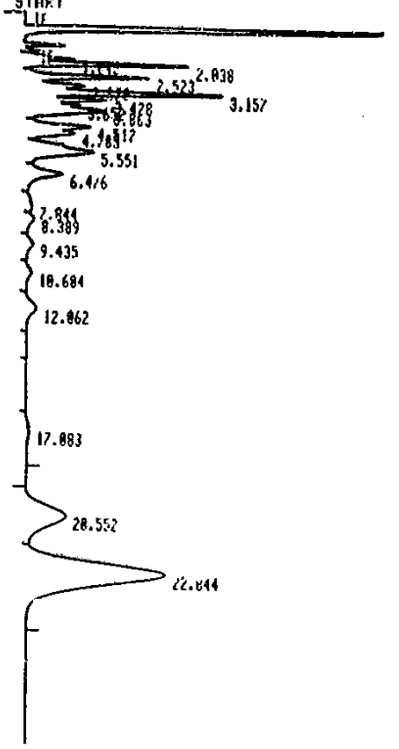
AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.838	108688	BV	.138	5.05850
2.035	277318	VP	.141	12.90[illegible]5
2.545	80595	PV	.218	3.75108
2.882	20824	VV	.198	.9[illegible]970
3.157	49791	VV	.199	2.31729
3.425	22234	VV	.189	1.03[illegible]
3.636	20201	VV	.300	.94020
4.300	13867	VP	.450	.64549
5.710	15019	PV	.417	.69302
6.326	11161	VV	.337	.84[illegible]
7.610	256552	VV	1.890	11.94055
9.395	27150	VV	.541	1.26[illegible]
10.588	28256	VP	.555	1.31520
12.055	35031	PV	.628	1.63043
13.358	15110	VV	.652	.70326
17.227	103377	PV	2.018	4.81141
20.546	224[illegible]	VV	1.006	10.43346
22.952	83[illegible]	VV	1.110	38.73492

TO AREA=2148578
MUL FACTOR=1.0000E+00

005202

RUN # 102 SEP 28, 1987 21:02:13
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

005203

RUN# 102 SEP 28, 1987 21:02:13

SAMPLE NAME: AP1232 SAMPLE# 9
PCB 1232

IDENTIFIER : HP 5890 (D)

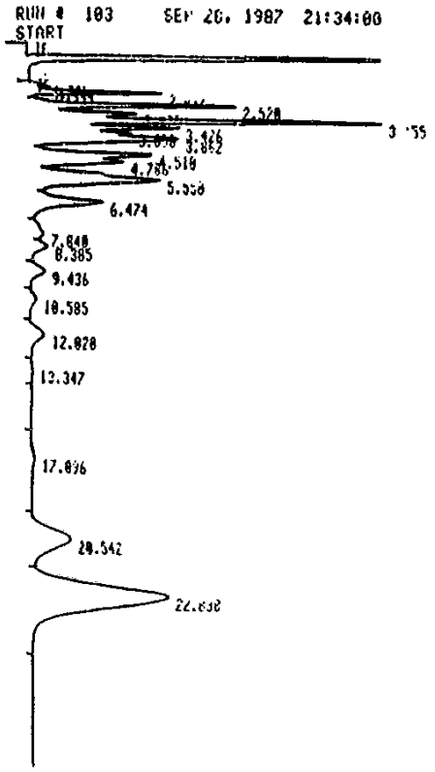
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.842	33506	PV	.141	1.48279
2.038	114698	VP	.136	5.07585
2.523	105649	PV	.165	4.67540
2.878	62246	VV	.209	2.75464
3.157	181927	VV	.177	8.05101
3.428	74450	VV	.178	3.29472
3.652	39112	VV	.142	1.73087
3.863	114598	VV	.276	5.07143
4.512	89058	VV	.265	3.94116
4.785	61622	VV	.247	2.72730
5.551	163644	VV	.460	7.24191
6.476	75734	VV	.398	3.35242
7.844	17999	VV	.605	.79653
8.389	18555	VV	.449	.82113
9.435	16242	VP	.483	.71977
10.684	14600	PP	.503	.64611
12.062	34405	PV	.609	1.52256
17.083	14155	PB	.882	.62612
20.552	207422	BV	.972	9.17927
22.844	820037	VB	1.097	36.28298

TOTAL AREA=2259678
MUL FACTOR=1.0000E+00

RUN # 103 SEP 28, 1987 21:34:00



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

RUN# 103 SEP 28, 1987 21:34:00

SAMPLE NAME: AR1242 SAMPLE# 19
PCB 1242

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

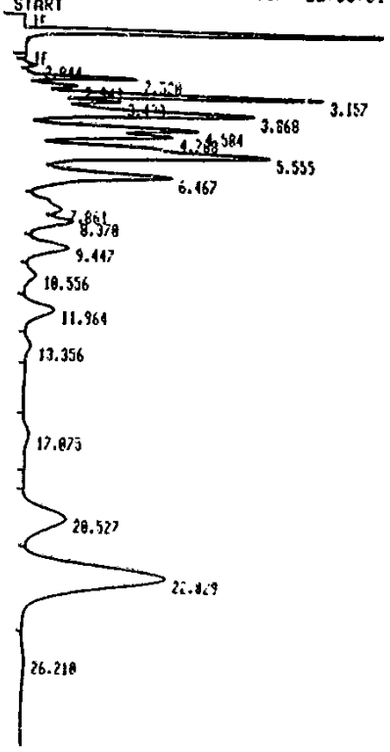
AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.725	9268	BV	.107	.27796
1.944	11530	VV	.100	.34562
2.	98617	VV	.137	2.95787
2.	184728	VV	.164	5.54064
2. 5	125448	VV	.215	3.76262
3.155	344189	VV	.179	10.32242
3.426	144633	VV	.180	4.33805
3.650	78980	VV	.143	2.36859
3.862	230898	VV	.287	6.92520
4.510	173221	VV	.263	5.19550
4.786	131243	VV	.257	3.93644
5.550	341862	VV	.484	10.25424
6.474	178050	VV	.439	5.34034
7.840	52330	VV	.659	1.56956
8.385	48376	VV	.480	1.45096
9.436	45014	VV	.535	1.35013
10.585	20602	VP	.543	.61793
12.020	47991	PV	.620	1.43942
13.347	7916	VV	.658	.23743
17.896	21796	PV	1.047	.65374
20.542	213867	VV	.984	6.41522
22.838	823466	VV	1.106	24.69862

TOTAL AREA=3334056
NUL FACTOR=1.0000E+00

005204

RUN # 104 SEP 28, 1987 22:05:51
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

RUN# 104 SEP 28, 1987 22:05:51

SAMPLE NAME: AR1248 SAMPLE# 11
PCB 1248

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

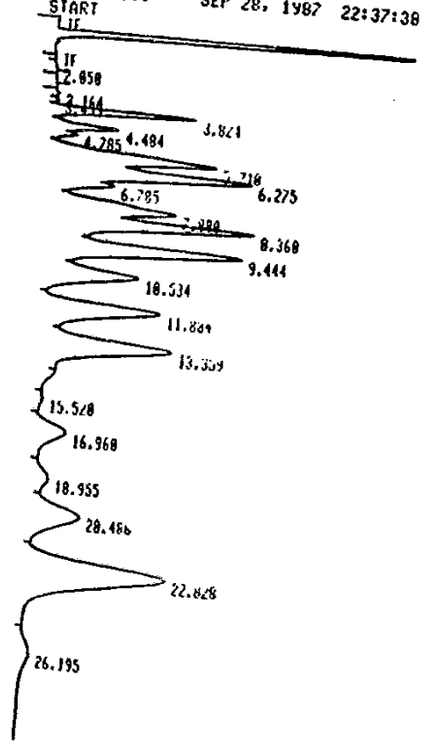
AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.044	13600	PV	.188	.31940
2.520	95884	VV	.158	2.24[illegible]
2.843	61836	VV	.212	1.44771
3.157	276311	VV	.172	6.46[illegible]
3.430	95870	VV	.185	2.24452
3.868	398106	VV	.322	9.32[illegible]
4.584	237852	VV	.253	5.56861
4.788	208046	VV	.259	4.87079
5.555	650895	VV	.492	15.22[illegible]
6.467	366045	VV	.457	8.56[illegible]
7.861	150802	VV	.682	3.53059
8.370	135989	VV	.488	3.18[illegible]
9.447	147968	VV	.570	3.46405
10.556	55752	VV	.690	1.30[illegible]
11.964	122054	VV	.687	2.85777
13.356	42880	VV	.800	1.00[illegible]
17.075	52079	VV	1.199	1.21928
20.527	250933	VV	1.030	5.87[illegible]
22.829	867833	VV	1.117	20.31777
26.210	41444	I VP	1.924	.97029

