147431

FINAL
SITE INSPECTION PRIORITIZATION
CORNELL DUBLIER ELECTRONICS, INCORPORATED
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

PREPARED UNDER

WORK ASSIGNMENT NO. 038-2JZZ
CONTRACT NO. 68-W9-0051

JANUARY 11, 1995
REV. NO. 0

VOLUME 2 OF 3

REFERENCE NO. 17

K+E

CROSS SECTION BOOK

82 0056

Cornell Dubilier Electronics, Inc.

South Plainfield, NJ

Project No.: 8003-306

Cornell Dubilier Electronics, Inc.

South Plainfield, New Jersey

Job No.: 8003-306

Background Sediment Sampling Event

October 13, 1994

Andrew Clibanoff 10/13/94 (1)

1000 Arrive at site

Malcolm Pirnie personnel:

A. Clibanoff (AC) - site manager

D. Kahlenberg (DK) - Health & Safety Officer
Sampler

Weather Conditions: Sunny, 60°F
Slight Breeze

Met with Mike from Norpak. Informed Mike that we're waiting for delivery of Analyte Free Water to the site. Expect delivery between 1000 and 1030.

1005 AC & DK go to Industrial Park entrance to await delivery

1010 DK conducts tailgate health & safety meeting.

1030 Water delivery arrived.

1035 Met with Mike again. Told him we will set up decon area & get back to him.

10:40 Setting up decon area

Andrew Clibanoff 10/13/94

(2) Andrew Ullmann
10/13/94

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Andrew Ullmann
10/13/94

Andrew C Brandt
10/13/94 (3)

Decon Equipment Lot Nos.

Bowls & Trowels - 1AA070

Scoopulas - 1AA056

1050 Decon Area set up

1100 Going to sample location # SED6.
Mike SanGiovanni is escorting

1115 Arrive at sample location SED6
Photo 1P1/1S1 Looking south at confluence of unnamed tributary to Bound Brook and unnamed stream off of Spicer Ave

1117 DK begins to collect sample no. SED-6. Sed6 is approximately 30' downstream of confluence.
Sediment is fine-grained, brown in color, and contains significant amount of vegatative matter. Photo 1P2/1S2 - DK collecting sediment ~~sa~~ sample no. SED-6

1127 DK finishes collecting sample no. SED-6
Heading back to decon area

Andrew C Brandt
10/13/94

Andrew Clibanoff
10/13/94

(4)

1140 Arrive at decon area. Will follow Mike S. to Sediment sample location SED7/SED8

1145 Arrive at intersection of Belmont Ave. with unnamed Bound Brook Tributary
Photo 1P3/1S3 - View looking southeast at Belmont Ave. Bridge over unnamed tributary.

1146 SED7/SED8 sample location will be approximately 50 ft. downstream of Belmont Ave Bridge.

1149 DK begins collecting sediment sample SED7. SED8 is a duplicate sample taken at same location as SED7
Photo 1P4/1S4 DK collecting SED7/SED8

Sediment is brown with some gray particles, fine-grained, with vegetative matter. Very similar to sediment type found at sample location SED6.

Andrew Clibanoff
10/13/94

(b) Andrew Olkowski
10/15/84

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Andrew Olkowski
10/15/84

1302 DK
R
A

1320 D

1321 E
"

1400 C
f

1420 C
=

Andrew Ollendorf 10/13/94 (5)

1205 DK finishes collecting sample nos. SED7 & SED8. Heading back to decon area.

1210 Arrive at decon area

1215 Proceeding to SW2/SED2 sample location that was sampled 6/6/94. Sample location still staked out.

Sediment is brown colored & fine-grained with some vegetative matter.

Comparable to sediment samples collected today

1225 walked along bank of stream to sample location SW3/SW4/SED3 &c. Sample location was staked to mark location. Sediment type very comparable to all other sediments observed along the stream

1245 DK begins collecting rinsate sample no: RIN1 (bowl & scoopula

Photo IP5/15 - DK collecting RIN1

1300 DK finishes collecting rinsate sample RIN1

Andrew Ollendorf 10/13/94

Andrew C. Wendt 10/13/94

7

1302 DK begins collecting rinsate sample RIN2 (trowel)

Photo 1P6/1S6: DK collecting RIN2

1325 DK finishes collecting RIN2

1321 Begin to pack coolers ~~Box~~ AC with samples for shipping

1400 Coolers packed. DK completing paperwork for shipping

1420 Coolers ready to be shipped. Leaving site

Andrew C. Wendt 10/13/94

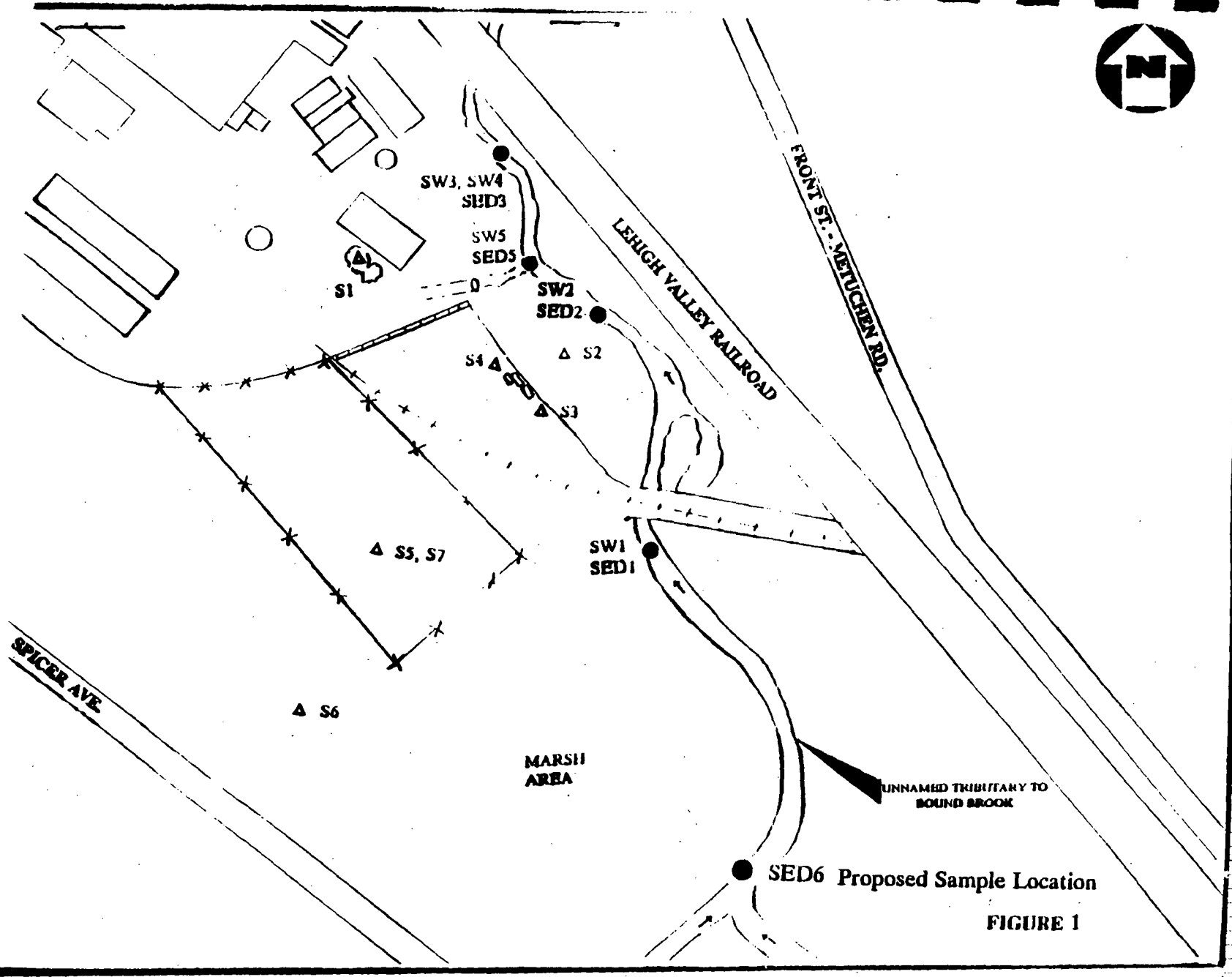
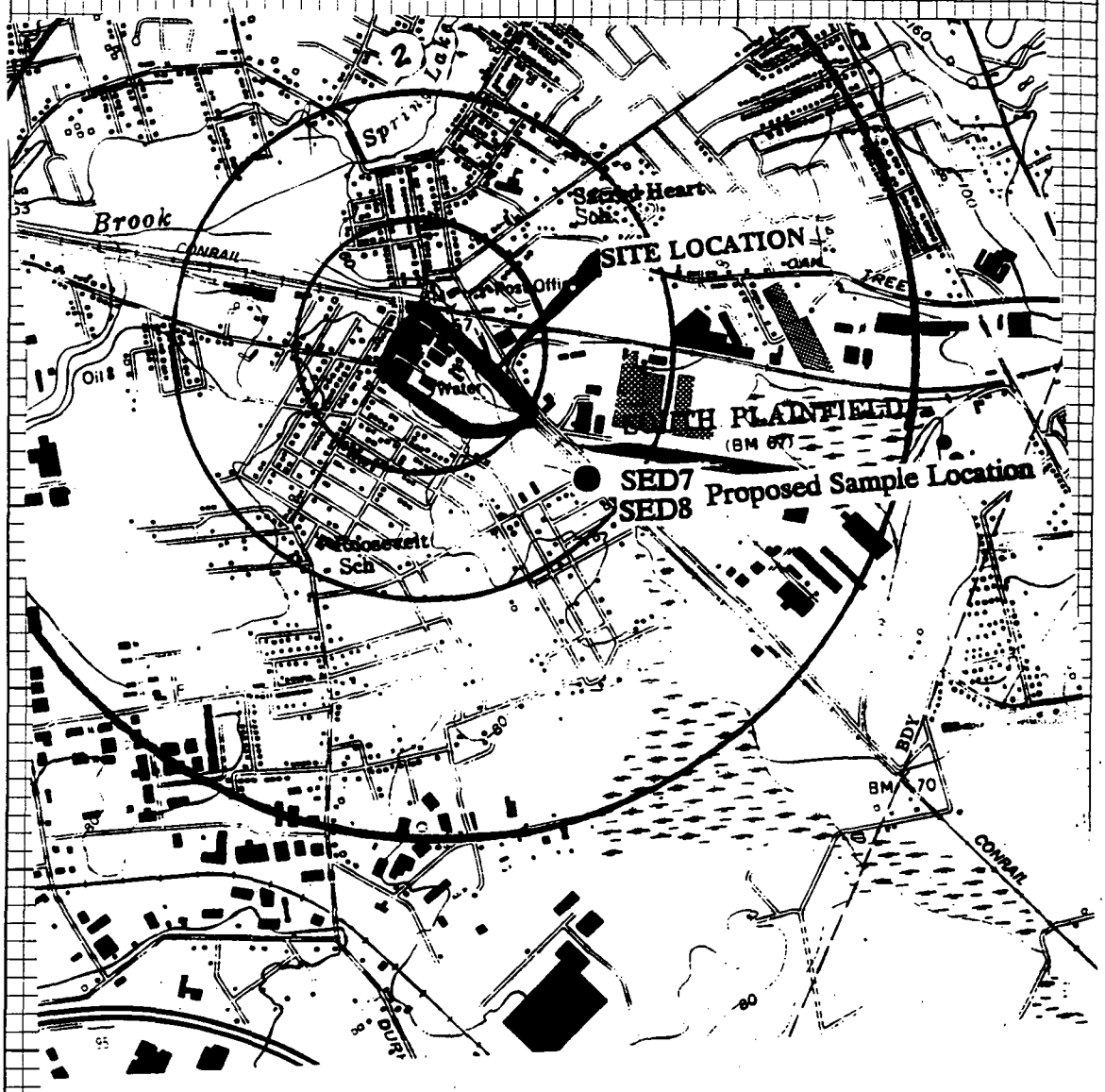


FIGURE 1

MAP KEY

SOIL SAMPLE

CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

REFERENCE NO. 18

SAMPLE TRIP REPORT

SITE NAME: Cornell Dubilier Electronics Site

PROJECT No.: 8003-306

CERCLIS ID No.: NJD981557879

SAMPLING DATE: October 13, 1994

EPA CASE No.: 22774

1. Site Location: Hamilton Boulevard, South Plainfield, New Jersey - Refer to Figure 1

2. Sample Locations: Refer to Figures 2 & 3

3. Sample Descriptions: Refer to Table 1

4. Laboratories Receiving Samples:

Sample Type	Name and Address of Laboratory
Full TCL Organics	IEA, Inc. - New Jersey 628 Route 10 Whippany, NJ 07981
TAL Inorganics (except CN)	IT Analytical Services - Export 5103 Old William Penn Highway Export, PA 15632

5. Sample Dispatch Data:

A total of two (2) aqueous samples and three (3) sediment samples were shipped on October 13, 1994 by Malcolm Pimie, Inc. personnel, via Federal Express, in one (1) cooler, under Airbill No. 2359714206 to IEA, Inc. - New Jersey for Full TCL Organics analyses. A total of two (2) aqueous samples and three (3) sediment samples were shipped on October 13, 1994 by Malcolm Pimie Inc. personnel, via Federal Express, in one (1) cooler, under Airbill No. 2359714195 to IT Analytical Services - Export for TAL Inorganics (excluding CN) analyses.

6. Sampling Personnel:

Name	Organization	Duties on Site
Andrew Cilbanoff	Malcolm Pimie, Inc.	Site Manager (SM)
David Kahlenberg	Malcolm Pimie, Inc.	Site Health & Safety Officer (SHSO), Sample Management Officer (SMO), Sampler

7. Weather Conditions:

10/13/94 Sunny; temperature, 60° F

8. Additional Comments:

All samples will be analyzed for Target Compound List (TCL) organic and Target Analyte List (TAL) inorganic compounds, excluding cyanide.

The collection time for RIN1 and RIN2 was after the collection of the sediment samples. However, the equipment used for rinsate collection was decontaminated prior to the actual sampling event and therefore can be associated with the sediment samples collected during this event.

9. Report Prepared By: _____ Date: October 20, 1994

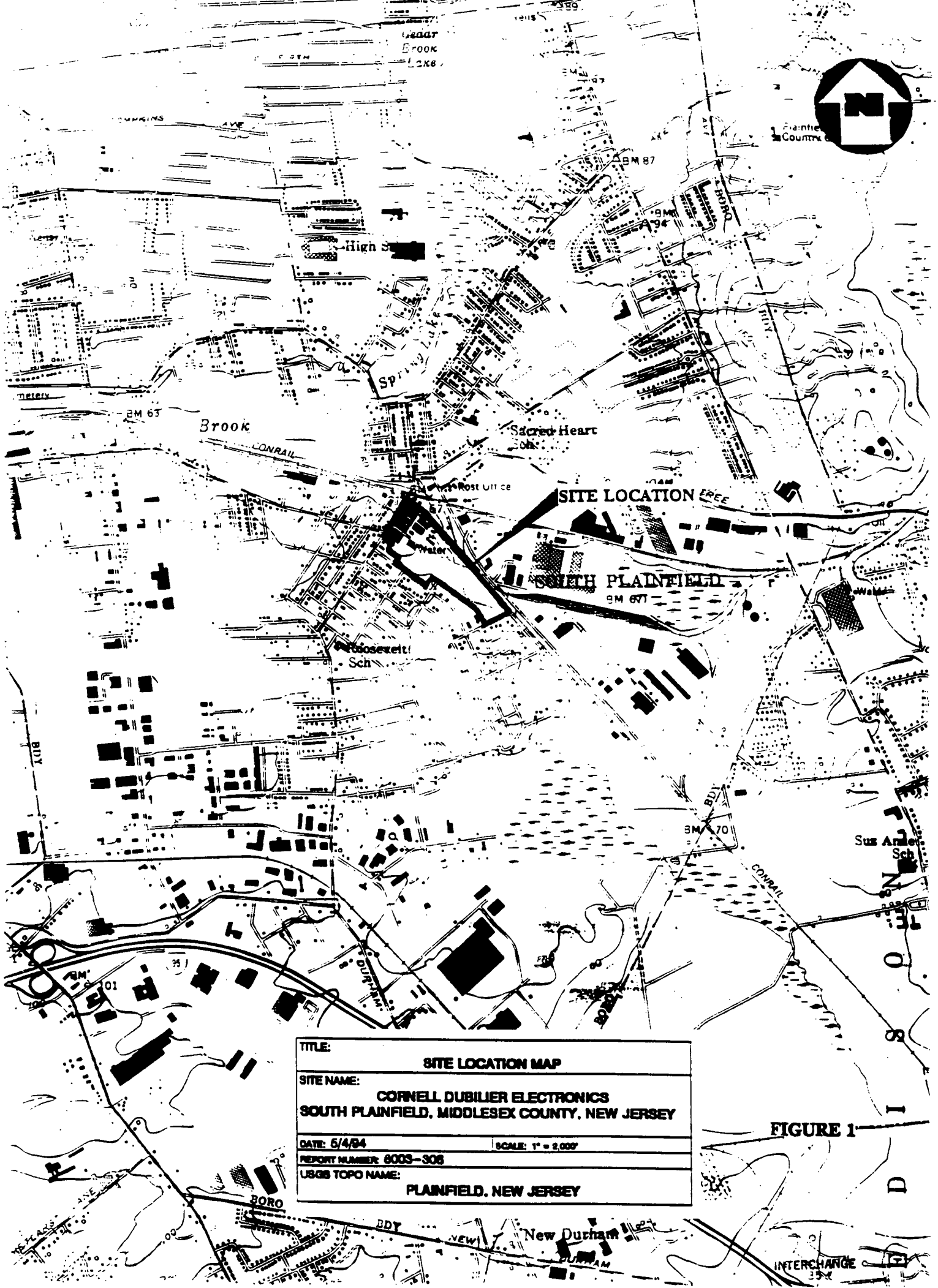
10. QA/QC Approved By: _____ Date: October 20, 1994

TABLE 1
SAMPLE DESCRIPTIONS
CORNELL DUBILIER ELECTRONICS SITE
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
SED6[1]	MBLZ89	BPL49	1117	Soil	Sediment sample collected approximately 30 feet downstream of confluence of unnamed tributary to Bound Brook unnamed stream off of Spicer Road (approx. 620 feet upstream of SW1/SED1).
SED7	MBLZ90	BPL50	1149	Soil	Sediment sample collected from unnamed Bound Brook tributary approximately 50 feet downstream of Belmont Avenue Bridge (approx. 1,350 feet upstream of SW1/SED1).
SED8[2]	MBLZ91	BPL51	1149	Soil	Duplicate sediment sample collected at same location as sample SED7.
RIN1	MBLZ92	BPL52	1245	Aqueous	Rinsate sample collected from bowl and scoopula.
RIN2	MBLZ93	BPL53	1302	Aqueous	Rinsate sample collected from trowel.

(1) Sample location designated for the collection of MS/MSD or MS/MD sample.

(2) Sample location designated for the collection of field duplicate sample.



TITLE: SITE LOCATION MAP	
SITE NAME: CORNELL DUBILIER ELECTRONICS SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 5/4/94	SCALE: 1" = 2,000'
REPORT NUMBER: 6003-306	
USGS TOPO NAME: PLAINFIELD, NEW JERSEY	

FIGURE 1

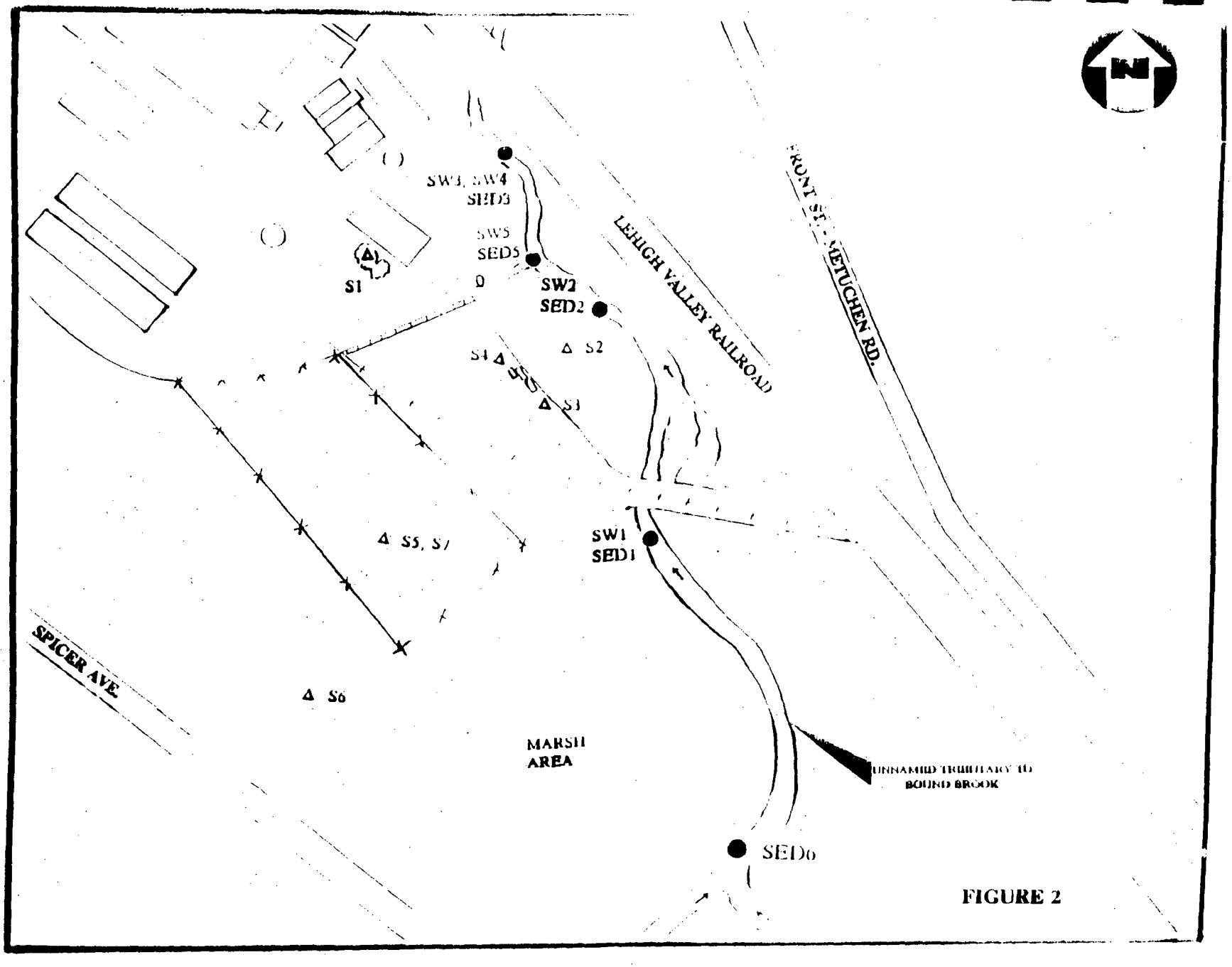
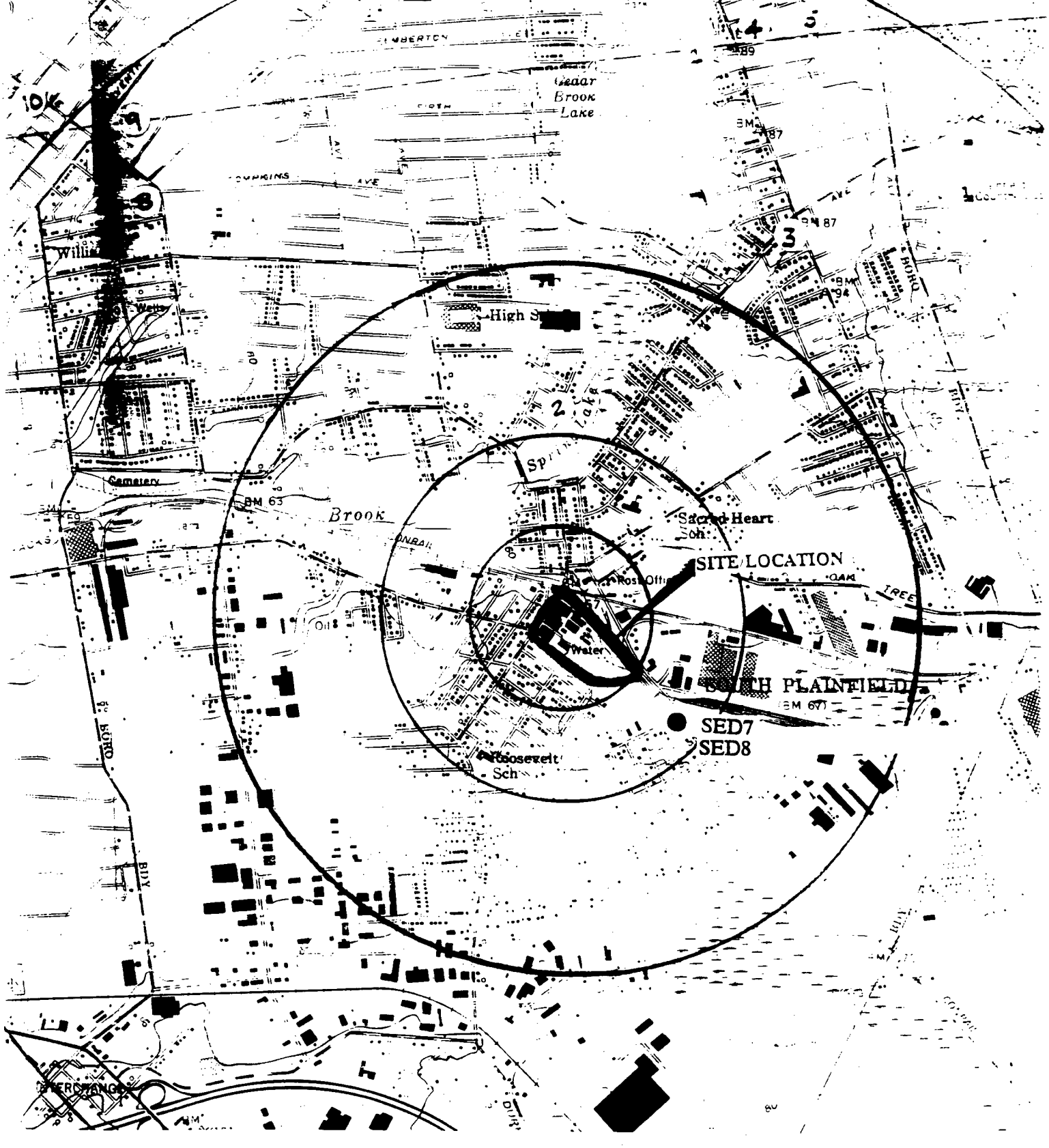