TOTAL AREA=4271302
MUL FACTOR=1.0000E+00

005205

RUN # 105 SEP 28, 1987 22:37:38
START



STOP

Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

Multicomponent Pesticide/PCBs	5 uL Injection ng on column
Toxaphene	5.0
Aroclor 1016	1.0
Aroclor 1221	4.0
Aroclor 1232	2.0
Aroclor 1242	2.0
Aroclor 1248	2.0
Aroclor 1254	2.5
Aroclor 1260	3.0

005206

RUN# 105 SEP 28, 1987 22:37:38
SAMPLE NAME: AR1254
PCB 1254 SAMPLE# 12

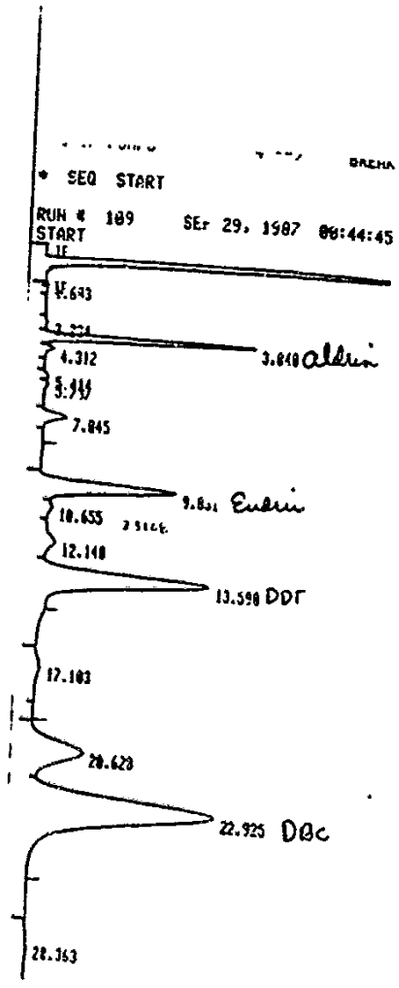
IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
3.164	3159	BV	.166	.05658
3.824	162020	VV	.215	2.90189
4.484	89030	VV	.254	1.59459
4.785	28878	VV	.221	.51748
5.710	417088	VV	.472	7.47032
6.275	482875	VV	.447	8.64[illegible]
6.785	110667	VV	.317	1.98212
7.880	399568	VV	.583	7.15653
8.368	544266	VV	.491	9.74817
9.444	577403	VV	.548	10.34167
10.534	319659	VV	.626	5.72531
11.884	423649	VV	.665	7.58703
13.359	528157	VV	.742	9.45964
15.528	28322	VV	.751	.50726
16.968	164044	VV	.937	2.93814
18.955	102089	VV	1.054	1.82848
20.486	295804	VV	1.064	5.28372
22.828	834539	VV	1.105	14.94715
26.195	72852	I VP	1.383	1.38483

TOTAL AREA=5583267
MUL FACTOR=1.0000E+00



Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

Evaluation Mixes ng on Column
5 uL injection

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.033	0.067	0.100
Endrin	0.125	0.250	0.375
4,4'-DDT	0.167	0.333	0.500
DBC	0.333	0.666	1.000

RUN# 189 SEP 29, 1987 00:44:45
SAMPLE NAME: EVALB
Eval Mix B SAMPLE# 16

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-240;

AREA%

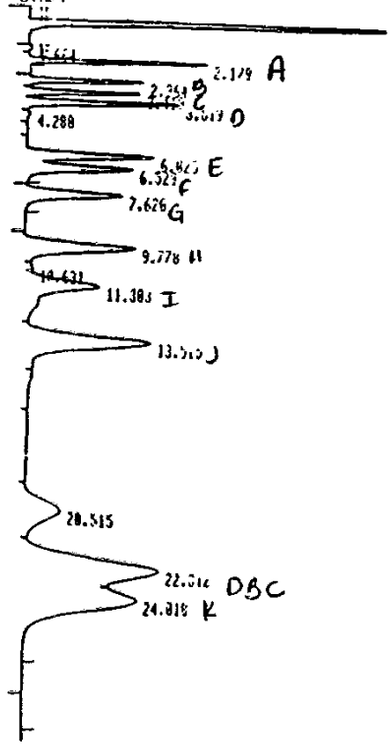
RT	AREA	TYPE	WIDTH	AREA%
3.234	3792	PV	.286	.13963
3.840	203276	VV	.175	7.48513
4.312	10937	VV	.227	.40274
5.414	5988	PV	.251	.22050
5.737	7894	VP	.319	.29069
7.845	39920	PV	.318	1.47000
9.831	330328	PV	.446	12.16386
10.655	32269	VV	.557	1.15104
12.140	68774	VV	.886	2.53392
13.598	555091	VB	.689	20.44042
17.103	20280	BP	.777	.74670
20.628	276514	BV	.986	10.1[illegible]
22.925	1153975	VB	1.135	42.49[illegible]
28.363	14169	[illegible]	1.245	[illegible]

24 7 7 5 2

4 / L 32 6

005207

RUN # 113 SEP 29, 1987 02:51:11
START



STOP

Instrument ID: 2ND D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

	Individual Mix A Pesticide	5 uL injection ng on Column
A	alpha-BHC	0.0500
B	beta-BHC	0.0625
C	delta-BHC	0.0500
D	Aldrin	0.0500
E	alpha-Chlordane	0.0750
F	gamma-Chlordane	0.0750
G	4,4'-DDE	0.0938
H	Endrin	0.1875
I	4,4'-DDD	0.1250
J	4,4'-DDT	0.2500
K	Endrin Ketone	0.2500
DBC	Dibutylchlorendate	0.5000

RUN# 113 SEP 29, 1987 02:51:11

SAMPLE NAME: IRON SAMPLE# 22
Pest Mix A

IDENTIFIER : HP 5890 (D)

Pesticide/PCBs Anal. on SP-2250/SP-2401

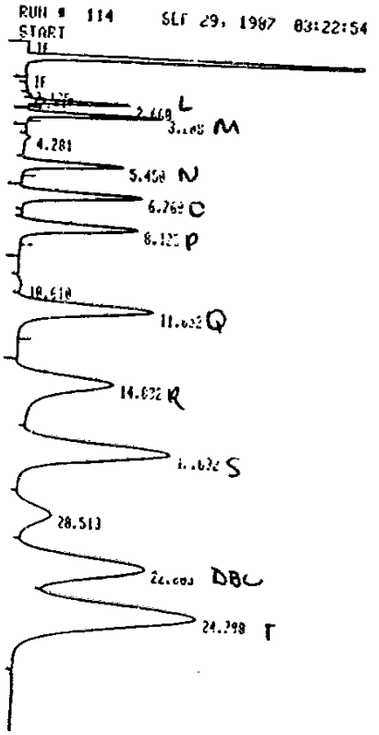
AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.179	105074	PB	.110	2.89532
2.964	88984	BV	.144	2.45133
3.419	91908	VV	.152	2.53253
3.819	141950	VV	.174	3.91144
4.288	3586	VP	.186	.09661
6.825	187629	VV	.276	5.17512
6.529	172319	VB	.305	4.74826
7.628	176380	BB	.343	4.86225
9.778	264903	BV	.445	7.29941
10.631	15818	VV	.330	.43587
11.303	276042	VV	.677	7.60648
13.515	448901	VV	.657	12.36943
20.515	214116	VV	1.036	5.89997
22.812	776199	VV	1.060	21.38019
24.818	665359	VB	1.084	18.33399

TOTAL AREA=3629101
MUL FACTOR=1.0000E+00

005208

RUN # 114 SEP 29, 1987 03:22:54
START



STOP

Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

	Individual Mix B Pesticide	5 uL injection ng on column
L	gamma-BHC	0.0375
M	Heptachlor	0.0500
N	Heptachlor Epoxide	0.0625
O	Endosulfan I	0.1000
P	Dieldrin	0.1250
Q	Endosulfan II	0.1875
R	Endrin Aldehyde	0.2500
S	Endosulfan Sulfate	0.3750
T	Methoxychlor	1.0000
DBC	Dibutylchlorendate	0.5000

RUN# 114 SEP 29, 1987 03:22:54

SAMPLE NAME: INOB SAMPLE# 21
Pest Mix B

IDENTIFIER : HP 5890 (B)