FIGURE 2

MAP KEY

SOIL SAMPLE △

CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

FIGURE 3

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No. (if applicable):

Case No.: 22774

1. Project Code: 8003306
Account Code:
2. Region No.: II
Sampling Co.: MPI
4. Date Shipped: 10/13/94
Carrier: Fed EX.

Regional Information:

Sampler (Name): DAVID KAHLENBERG

Airbill Number: 2359714206

Non-Superfund Program:

Sampler Signature:

5. Ship To: IEA, Inc. - New Jersey, 628 Route 10, Whippany, NJ 07981
ATTN: Brian Wood

Site Name: Cornell-Dubilier

3. Type of Activity: Lead / Pre-Remedial / Remedial / Removal
SF / PRP / ST / FED / PA / SSI [X] / LSI / RIFS / RD / RA / O&M / NPLD / CLEM / REMA / REM / OIL / UST

City, State: S. Plainfield, NJ
Site Spill ID: ZZ

6. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Other (Specify) 6. Ice only N. Not preserved

7. Sample Description (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis: VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC (B = Blank S = Spike D = Duplicate PE = Performance Eval. — = Not a QC Sample)
BPL49	5	L	G	N	✓				03037+38	SED6	10/13/94 1117	DBK	MBL289	S/SD
BPL49	5	L	G	N		✓	✓		03039	SED6	10/13/94 1117	DBK	MBL289	S/SD
BPL50	5	L	G	N	✓				03041+42	SED7	10/13/94 1149	DBK	MBL290	
BPL50	5	L	G	N		✓	✓		03043	SED7	10/13/94 1149	DBK	MBL290	
BPL51	5	L	G	N	✓				03045+46	SED8	10/13/94 1149	DBK	MBL291	
BPL51	5	L	G	N		✓	✓		03047	SED8	10/13/94 1149	DBK	MBL291	
BPL52	4	L	G	N	✓				03049+50	RIN1	10/13/94 1245	DBK	MBL292	
BPL52	4	L	G	N		✓	✓		03051+52	RIN1	10/13/94 1245	DBK	MBL292	
BPL53	4	L	G	N	✓				03054+55	RIN2	10/13/94 1302	DBK	MBL293	
BPL53	4	L	G	N		✓	✓		03056+57	RIN2	10/13/94 1302	DBK	MBL293	

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate: BPL49

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	10/13/94 4:05pm	Fed EX.			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Split Samples: [ ] Accepted (Signature) [ ] Declined

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:
Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 22774

1. Project Code: 8003306
Account Code:
2. Region No.: II
Sampling Co.: MPI
4. Date Shipped: 10/13/94
Carrier: Fed EX

Regional Information:
Sampler (Name): DAVID KAHLENBERG
Airbill Number: 2359714195

Non-Superfund Program:
Sampler Signature:
5. Ship To: IT Analytical Services - Export, 5103 Old William Penn Hwy, Export, PA 15632
ATTN: David Dunlap

Site Name: Cornell-Dubilier
City, State: S. Plainfield, NJ
Site Spill ID: ZZ

3. Type of Activity:
Lead: SF, PRP, ST, FED
Pre-Remedial: PA, SSI, LSI
Remedial: RIFS, PQ, RA, O&M, NPLD
Removal: CLEM, REMA, REM, OIL, UST

6. Preservative (Enter in Column D):
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (Specify)
N. Not preserved

7. Sample Description (Enter in Column A):
1. Surface Water
2. Ground Water
3. Leachate
4. Rinsate
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify)

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. only: Nitrate/Nitrite	Fluoride	High only: pH	Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC (B = Blank, S = Spike, D = Duplicate, PE = Performance Eval., — = Not a QC Sample)
MBLZ89	5	L	G	N	✓							03040	SED6	10/13/94 1117	DSK	BPL49	S
MBLZ90	5	L	G	N	✓							03044	SED7	10/13/94 1149	DSK	BPL50	
MBLZ91	5	L	G	N	✓							03048	SED8	10/13/94 1149	DSK	BPL51	
MBLZ92	4	L	G	2	✓							03053	RIN1	10/13/94 1245	DSK	BPL52	
MBLZ93	4	L	G	2	✓							03058	RIN2	10/13/94 1302	DSK	BPL53	

Shipment for Case complete? (Y/N): Y
Page 1 of 1
Sample used for a spike and/or duplicate: MBLZ89
Additional Sampler Signatures:
Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	10/13/94 1407	Fed EX.			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Split Samples: ☐ Accepted (Signature) ☐ Declined

EPA Form 9110-1 (Rev. S-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:
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SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Inorg-1

1 023361

REFERENCE NO. 19

MALCOLM PIRNIE, INC.	PROJECT NOTES

To:File	Date:Oecember 28, 1994
From:Andrew Cilbanoff	Project #:8003-306
Subject:USEPA Analytical Data - October 13, 1994	Site Name:Comell Dubilier Electronics

Due to the lack of an adequate surface water/sediment background sample for the June 8, 1994 USEPA sampling event, USEPA reinspected the Comell Dubilier Electronics (CDEI) site on October 13, 1994 and collected samples from two additional sediment sample locations. The samples were analyzed by USEPA Certified Laboratories for Target Compound Ust (TCL) organk: compounds and Target Analyte List (TAL) inorganic constituents. The analytical data has been analyzed and valklated using USEPA Contract Laboratory Program (CLP) protocols.

Sample locations can be found in the Sample Trip Report (Ref. No. 18).

The only hazardous substance detected at a concentration greater than 3 times background in the sediment samples collected from the CDEI site during the June 8, 1994 USEPA site inspection prioritization sampling event is a PCB (aroclor-1254 at 3,700 - 550,000 ug/kg in samples SED 1 - 3 & 5). The background concentration from sediment sample SED 6 collected on October 13, 1994 exhibited a concentration of aroclor-1254 of 520 E ug/kg.

SITE NAME: CORNELL DUBILIER ELECTRONICS SITE
PROJECT#: 8003-306
SAMPLING DATE: 10/13/94
EPA CASE NO.: 22774 LAB: IEA, INC.

VOLATILES					
Sample ID No.	SED6	SED7	SED8	RIN1	RIN2
Traffic Report No.	BPL49	BPL50	BPL51	BPL52	BPL53
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor	1	1	1	1	1
Percent Moisture	62	41	37	--	--
Chloromethane				7 J	
Bromomethane					
Vinyl Chloride					
Chloroethane					
Methylene Chloride					4 J
Acetone					8 J
Carbon Disulfide				12	
1,1-Dichloroethene					
1,1-Dichloroethane					
1,2-Dichloroethene (total)					
Chloroform					
1,2-Dichloroethane				4 J	
2-Butanone					
1,1,1-Trichloroethane					
Carbon Tetrachloride					
Bromodichloromethane					
1,2-Dichloropropane					
cis-1,3-Dichloropropene					
Trichloroethene					
Dibromochloromethane					
1,1,2-Trichloroethane					
Benzene					
trans-1,3-Dichloropropene					
Bromoform					
4-Methyl-2-Pentanone					
2-Hexanone					
Tetrachloroethene					
1,1,2,2-Tetrachloroethane					
Toluene					
Chlorobenzene					
Ethylbenzene					
Styrene					
Xylenes (Total)					

NOTES:
Blank Space – compound analyzed for but not detected
B – compound found in lab blank as well as sample, indicates possible/probable blank contamination
E – estimated value
J – estimated value, compound present below CRQL but above IDL
R – analysis did not pass EPA QA/QC
N – Presumptive evidence of the presence of the material
NR – analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS SITE
PROJECT#: 8003-306
SAMPLING DATE: 10/13/94
EPA CASE NO.: 22774 LAB: IEA, INC.

SEMI-VOLATILES					
Sample ID No.	SED6	SED7	SED8	RIN1	RIN2
Traffic Report No.	BPL49	BPL50	BPL51	BPL52	BPL53
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1	1	1	1	1
Percent Moisture	62	41	37	--	--
Phenol			130 J		
bis(2-Chloroethyl)ether					
2-Chlorophenol					
1,3-Dichlorobenzene					
1,4-Dichlorobenzene					
1,2-Dichlorobenzene					
2-Methylphenol					
2,2'-oxybis(1-Chloropropane)					
4-Methylphenol					
N-Nitroso-di-n-dipropylamine					
Hexachloroethane					
Nitrobenzene					
Isophorone					
2-Nitrophenol					
2,4-Dimethylphenol					
bis(2-Chloroethoxy)methane					
2,4-Dichlorophenol					
1,2,4-Trichlorobenzene					
Naphthalene					
4-Chloroaniline					
Hexachlorobutadiene					
4-Chloro-3-Methylphenol					
2-Methylnaphthalene					
Hexachlorocyclopentadiene					
2,4,6-Trichlorophenol					
2,4,5-Trichlorophenol					
2-Chloronaphthalene					
2-Nitroaniline					
Dimethylphlhaiate					
Acenaphthylene					
2,6-Dinitrotoluene					
3-Nitroaniline					
Acenaphthene					
2,4-Dinitrophenol					
4-Nitrophenol					
Dibenzofuran			110 J		
2,4-Dinitrotoluene					
Diethylphthalate					
4-Chlorophenyl-phenyl ether					
Fluorene					
4-Nitroaniline					
4,6-Dinitro-2-methylphenol					
N-nitrosodiphenylamine					
4-Bromophenyl-phenyl ether					
Hexachlorobenzene					
Pentachlorophenol					
Phenanthrene	540 J	320 J	410 J		
Anthracene	140 J	82 J	150 J		
Carbazole			64 J		
Di-n-butylphthalate					
Fluoranthene	1300 E	660 E	720 E		

SITE NAME: CORNELL DUBILIER ELECTRONICS SITE
PROJECT#: 8003-306
SAMPLING DATE: 10/13/94
EPA CASE NO.: 22774 LAB: IEA, INC.

SEMI-VOLATILES										
Sample ID No.	SED6		SED7		SED8		RIN1		RIN2	
Traffic Report No.	BPL49		BPL50		BPL51		BPL52		BPL53	
Matrix	SEDIMENT		SEDIMENT		SEDIMENT		WATER		WATER	
Units	ug/kg		ug/kg		ug/kg		ug/L		ug/L	
Dilution Factor/GPC Cleanup (Y)	1		1		1		1		1	
Percent Moisture	62		41		37		--		--	
Pyrene	1600	E	3400	E	4800	E				
Butylbenzylphthalate	8400	E	35000	E	38000	E				
3,3'-Dichlorobenzidine										
Benzo(a)anthracene	640	J	770	E	1000	E				
Chrysene	440	J	120	J	190	J				
bis(2-Ethylhexyl)phthalate	48000	E	250000	E	220000	E				
Di-n-octylphthalate	17000	E	100000	E	130000	E				
Benzo(b)fluoranthene	960		400	J	540	E				
Benzo(k)fluoranthene	690	J	220	J	310	J				
Benzo(a)pyrene	650	J	240	J	340	J				
Indeno(1,2,3-cd)pyrene	290	J	110	J	160	J				
Dibenz(a,h)anthracene	120	J			69	J				
Benzo(g,h,i)perylene	280	J	110	J	150	J				

NOTES:
Blank Space – compound analyzed for but not detected
B – compound found in lab blank as well as sample, indicates possible/probable blank contamination
E – estimated value
J – estimated value, compound present below CRQL but above IDL
R – analysis did not pass EPA QA/QC
N – Presumptive evidence of the presence of the material
NR – analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: CORNELL DUBILIER ELECTRONICS SITE
PROJECT#: 8003-306
SAMPLING DATE: 10/13/94
EPA CASE NO.: 22774 LAB: IEA, INC.

PESTICIDES/PCBs					
Sample ID No.	SED6	SED7	SEDS	RIN1	RIN2
Traffic Report No.	BPL49	BPL50	BPL51	BPL52	BPL53
Matrix	SEDIMENT	SEDIMENT	SEDIMENT	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1	1	1	1	1
Percent Moisture	62	41	37	--	--
alpha-BHC					
beta-BHC					
delta-BHC					
gamma-BHC (Lindane)					
Heptachlor					
Aldrin					
Heptachlor epoxide					
Endosulfan I					
Dieklrin	34 E				
4,4'-DDE	6.4 J				
Endrin					
Endosulfan II		21 EN			
4,4'-DDD	110 EN	160 EN	84 EN		
Endosulfan sulfate					
4,4'-DDT			150 EN		
Methoxychlor					
Endrin ketone	24 E	53 E	34 E		
Endrin aldehyde					
alpha-Chlordane	64 E	53 E	51 E		
gamma-Chlordane	61 E	51 E	49 E		
Toxaphene					
Aroclor-1016					
Aroclor-1221					
Aroclor-1232					
Aroclor-1242					
Aroclor-1248	180 E	100 EN	64 EN		
Aroclor-1254	520 E	250 E	310		
Aroclor-1260					

NOTES:
Blank Space – compound analyzed for but not detected
B – compound found in lab blank as well as sample, indicates possible/probable blank contamination
E – estimated value
J – estimated vaiue, compound present below CRQL but above IDL
R – analysis did not pass EPA QA/QC
N – Presumptive evidence of the presence of the material
NR – analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

CORNELL DUBILIER ELECTRONICS
PROJECT#: 8003-306
SAMPLING DATE: 10/13/94
EPA CASE NO.: 22774
LAB NAME: IT ANALYTICAL

INORGANICS										
Sample ID No.	SED6		SED7		SED8		RIN1		RIN2	
Traffic Report No.	MBLZ89		MBLZ90		MBLZ91		MBLZ92		MBLZ93	
Matrix	SEDIMENT		SEDIMENT		SEDIMENT		WATER		WATER	
Units	mg/kg		mg/kg		mg/kg		ug/L		ug/L	
Percent Solids	38		60.4		65.2		--		--	
Aluminum	12700	E	5370		4870		68.8	J	37.6	J
Antimony										
Arsenic	9	E	6.4	E	6.2	E				
Barium	277	E	110		107		0.5	J	0.78	J
Beryllium	0.93	J	0.75	J	0.5	J				
Cadmium	16.2	E	13.7		11.6					
Calcium	6160	E	4710		4510		520	J	501	J
Chromium	35.1	E	16.3		15.3					
Cobalt	12	J	8.2	J	7.3	J				
Copper	109	E	42.3		39.2		2.5	J	1.8	J
Iron	21000	E	10900		10900		39.7	J	28.9	J
Lead	242	E	115	E	116	E				
Magnesium	4290	E	2400		2380		18.4	J	14.5	J
Manganese	253	E	167		251		0.91	J	0.68	J
Mercury	0.28	E	0.78	E						
Nickel	34.7	E	17.7		17					
Potassium	1190	J	465	J	536	J				
Selenium	1.9	J	2	E	1.4	J	2.7	J		
Silver	3.7	J	0.82	J	1.2	J				
Sodium	325	J	121	J	137	J	895	J	902	J
Thallium										
Vanadium	40.3	E	15.8	J	14.3	J				
Zinc	372	E	176		169		3.6	J	4.6	J

NOTES:
Blank Space – compound analyzed for but not detected
E – estimated value
J – estimated value, compound present
below CRDL but above IDL
R – analysis did not pass EPA QA/QC
NR – analysis not required

6

QUALITY ASSURED
EPA-MMB FINAL
CONTRACT LABORATORY DATA

SITE NAME: CORNELL DUBILIER

CASE NO./SAS NO.: 22774

TYPE OF ANALYSIS (circle one):

~~VOA only~~
Full TCL IEANJ
~~Full TAL~~
Full TAL and CN
SAS/Other _____

From: VALERIE SMITH

Sent to: ANDREW CLIBANOFF

Date Sent: 12/16/94

RECORD OF COMMUNICATION
REGIONAL SAMPLE CONTROL CENTER

DATE: 11/22/94
SUBJECT: CLP Data Package for Quality Assurance Review
FROM: RSCC/ESAT
TO: George Karras,
Toxic and Hazardous Waste Sectioo

Rec'd RSCC 12/12/94

Attached is the following ORGANIC Data Package to be reviewed for Quality Assurance

SITE	CASE/SAS#	LAB	MATRIX	# SAMPLES
Cornell Dubilier Electronics	22774	JEANJ	Water	2
APER/SI			Soil	3

REGION II RSCC DATA TRANSFER LOG

Relinquished By Signature	Date/Time	Received By Signature	Date/Time
Janet Trotter	11/21/94	John Bulis	11/22/94
John Bulis	11/22/94	OCR (J Bulis)	11/22/94
J. Trotter	11/30/94	[illegible]	11/30/94
[illegible]	12/9/94	M Puckare	12/9/94
M Puckare	12/9/94 9:00am	[illegible]	12/12/94
J. Trotter	12/12/94	SDC	[illegible]
[illegible]		(Hand carried)	

(OVER FOR INSTRUCTIONS) revsd 3/93

Request to Contact Contract Laboratory

Date: 12/8/94 **Laboratory:** ICANJ

Case No.: 22774 **ESAT Reviewer:** George Vailakis

To: _____, **Task Monitor**

ESAT's review of the above referenced data package bas revealed that the following information and/or documentation, necessary to complete the review is missing from the data package. Permission is requested for ESAT personnel to contact the Contract Laboratory to obtain this information.

Raw data for the following standards:

AR12480B (11/16/94 @ 0326)
AR12540B (11/16/94 @ 0511)

AR12480Z (11/16/94 @ 0417)
AR12540Z (↓ @ 0602)

Request is :

✓ Approved

_____ Disapproved

George Karras — Task Monitor

12/8/94 — Date

Comments:

b1 Reference to Case No(s):

22774

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 12/8/94

Laboratory Name: TEANJ

Lab Contact: Kevin Gormon

Region: II

Regional Contact: G. Vailakis

Call Initiated By: ___ Laboratory ✓ Region

In reference to data for the following sample number(s):

AR124808, AR125408, AR124802 & AR125402

Summary of Questions/Issues Discussed:

Requested Chromatograms & raw data for the above ~~analyses~~ standards for use in sample identification.

Summary of Resolution:

Sent a ~~fax~~ FAX to the lab with all necessary info. The data will be sent to ESAT as soon as possible.

George S. Vailakis
Signature

12/8/94
Date

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

IEA
An Aquarion Company

628 Route 10
Whippany, New Jersey 07981

Phone 201-428-8181
Fax 201-428-5222

FACSIMILE COVER SHEET

DATE: 12/9/94

NUMBER OF PAGES (Including Cover Sheet) 13

TO:

Name: George Valakis

Location: Lockheed

Telephone No.: _____ Fax No.: 908 417 5727

FROM:

Name: K. Geeman

Location: IEA/NJ

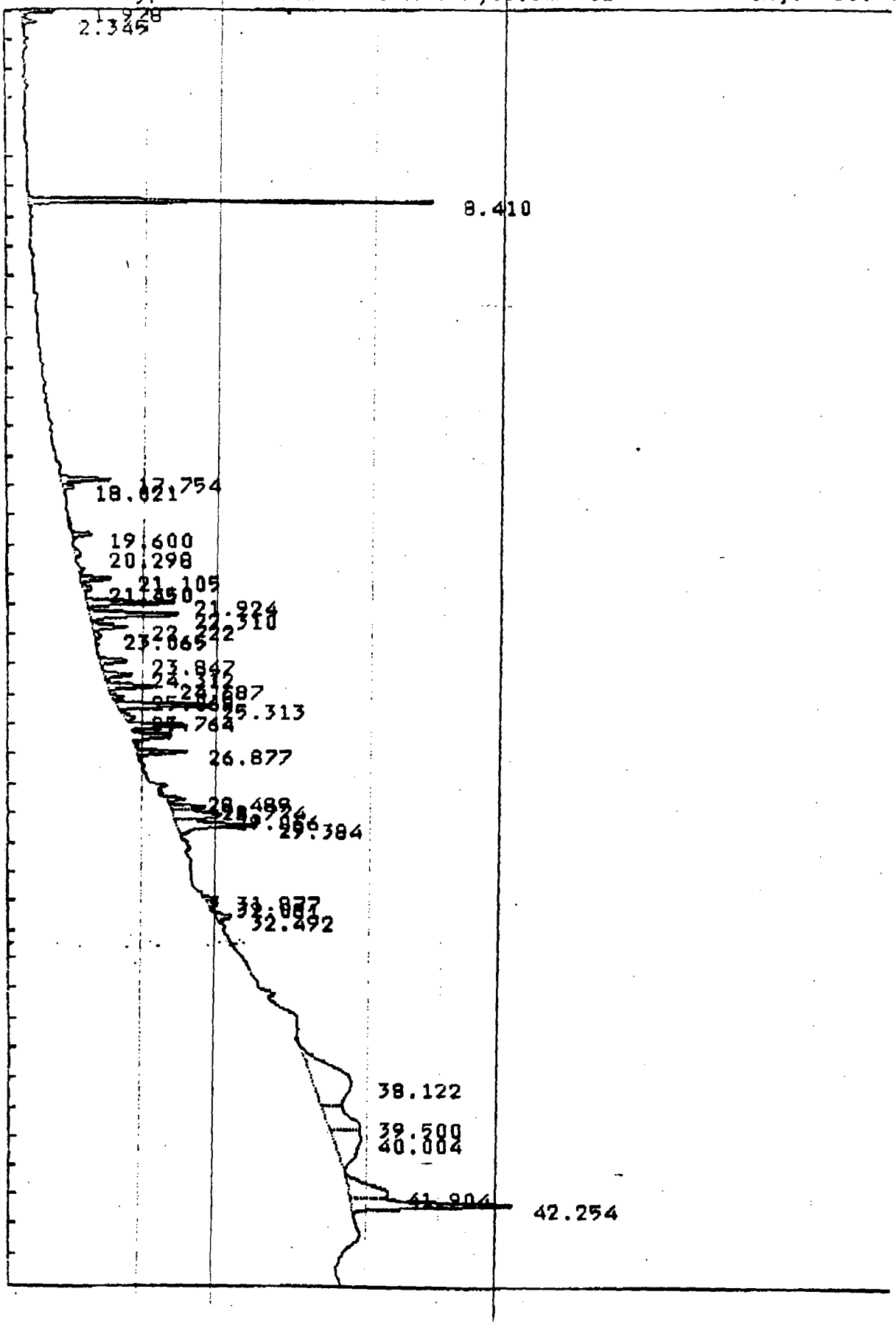
Telephone No.: 201-428-8181 Fax No.: 201-428-5222

MESSAGE
Here's what you need. Call if any questions.
KGB

Monroe, Connecticut 203-261-4456
Sunrise, Florida 305-846-1730
Schaumburg, Illinois 708-705-0740
N. Billerica, Massachusetts 617-272-5212
Research Triangle Park, North Carolina 919-677-0090

IEA Pesticide Standard Report

Sample Name : AR12540B Inj on 0511 16Nov1994
Result File : /DATA/LOOP/RESULT/048CLP069E_015. INSTRUMENT : HP58904B
Column Type : DB-608 30-Meter,0.53mm ID Inj. Vol. : 1 ul



IEA Peaticide Standard Report

Sample Name : AR12540B
Report No :252.00
Result File : /DATA/LOOP/RESULT/D48CLP069E_015.RES
Column Type : DB-608 30 Meter 0.53mm ID
Inj. Vol. : 1 ul
Instrument : HP58904B
Calculation : ExternalSTD
Run Time : 45.00 Mins. Injected on 0511 16NovI994
Sequence File : /DATA/LOOP/SEQUENCE/S4BCLP069E.SEQ
Subseq/Sample : 1/ 15
Bottle no. : 16

% Dil-Fact
10.00

Run Status : RunStatusOK
EndOffBaseline

Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
1	1.30		.025345	15513	BV	0.0000	
2	1.34		.063686	33866	VV	0.0000	
3	1.49		.038816	5404	VV	0.0000	
4	1.53		.040595	6125	VV	0.0000	
5	1.61		.049422	13731	VV	0.0000	
6	1.75		.067787	28663	VV	0.0000	
7	1.98		.062580	12580	VV	0.0000	
8	2.34		.109239	11861	VB	0.0000	
9	8.41	8.45	.083506	198419	BV	.0186	TCX
10	17.75		.118027	32782	PV	0.0000	
11	18.02		.142379	9106	VB	0.0000	
12	19.60		.093071	10715	BV	0.0000	
13	20.30		.193015	7570	BV	0.0000	
14	21.10		.131136	22410	PV	0.0000	
15	21.45		.138813	7777	VV	0.0000	
16	21.92		.126989	63934	VV	0.0000	
17	22.31		.146900	76574	VV	0.0000	
18	22.72	22.76	.132503	24730	VV	.0020	A-CHLORDANE
19	23.07		.200651	7583	VB	0.0000	
20	23.85		.132316	20398	BV	0.0000	
21	24.31		.138838	21241	PV	0.0000	
22	24.69	24.66	.125403	32485	VV	.0035	DIELDRIN
23	25.07		.105866	7139	PV	0.0000	
24	25.31		.129159	74081	VV	0.0000	
25	25.76		.194290	11915	VV	0.0000	
26	26.88		.121770	35406	VB	0.0000	
27	28.49		.095234	10471	BB	0.0000	
28	28.77		.139528	27841	BV	0.0000	
29	29.07		.239007	63888	VV	0.0000	
30	29.38	29.43	.192828	66443	VV	.0117	4,4' DDT
31	31.88		.119601	10783	PV	0.0000	
32	32.08		.177810	11007	VV	0.0000	
33	32.49		.170842	17076	VV	0.0000	
34	38.12		1.261607	255844	BV	0.0000	
35	39.50		.678636	113392	VV	0.0000	
36	40.00		.908004	138963	VB	0.0000	
37	41.90		.476888	97915	BV	0.0000	

IEA Pesticide Standard Report

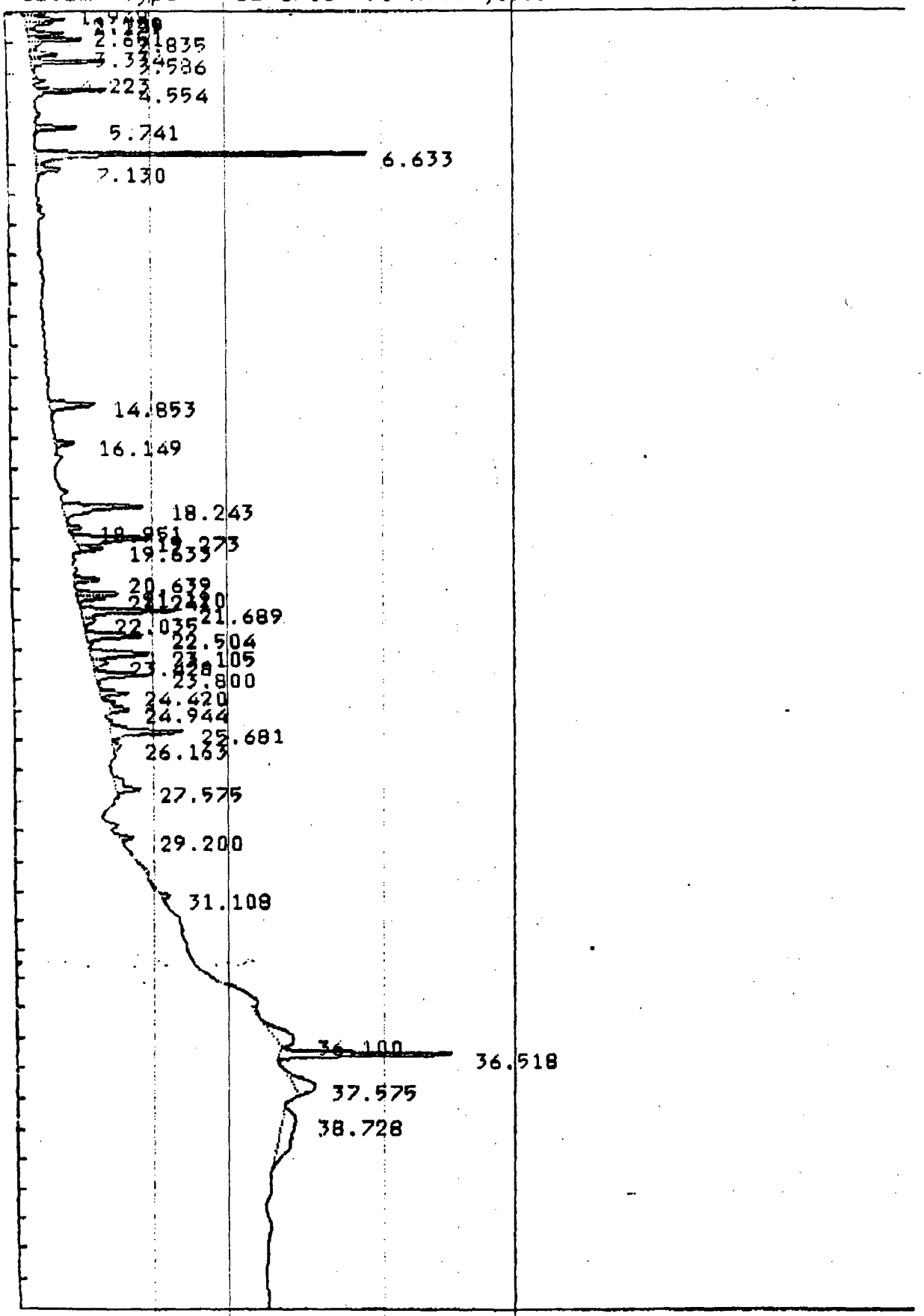
Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
38	42.25	#42.22	.206866	179850	VV	.0109	DCB

Total Area : 1804479 Total ng inj : .047

Report Time : 0602 16Nov1994
Method : /DATA/LOOP/METHOD/HP58904BCLP69.MTH
Result File : /DATA/LOOP/RESULT/D4BCLP069E_015.RES

IEA Pesticide Standard Report

Sample Name : AR125402 Inj on 0602 16Nov1994
Result File : /DATA/LOOP/RESULT/D4ACLP069E_016. INSTRUMENT: HP58904A
Culumn Type : DB-1701 30-Meter,0.53mm ID Inj. Vol. : 1 ul



IEA Paeticide Standard Report

Sample Name : AR125402 Report No :254.00
Result File : /DATA/LOOP/RESULT/D4ACLP069E_016.RES
Column Type : DB-1701 30 Meter,0.53mm ID Inj. Vol. : 1 ul
Instrument : HP58904A
Calculation : ExternalSTD
Run Time : 45.00 Mins. Injected on 0602 16Nov1994
Sequence File : /DATA/LOOP/SEQUENCE/S4ACLP069E.SEQ
Subseq/Sample : 1/ 16 Bottle no. : 16

% Dil-Fagt
10.00

Run Status : RunStatusOK
EndOffBaseline

Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
1	1.03		.054783	105336	BV	0.0000	
2	1.53		.080270	6069	VV	0.0000	
3	1.79		.108292	11595	VV	0.0000	
4	1.95		.100736	10261	VV	0.0000	
5	2.15		.109991	16234	VV	0.0000	
6	2.28		.089691	13735	VV	0.0000	
7	2.65		.118043	17162	VV	0.0000	
8	2.84		.068451	18354	VV	0.0000	
9	3.33		.131652	13309	VV	0.0000	
10	3.59		.063655	29074	VV	0.0000	
11	4.22		.115016	5850	VV	0.0000	
12	4.55		.078760	20242	PV	0.0000	
13	5.74		.102646	15678	SB	0.0000	
14	6.63	6.61	.089405	138663	BV	.0222	TCX
15	7.13		.147345	13136	VB	0.0000	
16	14.85	14.89	.160639	27586	BB	.0052	ALDRIN
17	16.15		.124751	8931	PV	0.0000	
18	18.24		.198724	57926	BV	0.0000	
19	18.95		.115213	6123	PB	0.0000	
20	19.27		.179782	51349	BV	0.0000	
21	19.63		.121514	10713	VB	0.0000	
22	20.64	20.63	.137438	13500	PB	.0015	A-CHLORDANE
23	21.12		.139120	20918	BV	0.0000	
24	21.24		.124247	13078	VV	0.0000	
25	21.69		.155873	52827	VV	0.0000	
26	22.03	21.98	.177856	8661	VV	.0017	DIELDRIN
27	22.50		.142902	29578	PV	0.0000	
28	23.10	23.06	.189849	38807	VV	.0095	ENDRIN
29	23.43		.195501	10016	VV	0.0000	
30	23.80		.153728	27975	VB	0.0000	
31	24.42		.131317	13823	BV	0.0000	
32	24.94		.140248	10280	VB	0.0000	
33	25.68	25.74	.186332	49998	VV	.0121	4,4' DDD
34	26.16		.172973	5847	VV	0.0000	
35	27.57		.248331	22769	BV	0.0000	
36	29.20		.146461	8063	PV	0.0000	
37	31.11		.295483	9617	BV	0.0000	