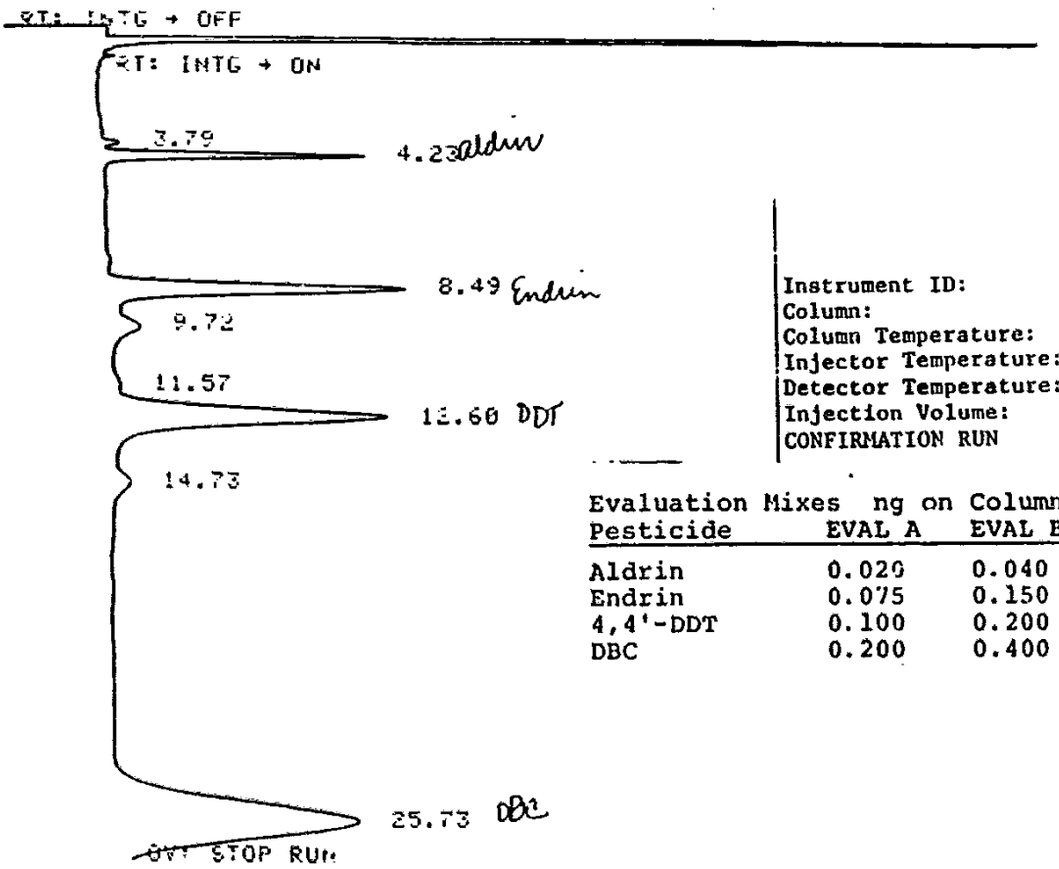
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.175	3584	PV	.358	.07425
2.417	4541	VV	.154	.09407
2.660 -	74133	VB	.129	1.53580
3.208 -	117893	BB	.156	2.44236
4.281	5916	VP	.213	.12256
5.450	141591	PB	.258	2.93221
6.760	213545	PV	.317	4.42396
8.125 -	238726	VB	.362	4.94671
10.610	8534	PV	.460	.17680
11.652	423187	VB	.558	8.76541
14.832	499869	BV	.928	10.35567
17.692	765411	VV	.879	15.85684
20.513	226115	VV	1.067	4.68437
22.803	830809	VV	1.110	17.19510
24.798	1273981	VV	1.220	26.39278

TOTAL AREA=4827008
MUL FACTOR=1.0000E+00

005209



Instrument ID:	B
Column:	3% SP2100
Column Temperature:	195
Injector Temperature:	225
Detector Temperature:	325
Injection Volume:	3 uL
CONFIRMATION RUN	

Evaluation Mixes ng on Column (3 uL inj.)

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.020	0.040	0.060
Endrin	0.075	0.150	0.225
4,4'-DDT	0.100	0.200	0.300
DBC	0.200	0.400	0.600

005210

RUN # 1 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100
SAMPLE ID:

LAB #:8709EG
CLIENT: EPA
VOL. INJ.: 3 µL

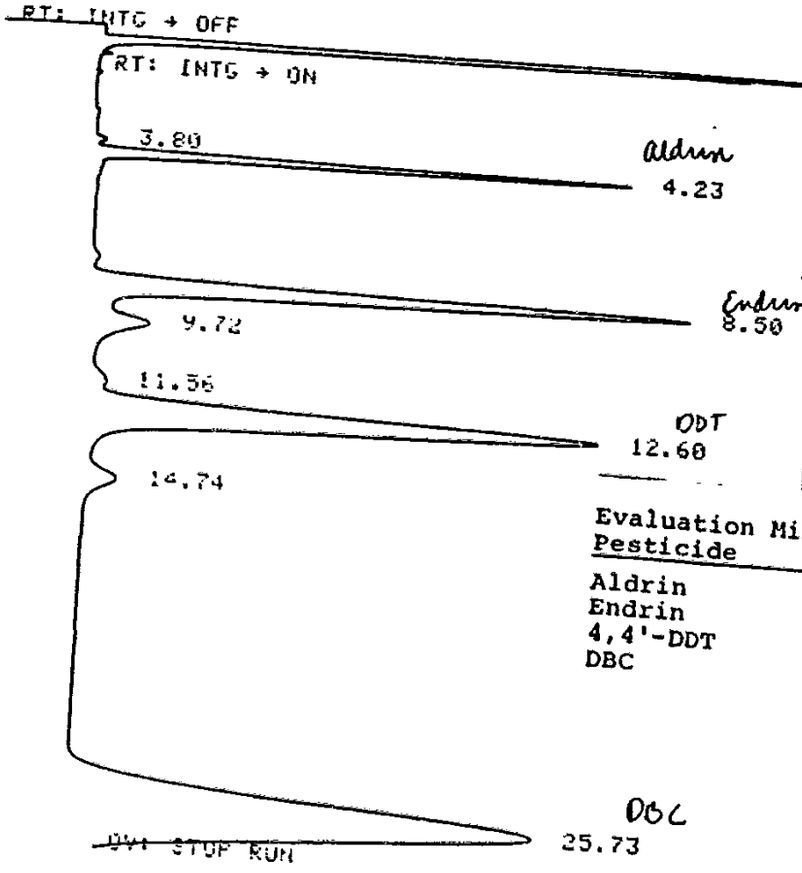
[hp] 5880A SAMPLER INJECTION @ 14:16 OCT 2, 1987
SAMPLE # : ID CODE :
1 EVALA
AREA %

RT	AREA	TYPE	AREA %
4.23	24605.70	VV	7.210
8.49	55884.60	PV	16.375
9.72	8768.41	VB	2.569
12.60	84634.00	VV	24.799
14.73	5888.52	VB	1.725
25.73	161494.00	H BH	47.321

TOTAL AREA = 341276.00
MULTIPLIER = 1

024

© SUPELCO, INC., Bellefonte, PA Cat. No. 2-3887 (and); Cat. No. 2-3888 (base of 10 pack)



Instrument ID:	B
Column:	3% SP2100
Column Temperature:	195
Injector Temperature:	225
Detector Temperature:	325
Injection Volume:	3 uL
CONFIRMATION RUN	

Evaluation Mixes ng on Column (3 uL inj)

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.020	0.040	0.060
Endrin	0.075	0.150	0.225
4,4'-DDT	0.100	0.200	0.300
DBC	0.200	0.400	0.600

RUN # 2 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

SAMPLE ID:

LAB #:3709EG
CLIENT: EPA

VOL. INJ.: 3 µL

[HP] 5880A SAMPLER INJECTION @ 14:45 OCT 2, 1987
SAMPLE # : 2 ID CODE : EVALB

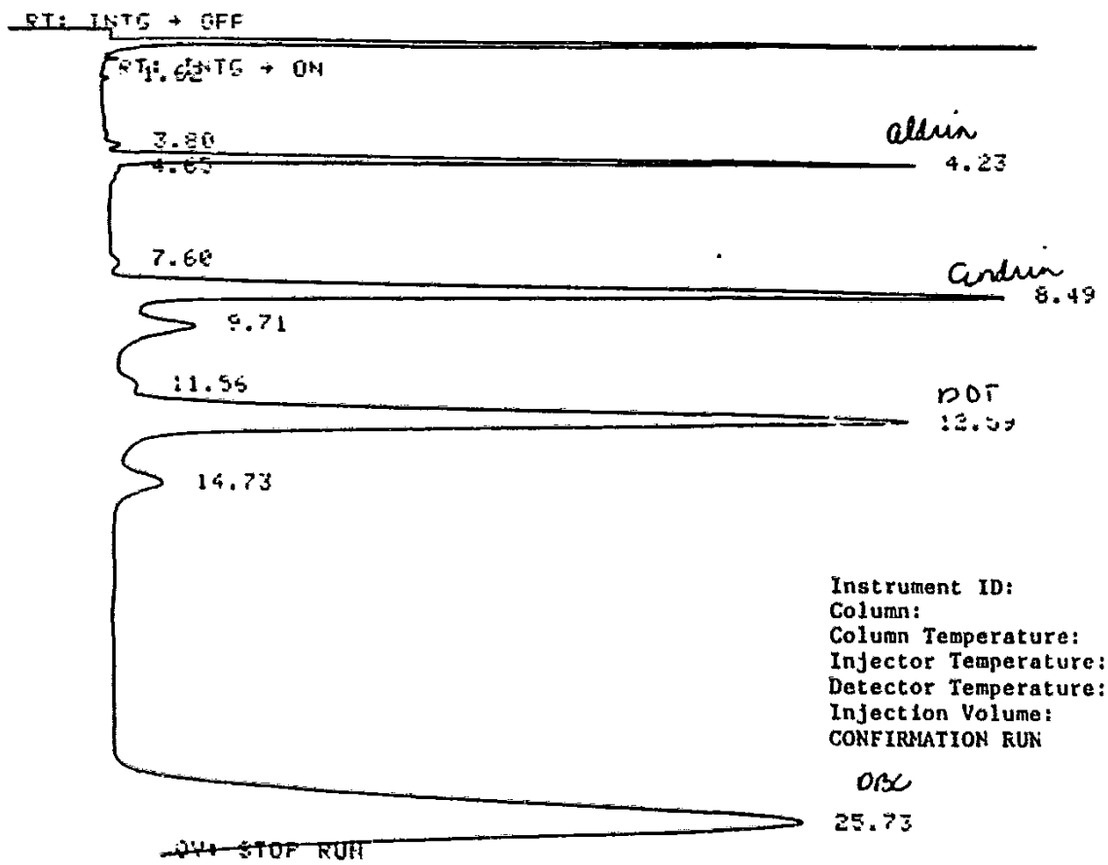
AREA %

RT	AREA	TYPE	AREA %
4.23	51258.20	VV	7.646
8.50	116844.00	BV	17.309
9.72	17315.50	VB	2.583
11.56	3192.47	BV	0.476
12.60	154939.00	VV	23.116
14.74	10966.80	VB	1.636
25.73	316716.00 A	BH	47.241

TOTAL AREA = 670432.00
MULTIPLIER = 1

025

© SUPELCO, INC. Bellefonte, PA Cat. No. 2-2887 (and) Cat. No. 2-2888 Box of 100 pcs.



Instrument ID: B
Column: 3% SP2100
Column Temperature: 195
Injector Temperature: 225
Detector Temperature: 325
Injection Volume: 3 uL
CONFIRMATION RUN

005212

RUN # 3 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100
SAMPLE ID:

LAB #:8709EG
CLIENT: EPA
VOL. INJ.: 3 uL

026

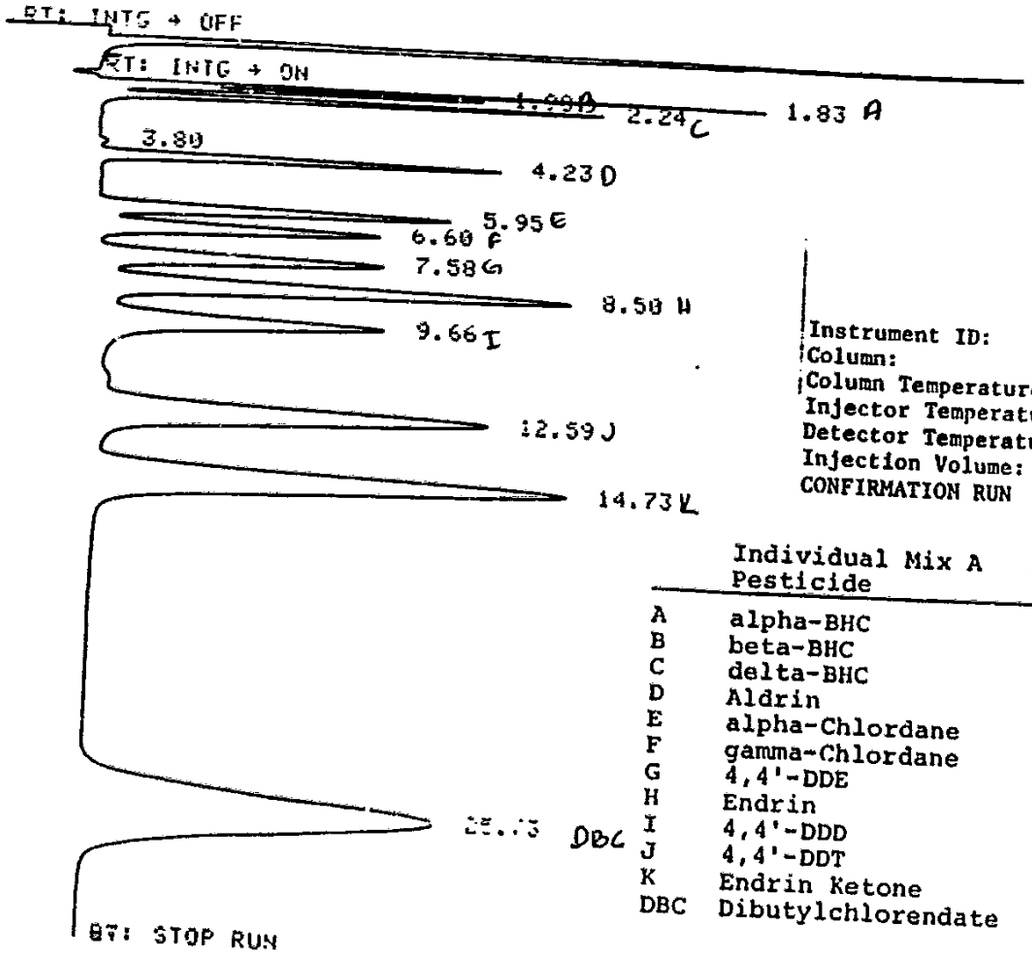
[hp] 5880A SAMPLER INJECTION @ 15:14 OCT 2, 1987
SAMPLE # : ID CODE :
3 EVALC
AREA %

RT	AREA	TYPE	AREA %
4.23	77438.90	VV	7.610
8.49	174511.00	VV	17.150
9.71	29232.80	VV	2.873
11.56	7110.83	VV	0.699
12.59	247100.00	VV	24.284
14.73	18216.70	VB	1.790
25.73	463950.00	A BH	45.594

TOTAL AREA = 1017560.00
MULTIPLIER = 1

Evaluation Mixes ng on Column (3 uL inj.)

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.020	0.040	0.060
Endrin	0.075	0.150	0.225
4,4'-DDT	0.100	0.200	0.300
DBC	0.200	0.400	0.600



Instrument ID:	B
Column:	3% SP2100
Column Temperature:	195
Injector Temperature:	225
Detector Temperature:	325
Injection Volume:	3 uL
CONFIRMATION RUN	

	Individual Mix A Pesticide	3 uL injection ng on Column
A	alpha-BHC	0.0300
B	beta-BHC	0.0375
C	delta-BHC	0.0300
D	Aldrin	0.0300
E	alpha-Chlordane	0.0450
F	gamma-Chlordane	010450
G	4,4'-DDE	0.0563
H	Endrin	0.1124
I	4,4'-DDD	0.0750
J	4,4'-DDT	0.1500
K	Endrin Ketone	0.1500
DBC	Dibutylchlorendate	0.3000

RUN # 4 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

LAB #:3709EG
CLIENT: EPA

SAMPLE ID:

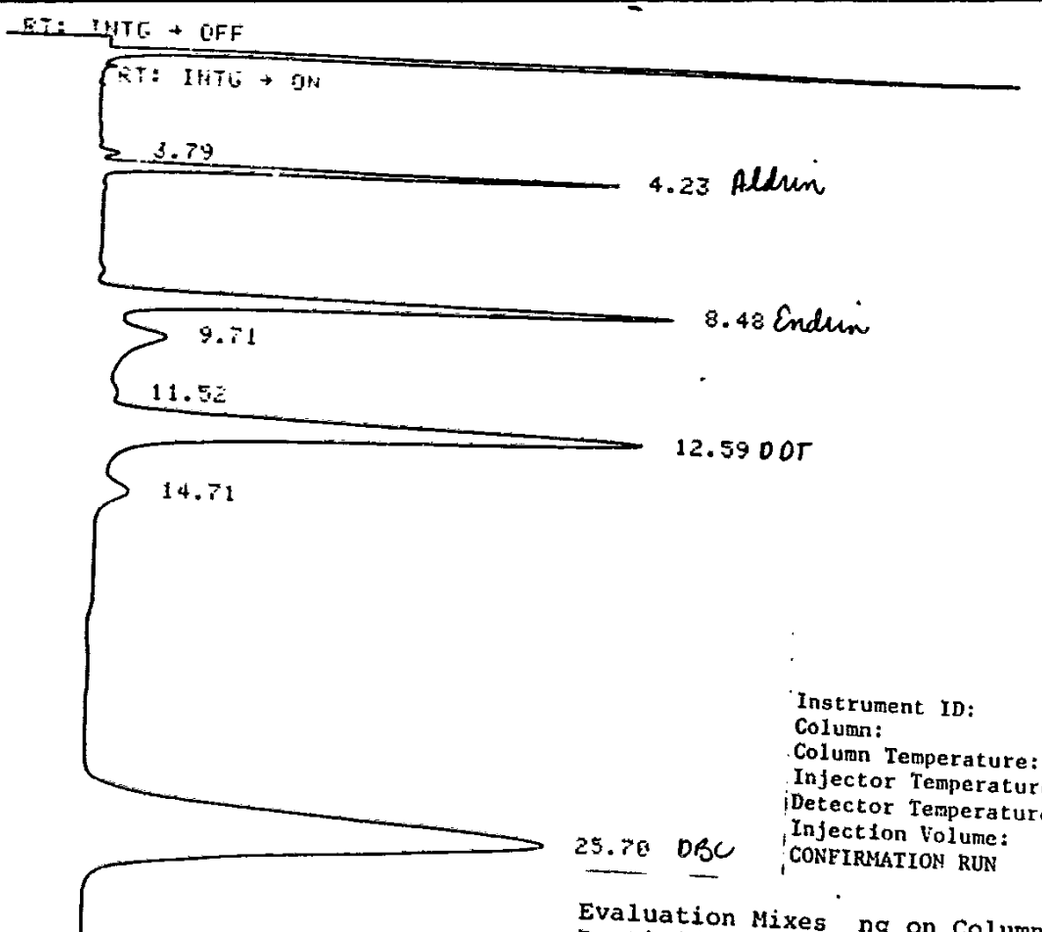
VOL. INJ.: 3 µL

[hp] 5880A SAMPLER INJECTION @ 15:44 OCT 2, 1987
SAMPLE # : 4 ID CODE : INDA

AREA %

RT	AREA	TYPE	AREA %
1.83	31335.80	BV	3.067
1.98	22187.40	VV	2.172
2.24	35674.70	VV	3.492
3.80	4903.15	VV	0.480
4.23	46021.00	VV	4.504
5.95	54902.90	VV	5.374
6.60	50176.60	VV	4.911
7.58	57272.20	VV	5.605
8.50	100231.00	VV	9.810
9.66	85980.70	VV	8.415
12.59	126866.00	VV	12.417
14.73	164496.00	VB	16.100
25.73	241679.00	BB	23.654

TOTAL AREA = 1021730.00
MULTIPLIER = 1



Instrument ID:	B
Column:	3% SP2100
Column Temperature:	195
Injector Temperature:	225
Detector Temperature:	325
Injection Volume:	3 uL
CONFIRMATION RUN	

Evaluation Mixes ng on Column (3 uL inj.)

Pesticide	EVAL A	EVAL B	EVAL C
Aldrin	0.020	0.040	0.060
Endrin	0.075	0.150	0.225
4,4'-DDT	0.100	0.200	0.300
DBC	0.200	0.400	0.600

VOL. INJ.: 3 µL

RUN # 8

PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

SAMPLE ID:

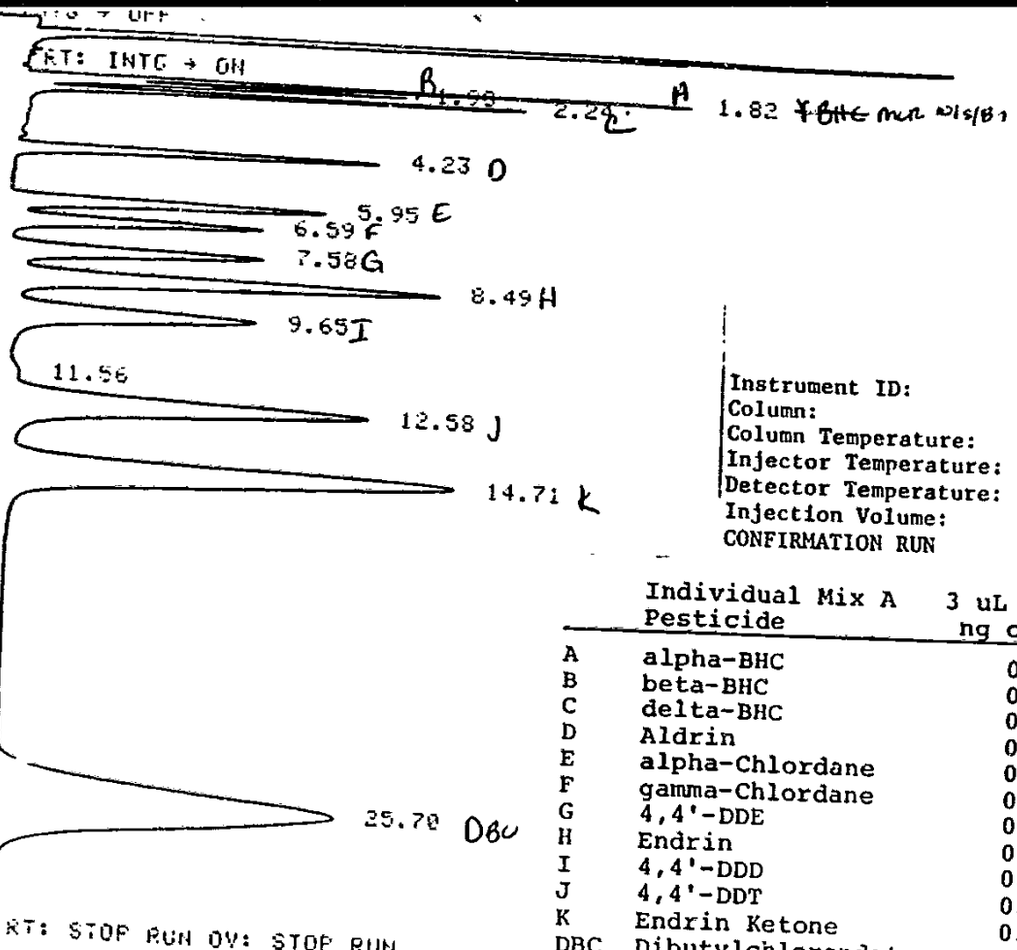
[HP] 5880A SAMPLER INJECTION @ 17:53 OCT 2, 1987
SAMPLE # : ID CODE :
8 - EVAL8

AREA %

RT	AREA	TYPE	AREA %
4.23	49959.50	VV	7.089
8.48	112145.00	VV	15.914
9.71	33460.40	VV	4.748
11.52	6213.54	VV	0.882
12.59	176881.00	VV	25.100
14.71	12879.30	VB	1.828
25.70	313158.00	BB	44.439

TOTAL AREA = 704697.00
MULTIPLIER = 1

005214
032
005214



Instrument ID:	B
Column:	3% SP2100
Column Temperature:	195
Injector Temperature:	225
Detector Temperature:	325
Injection Volume:	3 uL
CONFIRMATION RUN	

	Individual Mix A Pesticide	3 uL injection ng on Column
A	alpha-BHC	0.0300
B	beta-BHC	0.0375
C	delta-BHC	0.0300
D	Aldrin	0.0300
E	alpha-Chlordane	0.0450
F	gamma-Chlordane	010450
G	4,4'-DDE	0.0563
H	Endrin	0.1124
I	4,4'-DDD	0.0750
J	4,4'-DDT	0.1500
K	Endrin Ketone	0.1500
DBC	Dibutylchlorendate	0.3000

RUN # 9 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

LAB #:8709EG
CLIENT: EPA

SAMPLE ID:

VOL. INJ.: 3 uL

[hp] 5880A SAMPLER INJECTION @ 18:25 OCT 2, 1987
SAMPLE # : 9 ID CODE : INDA

AREA %

RT	AREA	TYPE	AREA %
1.82	27647.70	PV	3.172
1.98	19598.20	VV	2.248
2.24	29664.50	VV	3.403
4.23	33949.90	VP	3.895
5.95	42361.80	BV	4.860
6.59	38051.50	VV	4.365
7.58	43942.20	VV	5.041
8.49	82201.70	VV	9.430
9.65	60642.00	VV	6.957
11.56	2617.49	VV	0.300
12.58	109025.00	VV	12.507
14.71	152405.00	VB	17.484
25.70	229573.00	BB	26.337