IEA Pesticide Standard Report

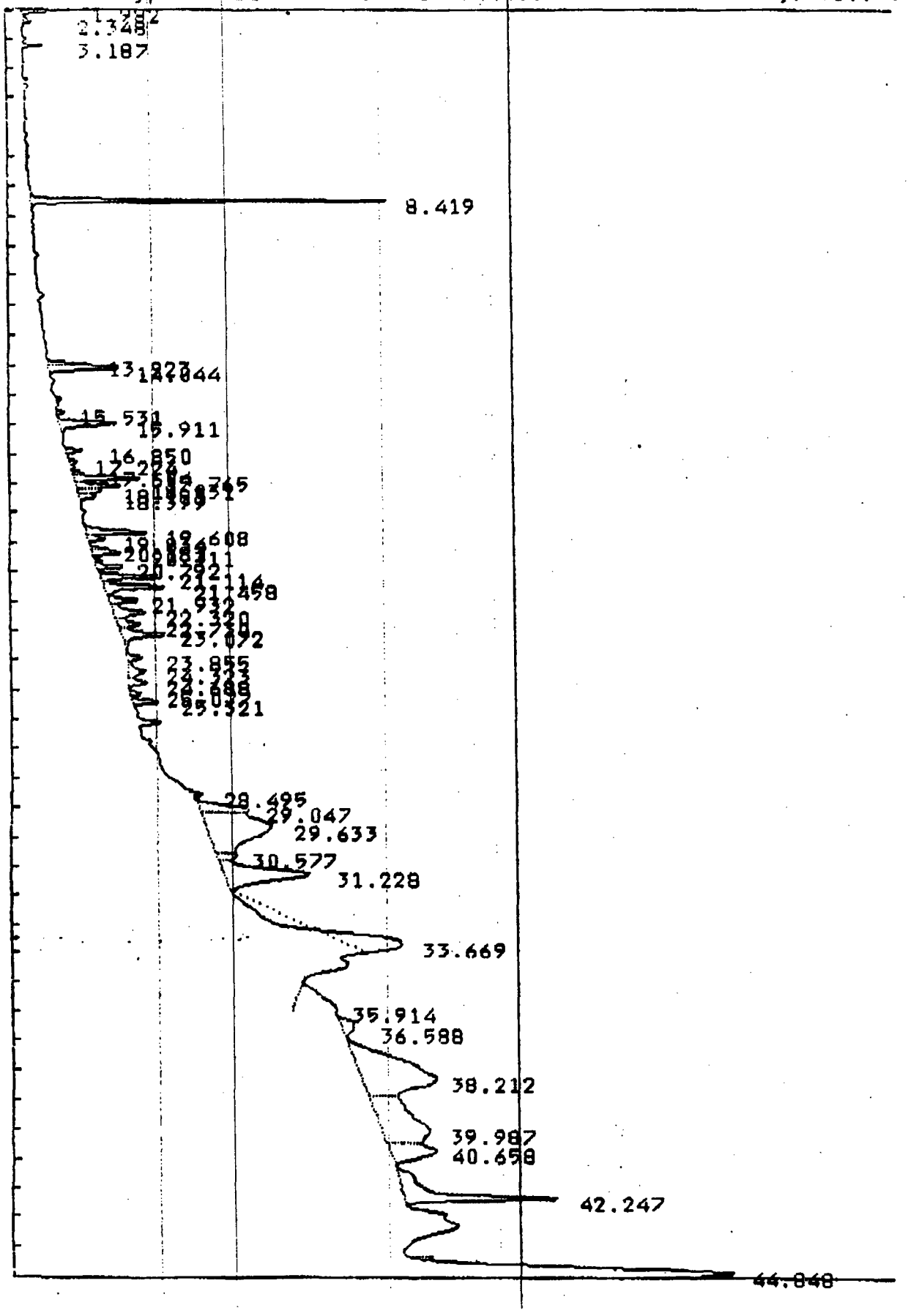
Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
38	36.10		.815204	46960	VB	0.0000	
39	36.52	#36.53	.135107	87824	BV	.0089	DCB
40	37.58		.489489	37710	PB	0.0000	
41	38.73		1.394166	64253	BB	0.0000	

Total Area : 1169831 Total ng inj : .061

Report Timo : 0650 16Nov1994
Method : /DATA/LOOP/METHOD/HP58904ACLP69.MTH
Result File : /DATA/LOOP/RESULT/04ACLP069E_016.RES

IEA Pesticide Standard Report

Sample Name : AR12480B Inj on 0326 16Nov1994
Result File : /DATA/LOOP/RESULT/D48CLP069E_013. INSTRUMENT : HP589048
Column Type : DB-608 30-Meter,0.53mm ID Inj. Vol. : 1 ul



IEA Pesticide Standard Report

Sample Name : AR12480B
Report No :250.00
Result File : /DATA/LOOP/RESULT/D4BCLP069E_013.RES
Column Type : DB-608 30 Meter,0.53mm ID
Inj. Vol. : 1 ul
Instrument : HP589048
Calculation : ExternalSTD
Run Time : 45.00 Mins. Injected on 0326 16Nov1994
Sequence File : /DATA/LOOP/SEQUENCE/S48CLP069E.SEQ
Subseq/Sample : 1/ 13 Bottle no. : 14

% Dil-Fact
10.00

Run Status : RunStatusOK
EndOffBaseline

Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
1	1.32		.056350	468383	BV	0.0000	
2	1.49		.039003	5077	VV	0.0000	
3	1.58		.081498	34308	VV	0.0000	
4	1.72		.037683	16769	VV	0.0000	
5	1.75		.065867	27307	VV	0.0000	
6	1.98		.070329	10506	VV	0.0000	
7	2.35		.096554	5454	VV	0.0000	
8	3.19		.067516	10083	VV	0.0000	
9	8.42	8.45	.084944	185730	VV	.0174	TCX
10	13.92		.088055	18272	BV	0.0000	
11	14.04	14.00	.136170	56761	VV	.0073	G-BHC
12	15.53		.116802	5379	VV	0.0000	
13	15.91		.187763	51043	PB	0.0000	
14	16.85		.110417	9884	OB	0.0000	
15	17.22		.124209	6333	BV	0.0000	
16	17.60	17.57	.100212	6179	VV	.0007	ALDRIN
17	17.77		.124973	44079	VV	0.0000	
18	18.03		.128071	31536	VV	0.0000	
19	18.19		.155831	19970	VV	0.0000	
20	18.40		.131332	11951	VB	0.0000	
21	19.61		.131014	43309	BV	0.0000	
22	19.83		.121098	11974	VV	0.0000	
23	20.18		.097918	9379	VV	0.0000	
24	20.31		.125388	21023	VV	0.0000	
25	20.79	20.86	.119603	19336	VV	.0017	HEPTACHLOR EPOXIDE
26	21.11		.131957	45710	VV	0.0000	
27	21.46		.157273	54678	VV	0.0000	
28	21.93		.160026	27240	VV	0.0000	
29	22.32		.239728	42090	VV	0.0000	
30	22.73	22.76	.178293	21631	VV	.0017	A-CHLORDANE
31	23.07		.196881	52059	VB	0.0000	
32	23.86		.166481	13265	BV	0.0000	
33	24.32		.233592	23076	VV	0.0000	
34	24.69	24.66	.149786	15320	VV	.0017	DIELDRIN
35	25.08		.111213	6516	PV	0.0000	
36	25.32		.118960	17323	VV	0.0000	
37	28.50		.155499	9906	BB	0.0000	

IEA Pesticide Standard Report

Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
38	29.05		.318653	79977	BV	0.0000	
39	29.63		.919007	310216	VV	0.0000	
40	30.58	30.58	.199436	20906	VV	.0021	ENDOSULFAN SULFATE
41	31.23		.475214	212396	VV	0.0000	
42	33.67		.243990	71420	PB	0.0000	
43	35.91		.652044	146328	PB	0.0000	
44	36.59		.547586	32074	BV	0.0000	
49	38.21		1.150099	451614	VV	0.0000	
46	39.99		1.214477	306498	VV	0.0000	
47	40.66		.495566	119462	VB	0.0000	
48	42.25	#42.22	.276840	229048	BV	.0139	DCB
49	44.85		.197093	80465	BB	0.0000	

Total Area : 3519244 Total ng inj t .046

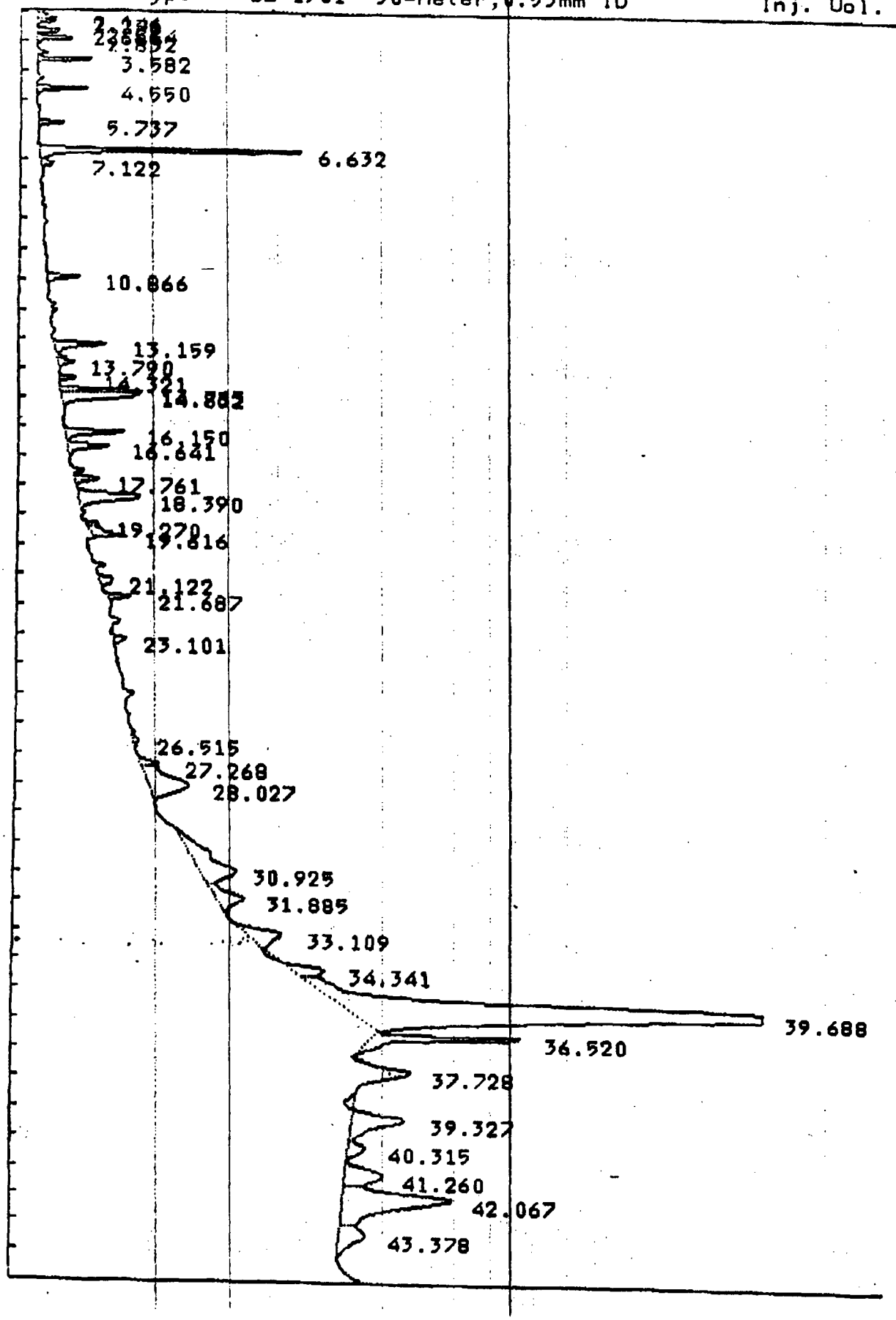
Report Time : 0415 16Nov1994
Method : /DATA/LOOP/METHOD/HP58904BCLP69.MTH
Result File : /DATA/LOOP/RESULT/D4BCLP069E_013.RES

ac

IEA Pesticide Standard Report

Sample Name : AR124802
Result File : /DATA/LOOP/RESULT/04ACLP069E_014.
Column Type : DB-1701 30-Meter, 0.53mm ID

Inj on 0417 16Nov1994
INSTRUMENT: HP58904A
Inj. Vol. : 1 ul



2

IEA Pesticide Standard Report

Sample Name : AR124802 Report No :252.00
Result File : /DATA/LDDP/RESULT/D4ACLP069E_014.RES
Column Type : D8-1701 30 Meter,0.53mm ID Inj. Vol. : 1 ul
Instrument : HP58904A
Calculation : ExternalSTD
Run Time : 45.02 Mins. Injected on 0417 16Nov1994
Sequence File : /DATA/LDDP/SEQUENCE/S4ACLP069E.SEQ
Subseq/Sample : 1/ 14 Battle no. : 14

% Oil-Fact
10.00

Run Status : RunStatusOK
EndOffBaseline

Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
1	1.03		.063911	546163	BV	0.0000	
2	1.39		.079332	10745	PV	0.0000	
3	1.50		.053399	12580	VV	0.0000	
4	1.79		.097523	5284	VV	0.0000	
5	2.15		.099932	7278	VV	0.0000	
6	2.28		.067391	6607	VV	0.0000	
7	2.56		.051630	5540	PV	0.0000	
8	2.64		.081194	6532	VV	0.0000	
9	2.83		.072337	13872	VV	0.0000	
10	3.58		.076970	19124	VV	0.0000	
11	4.55		.100335	18989	VV	0.0000	
12	5.74		.105682	9839	BB	0.0000	
13	6.63	6.61	.095788	115856	BV	.0185	TCX
14	7.12		.156736	7596	VB	0.0000	
15	10.87		.123815	14917	BB	0.0000	
16	13.16		.168564	31986	BV	0.0000	
17	13.79		.143174	8265	VB	0.0000	
18	14.32		.117804	7749	BV	0.0000	
19	14.76		.110421	31311	PV	0.0000	
20	14.83		.230447	62471	VB	0.0000	
21	16.15		.160078	34315	BV	0.0000	
22	16.44		.172017	26068	VB	0.0000	
23	17.76		.155908	13640	VB	0.0000	
24	18.39		.308961	63651	BV	0.0000	
25	19.27		.103893	5888	BV	0.0000	
26	19.62		.207976	21367	VB	0.0000	
27	21.12		.231250	12012	PV	0.0000	
28	21.69		.142672	12436	PB	0.0000	
29	23.10	23.06	.151938	7264	BV	.0018	ENDRIN
30	26.51		.354993	6744	BV	0.0000	
31	27.27		.173869	11142	BV	0.0000	
32	28.03	28.06	.703309	93721	VV	.0236	ENDRIN ALDEHYDE
33	30.92		.940504	121088	BV	0.0000	
34	31.89	31.93	.534952	51582	VV	.0121	ENDRIN KETONE
35	33.11		.502319	62371	PV	0.0000	
36	34.34		.308679	35549	PV	0.0000	
37	35.69		.672186	1026976	VB	0.0000	

IEA Pesticide Standard Report

Pk#	RT	ID-tm	Peak Width	Area	Code	ng inj	Name
38	36.52	#36.53	.165596	93983	BV	.0095	DCB
39	37.73		.281123	23067	PB	0.0000	
40	39.33		.408121	73980	BV	0.0000	
41	40.32		.391150	23563	VV	0.0000	
42	41.26		.577419	75761	PV	0.0000	
43	42.07		.674506	255435	VV	0.0000	
44	43.38		.617963	56684	VV	0.0000	

Total Area : 3152990 Total ng inj : .065

Report Time : 0510 16Nov1994
Method : /DATA/LOOP/METHOD/HP58904ACLP69.MTH
Result File : /DATA/LOOP/RESULT/D4ACLP069E_014.RES

2

CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 22774 SDG No.: BPL49, 52 LABORATORY: 1EANJ

SITE: Cornell Dubilier Electronics

DATA ASSESSMENT

The current Functional Guidelines for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detects), "R" (unusable), or "JN" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they can not be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

*Analytical data qualified as "JN" or "R" may not be used to demonstrate compliance with Toxicity Characteristic or Land Ban Regulations.

Reviewer's Signature: Gary S. Vanderlin Date: 12/9/1994

Verified By: G. Farros Date: 12/12/1994

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

BNA:

Extraction holding times were exceeded for samples BPL49, 50 and 51. All results for these samples were qualified "J".

2. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blauks measure cross-contamination of sampies during shipment. Field and rinse blanks measure cross-contamination of samplea during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following aualytes in the sample shown were qualified with "U" for these reasons:

DATA ASSESSMENT

A) Method blank contamination:

BNA:

Di-n-butylphthalate was qualified "U" in samples BPL49, 50 and S1 due to contamination in method blank SBLK1.

The following TICs were rejected:

BPL49 - RT = 6.34, 5.58, 7.66, 22.46 and 5.12
BPL50 - RT = 6.38
BPL51 - RT = 6.41, 7.66, 5.58

B) Field or rinse blank contamination:

Sample results were not affected by rinse blank contamination.

3. CALIBRATION GC/MS:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

DATA ASSESSMENT

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

VOA:

%RSD was high for chloroethane and acetone for both aqueous and soil samples. No action was taken based on this result.

Due to high %D, chloroethane and acetone were qualified "J" in sample BPL52. Chloroethane was also qualified "J" in BPL53 for %D; the result for acetone in this sample was already qualified "J" by the lab.

BNA:

All sample results were previously qualified "J" for holding time criteria. As a result, further qualification of the samples for calibration problems was unnecessary.

Pest/PCB:

Delta-BHC, endrin ketone, 4,4'-DDT and methyoxychlor were qualified "J" in samples BPL50, 51, 52 and 53 due to high %RSD. Sample BPL49 was already qualified for percent moisture.

4. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

2

DATA ASSESSMENT

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

BNA:

Due to poor internal standard resolution for chrysene-d12, IS # 5, the non-detect result for 3,3'-dichlorobenzidine in samples BPL50 and 51 were rejected. These results were subsequently replaced with the non-detect results from their respective diluted analyses. The "U" values, along with the higher CRQLs, from samples BPL50DL and 51DL were used in place of the rejected data.

Since all results for BPL49 were previously qualified "J" for percent moisture, further qualification for low internal standard resolution was unnecessary.

5. COMPOUND IDENTIFICATION:

PESTICIDE FRACTION:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

In sample BPL49:

4,4'-DDD was qualified "NJ", based on interference from Aroclor peaks. 4,4'-DDE was qualified "U". Aroclor 1254, dieldrin and alpha-chlordane were already qualified "J" for other criteria and, therefore, required no further action.

In sample BPL50:

Alpha-chlordane and Aroclor 1254 were qualified "J". Aroclor 1248 was also qualified "JN" based on interference from Aroclor 1254. Endosulfan II was also qualified "JN" based on Aroclor interference. Based on professional judgement, 4,4'-DDD was also qualified "JN" (this peak is likely a false positive resulting from Aroclor interference - note that DDT was not detected in this sample). Heptachlor epoxide and 4,4'-DDE were qualified "U". Endrin ketone was already qualified "J" for other criteria.

DATA ASSESSMENT

In sample PBL51:

Alpha-chlordane was qualified "J". Based on chromatographic interference from Aroclor peaks and using professional judgement, 4,4'-DDD and 4,4'-DDT were qualified "JN". Aroclor 1248 was qualified "JN", based on professional judgement. Heptachlor epoxide and 4,4'-DDE were qualified "U".

6) OTHER QC OUT OF SPECIFICATION:

VOA, Pest/PCB:

All results in sample BPL49 were qualified "J" for high percent moisture.

BNA:

Due to the low internal standard resolution for chrysene-d12 (IS # 5) in BPL51, the result for pyrene (4800 ug/kg) should be regarded as artificially high.

7) SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

The GC and GC/MS systems performed adequately. There was, however, a brief loss of resolution during the BNA analysis, as evidenced by the low internal standard response in samples BPL50 and 51. The affected samples were diluted and reanalyzed.

8) This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified to be used.

BNA, Pest/PCB:

Use BPL49, 50 and 51, instead of BPL49DL, 50DL and 51DL.

DPO: []ACTION []FYI REGION II

ORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE/SAS NO. 22774 LABORATORY IEANJ

SDG NO. BPL49, 52 DATA USER APER/SI

SOW OLM01.8 REVIEW COMPLETION DATE

NO. OF SAMPLES 2 WATER 3 SOIL OTHER

REVIEWER: [] ESD [x]ESAT [] OTHER, CONTRACTOR

QC ITEM	VOA	BNA	PEST		
HOLDING TIMES	O	M	O		
GC-MS PERFORMANCE	O	O	O		
INITIAL CALIBRATIONS	O	O	M		
CONTINUING CALIBRATIONS	X	O	O		
FIELD BLANKS(F = N/A)	O	O	O		
LABORATORY BLANKS	O	X	O		
SURROGATES	O	O	O		
MATRIX SPIKE/DUPLICATES	O	O	O		
QC SAMPLES(LCS, PVS)	NA	NA	NA		
INTERNAL STANDARDS	O	O	O		
COMPOUND IDENTIFICATION	O	O	M		
COMPOUND QUANTITATION	O	X	O		
SYSTEM PERFORMANCE	O	X	O		
OVERALL ASSESSMENT	X	X	X		

O = No problems or minor problems that do not affect data usability.
X = Mc more than about 5% of the data points are qualified as either estimated or unusable.
M = More than about 5% of the data points are qualified as either estimated or unusable.
Z = More than about 5% of the data points are qualified as unusable.

DPO ACTION ITEMS:

AREAS OF CONCERN: The result for pyrene (4800 ug/kg) in sample BPL51 is biased high, due to poor internal standard resolution.

3

DATA REJECTION SUMMARY

Type of Review: Organic Date: December 9, 1994 Case No.: 22774

Site Name: Cornell Dubilier Electronics Lab Name: lEANJ

Reviewer's Initials: G.V. Number of Samples: 5

Analytes Rejected Due to Exceeding Review Criteria For:

No. of Compounds/No. of Fractions (Samples)

	Surrogates	Holding Time	Calibra-tion	Contamina-tion "U"	ID "U"	Internal Standards	Other	Total # of Sanples	Total # Rejected/Total # In All Sanplea
VOA(33)								5	0 / 165 = 0 %
ACID(14)								5	0 / 70 = 0 %
B/N(50)				3				5	3 / 250 = 1 %
PEST(21)					5			5	5 / 105 = 5 %
PCB(7)								5	0 / 35 = 0 %

NOTS: ASTERISK (*) INDICATES ADDITIONAL RXCEEDANCES OF REVIEW CRITERIA.