TOTAL AREA = 871681.00
MULTIPLIER = 1

PESTICIDE/PCB

RAW QC DATA

005216

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87 KK

Matrix: (soil/water) WATER Lab Sample ID: Extraction Blank

Sample wt/vol: 1000. (g/mL)ML Lab File ID: SEP2813

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 9/28/87

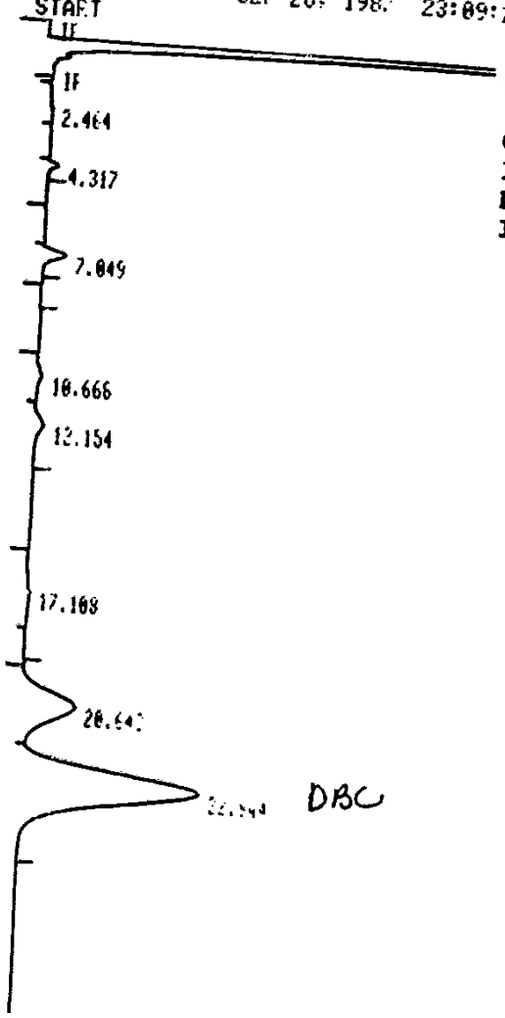
GPC Cleanup: (Y/N) N pH: 7.0 Dilution factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.05	U
76-44-8	Heptachlor	.05	U
309-00-2	Aldrin	.05	U
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.05	U
1031-07-8	Endosulfan sulfate	.1	U
50-29-3	4,4'-DDT	.1	U
72-43-5	Methoxychlor	.5	U
53494-70-5	Endrin ketone	.1	U
5103-71-9	alpha-Chlordane	.5	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	1.	U
12674-11-2	Aroclor-1016	.5	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	1.	U
11096-82-5	Aroclor-1260	1.	U

005217

FORM I PEST 1/87 Rev.

RUN # 106 SEP 28, 1987 23:09:24
START



Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

STOP

RUN# 106 SEP 28, 1987 23:09:24

SAMPLE NAME: PBLF
Pest Blank SAMPLE# 13

IDENTIFIER : HF 5890 (D)

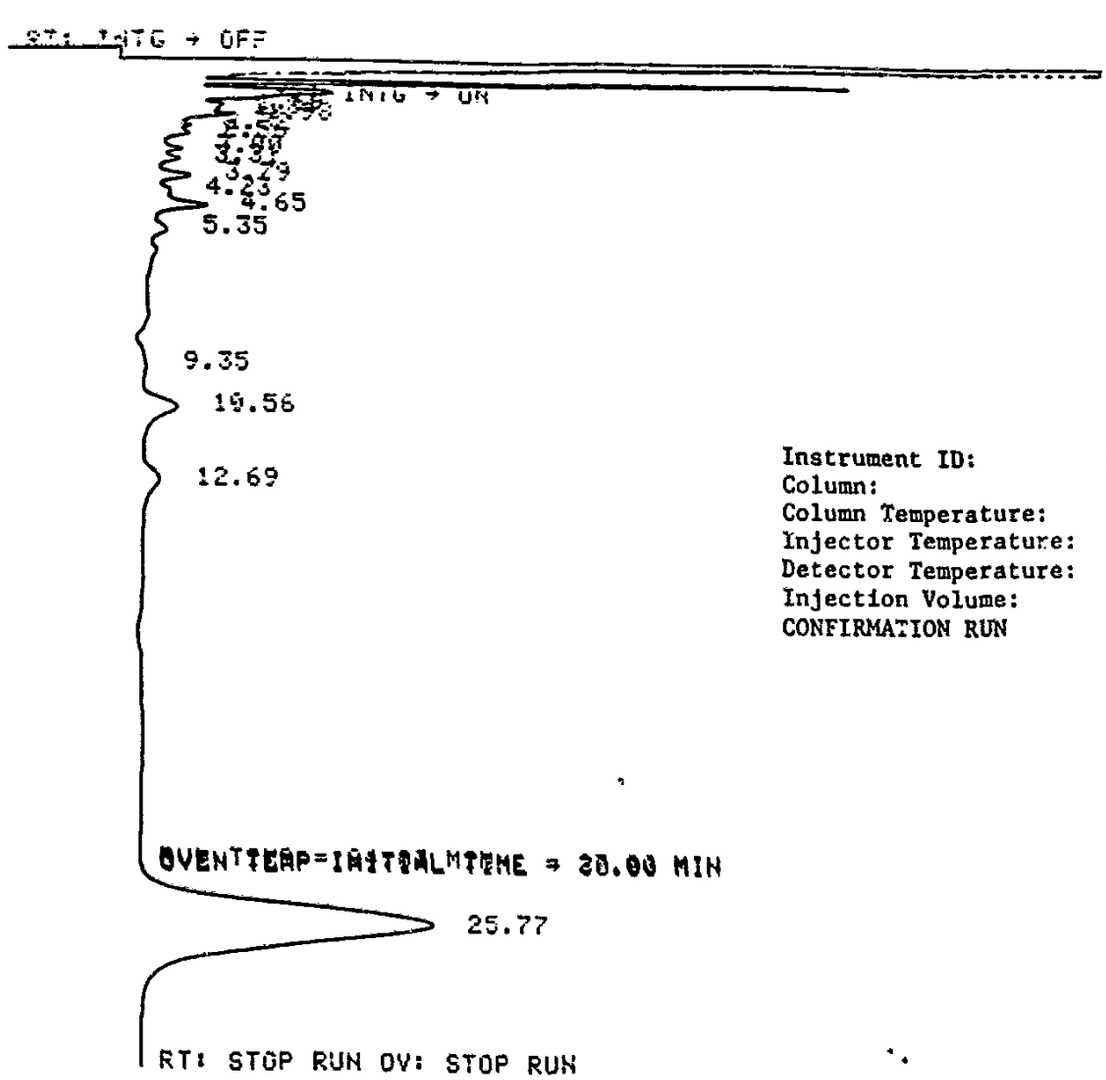
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
2.464	12178	PV	.944	1.11277
4.317	9234	VB	.213	.94[illegible]
7.049	30386	PB	.321	2.77654
10.666	10527	BP	.515	.96191
12.154	20163	PB	.579	1.84241
17.108	8286	PV	.822	.75714
20.643	206489	BV	.978	18.86816
22.944	797119	VB	1.104	72.83739

TOTAL AREA=1094382
MU' CORTND=1.0000E+00

005218



Instrument ID: B
Column: 3% SP2100
Column Temperature: 195
Injector Temperature: 225
Detector Temperature: 325
Injection Volume: 3 uL
CONFIRMATION RUN

005219

RUN # 5 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

LAB #:8709EG
CLIENT: EPA

SAMPLE ID:

VOL. INJ.: 3 µL

[hp] 5880A SAMPLER INJECTION @ 16:16 OCT 2, 1987
SAMPLE # : ID CODE :
5 BLANK

AREA %

RT	AREA	TYPE	AREA %
3.79	2883.75	PV	1.484
4.65	6603.35	VV	3.398
10.56	8574.08	BB	4.412
12.69	4973.78	BB	2.559
25.77	171292.00	BB	88.146

TOTAL AREA = 194327.00
MULTIPLIER = 1

6.34

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MS

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87 AK

Matrix: (soil/water) WATER Lab Sample ID: 8705E004MS

Sample wt/vol: 1000. (g/mL) ML Lab File ID: SEP2918

Level: (low/med) LOW Date Received: ~~9/14/87~~ 9/12/87 10/9/87 AK

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 9/29/87

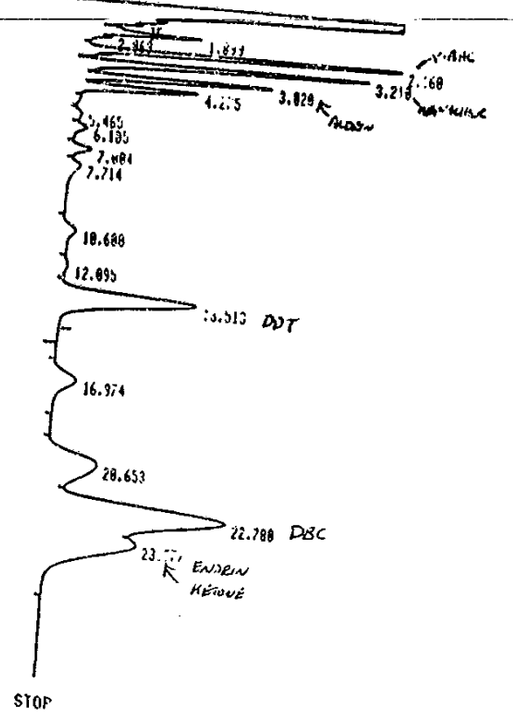
GPC Cleanup: (Y/N) N pH: 7.5 Dilution factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.3	
76-44-8	Heptachlor	.2	
309-00-2	Aldrin	.1	
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.1	U
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.05	U
1031-07-8	Endosulfan sulfate	.1	U
50-29-3	4,4'-DDT	.5	
72-43-5	Methoxychlor	.5	U
53494-70-5	Endrin ketone	.4	
5103-71-9	alpha-Chlordane	.5	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	1.	U
12674-11-2	Aroclor-1016	.5	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	1.	U
11096-82-5	Aroclor-1260	1.	U

005220

FORM I PEST 1/87 Rev.

RUN # 111 SEP 29, 1987 01:47:44
START



Instrument ID: INST D
Column: 1.5% SP-2250/ 1.95% SP 2401
Column Temp.: 210
Injector Temp.: 225
Detector Temp.: 325
Injection Vol.: 5 uL

RUN# 111 SEP 29, 1987 01:47:44

SAMPLE NAME: FD272
8709EG04MS SAMPLE# 18

IDENTIFIER : HP 5850 (D)

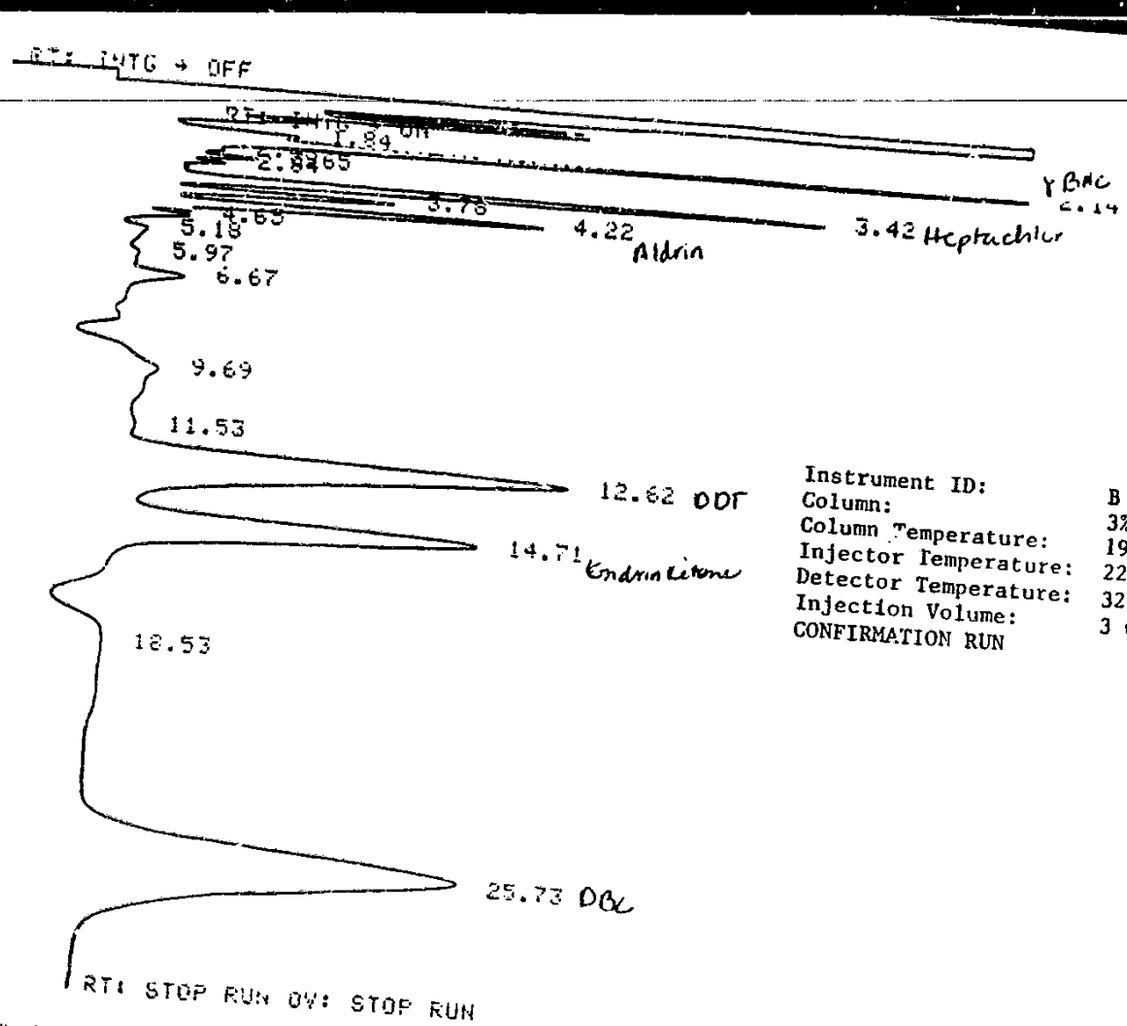
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.899	88125	BV	.156	2.29325
2.069	7150	VP	.095	.18596
2.660	273795	PB	.128	7.12488
3.210	283718	BV	.177	7.38219
3.820	193813	VV	.181	5.04353
4.275	150189	VV	.224	3.90[illegible]
5.465	16474	PV	.450	.42870
6.105	30114	VV	.393	.78[illegible]5
7.804	38728	VV	.338	1.08781
7.714	36385	VP	.567	.94584
10.600	56571	PV	.778	1.47213
12.095	26860	VV	.691	.69[illegible]
13.513	479884	VB	.611	12.48767
16.974	104834	PV	.803	2.72[illegible]
20.653	359336	PV	1.288	9.35089
22.780	1166156	VV	1.127	30.34156
23.977	530668	VV	.997	13.80940

TOTAL AREA=3842802
MUL FACTOR=1.0000E+00

005221



Instrument ID: B
Column: 3% SP2100
Column Temperature: 195
Injector Temperature: 225
Detector Temperature: 325
Injection Volume: 3 uL
CONFIRMATION RUN

RUN # 6

PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

SAMPLE ID:

LAB #:8709EG
CLIENT: EPA

VOL. INJ.: 3 uL

HP 5880A SAMPLER INJECTION @ 16:48 OCT 2, 1987
SAMPLE # 6 ID CODE :
F0272MS

AREA %

RT	AREA	TYPE	AREA %
1.84	11329.10	BV	1.029
2.14	72588.80	VV	6.593
2.43	4258.46	VV	0.387
2.65	6671.00	VV	0.606
2.84	4782.38	VV	0.434
3.42	58169.80	VV	5.283
3.78	24772.10	VV	2.250
4.22	40173.50	VV	3.649
4.65	6984.71	VP	0.634
5.18	6943.38	PV	0.631
5.97	4952.68	VV	0.450
6.67	30973.00	VV	2.813
9.69	71819.90	PV	6.523
11.53	26541.40	VV	2.411
12.62	228384.00	VV	20.742
14.71	192093.00	VP	17.447
18.53	17552.10	PS	1.594
25.73	292072.00	PB	[illegible]

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MSD

Lab Name: EIRA Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87

Matrix: (soil/water) WATER Lab Sample ID: 8709EG04MSD

Sample wt/vol: 1000. (g/mL)ML Lab File ID: SLP2919

Level: (low/med) LOW Date Received: ~~9/14/87~~ 9/12/87 10/9/87

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 9/29/87

GPC Cleanup: (Y/N) N pH: 7.5 Dilution factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.3	
76-44-8	Heptachlor	.2	
309-00-2	Aldrin	.2	
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.1	
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.05	U
1031-07-8	Endosulfan sulfate	.1	U
50-29-3	4,4'-DDT	.5	
72-43-5	Methoxychlor	.5	U
53494-70-5	Endrin ketone	.4	
5103-71-9	alpha-Chlordane	.5	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	1.	U
12674-11-2	Aroclor-1016	.5	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	1.	U
11096-82-5	Aroclor-1260	1.	U

005223

FORM I PEST 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD272MSD

Lab Name: EIRA

Contract: 68-01-7414

Lab Code: EIRA Case No.: 8016 SAS No.: SDG No.: ~~FD272~~ FD211 10/9/87 AL

Matrix: (soil/water) WATER Lab Sample ID: 8709FG04MSD

Sample wt/vol: 1000. (g/mL)ML Lab File ID: SEP2919

Level: (low/med) LOW Date Received: ~~9/14/87~~ 9/12/87 10/9/87 AL

% Moisture: not dec. 0. dec. 0. Date Extracted: 9/15/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 9/29/87

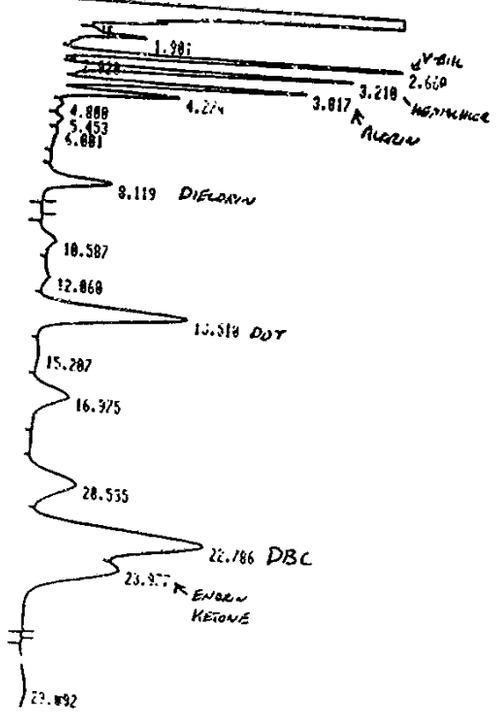
GPC Cleanup: (Y/N) N pH: 7.5 Dilution factor: 1.0000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	.05	U
319-85-7	beta-BHC	.05	U
319-86-8	delta-BHC	.05	U
58-89-9	gamma-BHC (Lindane)	.3	
76-44-8	Heptachlor	.2	
309-00-2	Aldrin	.2	
1024-57-3	Heptachlor epoxide	.05	U
959-98-8	Endosulfan I	.05	U
60-57-1	Dieldrin	.1	
72-55-9	4,4'-DDE	.1	U
72-20-8	Endrin	.1	U
33213-65-9	Endosulfan II	.1	U
72-54-8	4,4'-DDD	.05	U
1031-07-8	Endosulfan sulfate	.1	U
50-29-3	4,4'-DDT	.5	
72-43-5	Methoxychlor	.5	U
53494-70-5	Endrin ketone	.4	
5103-71-9	alpha-Chlordane	.5	U
5103-74-2	gamma-Chlordane	.5	U
8001-35-2	Toxaphene	1.	U
12674-11-2	Aroclor-1016	.5	U
11104-28-2	Aroclor-1221	.5	U
11141-16-5	Aroclor-1232	.5	U
53469-21-9	Aroclor-1242	.5	U
12672-29-6	Aroclor-1248	.5	U
11097-69-1	Aroclor-1254	1.	U
11096-82-5	Aroclor-1260	1.	U

005224

FORM I PEST 1/87 Rev.

RUN # 112 SEP 29, 1987 02:19:26
START



STOP

Instrument ID:	INST D
Column:	1.5% SP-2250/ 1.95% SP 2401
Column Temp.:	210
Injector Temp.:	225
Detector Temp.:	325
Injection Vol.:	5 uL

RUN# 112 SEP 29, 1987 02:19:26

SAMPLE NAME: FD2?2
8709EG04MSD SAMPLE# 19

IDENTIFIER : HP 5890 (D)

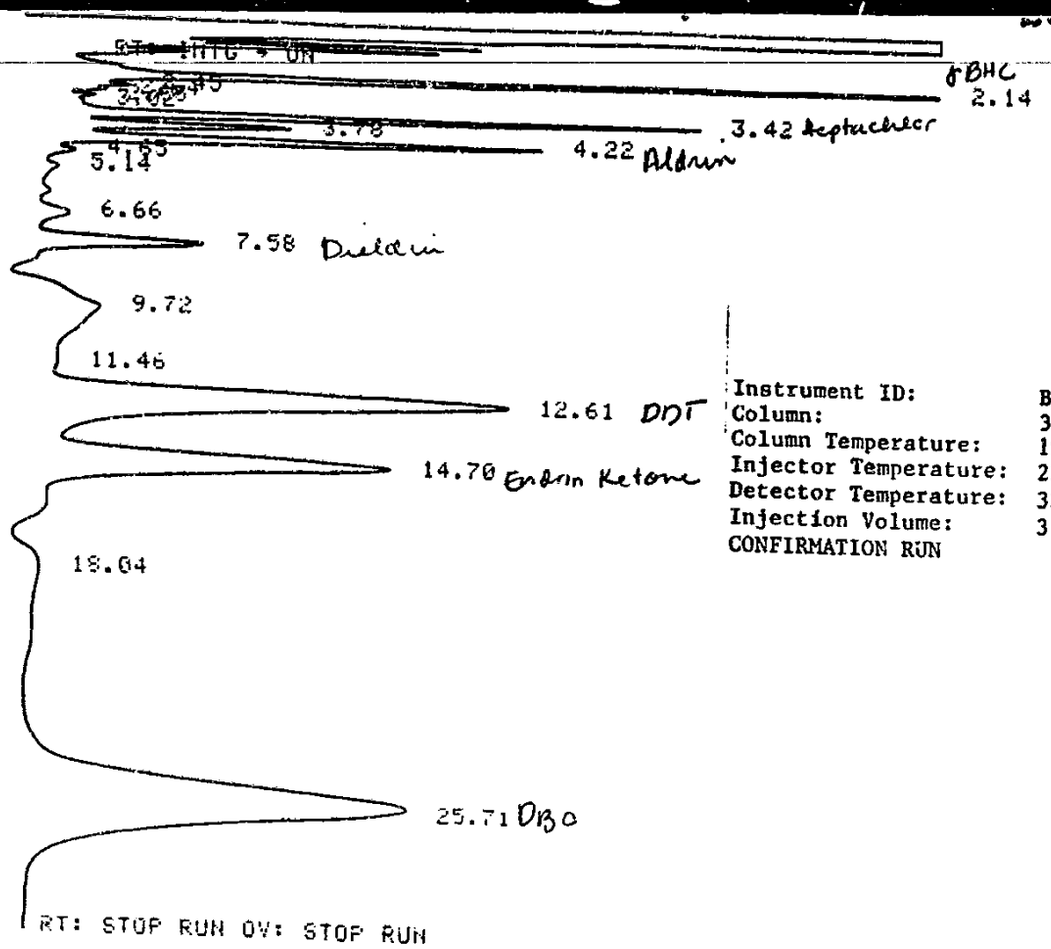
Pesticide/PCBs Anal. on SP-2250/SP-2401

AREA%

RT	AREA	TYPE	WIDTH	AREA%
1.901	49323	BP	.143	1.29705
2.660	281817	PV	.127	7.41049
2.920	5593	VV	.132	.14708
3.210	262159	VV	.170	6.89434
3.817	236419	VV	.179	6.21715
4.224	144021	VV	.227	3.78734
4.880	7505	VP	.283	.19736
5.453	13026	PV	.329	.34260
6.001	11604	VV	.485	.30515
8.119	142261	VB	.406	3.74106
10.587	52333	BV	.655	1.37621
12.860	57525	VV	1.050	1.51274
13.510	490211	VV	.613	12.89116
15.207	22116	VV	1.038	.58154
16.975	159823	VV	.840	4.20289
20.535	268593	PV	1.054	7.06333
22.786	1049101	VV	1.186	27.58838
23.977	500502	VB	.991	13.16389
29.092	48676 I	BH	1.401	1.28004

TOTAL AREA=3802693
MUL FACTOR=1.0000E+00

005225



Instrument ID:	B
Column:	3% SP2100
Column Temperature:	195
Injector Temperature:	225
Detector Temperature:	325
Injection Volume:	3 uL
CONFIRMATION RUN	

005226

RUN # 7 PESTICIDE ANALYSIS
CONFIRMATION RUN
COLUMN: 6 FT X 4 MM 3% SP-2100

LAB #:8709EG
CLIENT: EPA

SAMPLE ID:

VOL. INJ.: 3 µL

[MP] 5880A SAMPLER INJECTION @ 17:20 OCT 2, 1987
SAMPLE # : ID CODE :
7 F0272MSD

AREA %

RT	AREA	TYPE	AREA %
2.14	70191.90	BV	7.805
2.45	4601.39	VV	0.512
3.42	54364.20	VV	6.045
3.78	23710.10	VV	2.636
4.22	48003.20	VV	5.338
4.65	2765.29	VV	0.307
6.66	9738.62	VV	1.083
7.58	36913.60	VP	4.105
9.72	43589.90	PB	4.847
12.61	166075.00	VV	18.467
14.70	126609.00	VV	14.078
18.04	11402.60	PB	1.268
25.71	301357.00 A	BH	33.509

TOTAL AREA = 899323.00
MULTIPLIER = 1

031

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