Analytes Estimated Due to Exceeding Review Criteria For:

No. of Compounds/No. of Fractions (Samples)

	Surrogates	Holding Time	Calibra-tion	Contamina-tion	ID J/JN	Internal Standards	Other	Total # of Samples	Total # Estimated/Total # In All Sanplea
VOA(33)			3				33	5	36 / 165 = 22 %
ACID(14)		42						5	42 / 70 = 60 %
B/N(50)		150						5	150 / 250 = 60 %
PEST(21)					7		21	5	28 / 105 = 27 %
PCB(7)					2		7	5	9 / 35 = 26 %

NOTE: ASTERISK (*) INDICATES ADDITIONAL EXCEEDANCES OF REVIEW CRITERIX.

SOP NO. HW-6
Revision #8

CLP ORGANICS DATA REVIEW
AND PRELIMINARY REVIEW

BY: _____ Date: January 2 1992
Leon Lazarus, Environmental Scientist
Toxic and Hazardous Waste Section

BY: _____ Date: January 3 1992
George Karras, Chemist
Toxic and Hazardous Waste Section

BY: _____ Date: 1/3/1992
Stelios Gerazounis, Chemist
Toxic and Hazardous Waste Section

CONCURRED BY: _____ Date: 1/3/92
Kevin Kubik, Chief
Toxic and Hazardous Waste Section

APPROVED BY: _____ Date: 1/7/92
Robert Runyon, Chief
Monitoring Management Branch

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 22774 LAB: IEANJ

SITE: Cornell Dubilier

1.0 Data Completeness and Deliverables

1.1 Have any missing deliverables been received and added to the data package? [✓] ___ ___

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the data under the "Contract Problems/Non-Compliance" section of reviewer narrative.

1.2 Was SMO CCS checklist included with the package? [ ] [✓] ___

2.0 Cover Letter, SDG Narrative

2.1 Is the narrative or cover letter present? [✓] ___ ___

2.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? [✓] ___ ___

3.0 Data Validation Checklist

The following checklist is divided into three parts. Part A is filled out if the data package contains any VOA analyses, Part B for any BNA analyses and Part C for Pesticide/PCBs.

3.1 Does this package contain:

VOA Data? [✓] ___

BNA Data? [✓] ___

Pesticide/PCB data? [✓] ___

Action: Complete corresponding parts of the checklist.

	YES	NO	N/A

PART A: VOA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

1.1 Are the Traffic Report Forms present for all samples? ☑ ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ ☑ ___

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated (J). If a soil sample other than TCLP contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all Non-Detects "UJ".

ACTION: If both VOA vials for a sample have air bubbles or the VOA vial analyzed had air bubbles, flag all positive results "J" and all non-detects "R".

2.0 Holding Times

2.1 Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded? ___ ☑ ___

If unpreserved, aqueous samples maintained at 4°C which are to be analyzed for aromatic hydrocarbons must be analyzed within 7 days of collection. If preserved with HCl (pH<2) and stored at 4°C, then aqueous samples must be analyzed within 14 days of collection. If uncertain about preservation, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

YES NO N/A

Table of Holding Time Violations

(See Traffic Report)

Sample ID	Sample Matrix	Preserved?	Date Sampled	Date Lab Received	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon reanalysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results mast be qualified "J", but the reviewer may determine that non-detect data are unusable (R). If holding times are exceeded by more than 28 days, all non-detect data are unusable (R).

3.0 System Monitoring Compound (SMC) Recovery (Form II)

3.1 Are the VOA SMC Recovery Summaries (Form II) present for each of the following matrices:

a. Low Water [✓] ___ ___

b. Low Soil [✓] ___ ___

c. Med Soil [ ] ___ [✓]

	YES	NO	N/A
3.2 Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:			
a. Low Water	[✓]		
b. Low Soil	[✓]		
c. Med Soil	[ ]		✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect(s) in data assessments.

3.3 Were outliers marked correctly with an sterisk?	[ ]		✓

ACTION: Circle all outliers in red.

3.4 Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank?		[✓]	
If yes, were samples re-analyzed?	[ ]		✓
Were method blanks re-analyzed?	[ ]		✓

ACTION: If recoveries are > 10% but 1 or more compounds fail to meet SOW specifications:

1. All positive results are qualified as estimated (J).

2. Flag all non-detects as estimated detection limits ("UJ") where recovery is less than the lower acceptance limit.

3. If SMC recoveries are above allowable levels, do not qualify non-detects.

If any SMC recovery is < 10% :

1. Flag all positive results as estimated, "J."

2. Flag all non-detects as unusable, "R."

NOTE: Professional judgement should be used to qualify data that only have method blank SMC recoveries out of specification in both original and re-analyses. Check the internalstandard areas.

	YES	NO	N/A
3.5 Are there any transcription/calculation errors between raw data and Form II?		[✓]	

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spikes (Form III)

	YES	NO	N/A
4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	[✓]		
4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:			
a. Low Water	[ ]		✓
b. Low Soil	[✓]		
c. Med Soil	[ ]		✓

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many VOA spike recoveries are outside QC limits?

Waters	Soils
NA out of 10	0 out of 10

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Waters	Soils
NA out of 5	0 out of 5

ACTION: No action is taken based on MS/MSD data alone. However, using informed professional judgement, the MS/MSD results may be used in conjunction with other QC criteria to determine the need for qualification of the data.

	YES	NO	N/A
5.0 Blanks (Form IV)			
5.1 Is the Method Blank Summary (Form IV) present?	✓		
5.2 Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?	✓		
5.3 Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used?	✓		

ACTION: If any method blank data are missing, call lab for explanation/ resubmittal. If method blank data are not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank or trip blank data for missing method blank data.

	YES	NO	N/A
5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra. Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs?	✓		

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are <u>not</u> used to qualify data. Do not confuse them with the other QC blanks discussed below.

	YES	NO	N/A
6.1 Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs? (When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for % moisture when necessary.)		✓	
6.2 Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)?	✓		

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Blanks may not be qualified because of contamination in another blank. Field Blanks & Trip Blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R).

YES NO N/A

	Sample cone > CRQL but < 10x blank value	Sample cone < CRQL & < 10x blank value	Sample cone > CRQL & > 10x blank value
Methylene Chloride Acetone Toluene 2-Butanone	Flag sample result with a "U;	Report CRQL & qualify "U"	No qualification is needed

	Sample cone > CRQL but < 5x blank value	Sample cone < CRQL & is < 5x blank value	Sample cone > CRQL value & > Sx blank
Other Contam-inants	Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

ACTION: For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated assoeiated blank, flag the sample data "R" (unusable).

6.3 Are there field/rinse/equipment blanks associated with every sample? [Y] ___ ___

ACTION: For low level samples, note in data assessment that there is no assoeiated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 GC/MS Instrument Performance Check (Form V)

7.1 Are the GC/MS Instrument Performance Check Forms (Form V) present for bromofluorobenzene (BFB)? [Y] ___ ___

4c

	YES	NO	N/A
7.2 Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	[✓]	___	___
7.3 Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	[✓]	___	___

ACTION: List date, time, instrument ID, and sample analysis for whieh no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

7.4 Have ion abundances been normalized to m/z 95?	[✓]	___	___

ACTION: If mass assignment is in error, qualify all associated data as unusable (R).

7.5 Have the ion abundance eriteria been met for each instrument used?	[✓]	___	___

ACTION: List all data which do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

7.6 Are there any transcription/calculation errors between mass lists and Form Vs? (Check at least two values but if errors are found, check more.)	___	[✓]	___
7.7 Have the appropriate number of signifieant figures (two) been reported?	[✓]	___	___

	YES	NO	N/A
ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.			
7.8 Are the spectra of the mass calibration compound acceptable?	[✓]	___	___
ACTION: Use professional judgement to determine whether assoeiated data should be accepted, qualified, or rejected.			
8.0 Target Compound List (TCL) Analytes			
8.1 Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
a. Samples and/or fractions as appropriate	[✓]	___	___
b. Matrix spikes and matrix spike duplicates	[✓]	___	___
c. Blanks	[✓]	___	___
8.2 Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
a. Samples and/or fractions as appropriate	[✓]	___	___
b. Matrix spikes and matrix spike duplicates (Mass spectra not required)	[✓]	___	___
e. Blanks	[✓]	___	___
ACTION: If any data are missing, take action specified in 3.2 above.			
8.3 Are the response factors shown in the Quant Report?	[✓]	___	___

	YES	NO	N/A
8.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]	___	___
Resolution?	[✓]	___	___
Peak shape?	[✓]	___	___
Full-scale graph (attenuation)?	[✓]	___	___
Other: _____	[ ]	___	___

ACTION: Use professional judgement to determine the acceptability of the data.

8.5 Are lab-generated standard mass spectra of the identified VOA compounds present for each sample?	[✓]	___	___

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contract Problems/Non-compliance".

8.6 Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	[✓]	___	___
8.7 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	[✓]	___	___
8.8 Do sample and standard relative ion intensities agree within 20%?	[✓]	___	___

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the eriteria listed in 8.6, 8.7, and 8.8.

	YES	NO	N/A

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

		YES	NO	N/A
9.1	Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier?	[✓]		
9.2	Are the the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate	[✓]		
	b. Blanks	[ ]		✓

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

		YES	NO	N/A
9.3	Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene - a VOA TCL analyte - and should not be reported as a TIC)?		[✓]	

ACTION: Flag with "R" any TCL compound listed as a TIC.

		YES	NO	N/A
9.4	Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	[ ]	✓	
9.5	Do TIC and "best match" standard relative ion intensities agree within 20%?	[ ]		✓

There were no matches.

YES NO N/A

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change the TIC to "unknown" or to some less specific identification (e.g., "C3 substituted benzene") as appropriate.

Also, when a compound is not found in any blank, but is detected in a sample and is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable (R). (i.e. common lab contaminants: CO_2 (M/E 44), siloxanes (M/E 73) hexane, aldol condensation products, solvent preservatives, and related by-products - see Functional Guidelines for further guidance).

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Cheek at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found? ___ [✓] ___

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify whieh Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

	YES	NO	N/A
11.0 Standards Data (GC/MS)			
11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant. Reports) present for initial and continuing calibration?	[✓]	___	___
ACTION: If any calibration standard data are missing, take action specified in 3.2 above.			
12.0 GC/MS Initial Calibration (Form VI)			
12.1 Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/l? Are there separate calibrations for low water/med soils and low soil samples?	[✓]	___	___
ACTION: If any calibration standard forms are missing, take aetion specified in 3.2 above.			
12.2 Were all low level soil standards, blanks and samples analyzed by heated purge?	[✓]	___	___
ACTION: If low level soil samples were not heated during purge, qualify positive hits "J" and non-detects "R".			
12.3 Are response factors stable for VOA's over the concentration range of the calibration (% Relative Standard Deviation (%RSD) ≤ 30.0%)?	[ ]	[✓]	___
ACTION: Circle all outliers in red.			
NOTE: Although 11 VOA compounds have a minimum RRF and no maximum %RSD, the technical criteria are the same for all analytes.			
ACTION: If %RSD > 30.0%, qualify associated positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, flag all non-detects for that analyte "R," unusable.			

	YES	NO	N/A
NOTE: Analytes previously qualified "U" for blank contamination are still considered as "hits" when qualifying for initial calibration criteria.			
12.4 Are all RRFs greater than 0.05?	[✓]	___	___
ACTION: Circle all outliers in red.			
ACTION: If any RRF are < 0.05, qualify associated non-detects ("R") and flag associated positive data as estimated ("J").			
12.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD? (Check at least 2 values, but if errors are found, check more.)	___	[✓]	___

13.0 GC/MS Continuing Calibration (Form VII)

	YES	NO	N/A
13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	[✓]	___	___
13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	[✓]	___	___

ACTION: List below all sample analyses that were not within twelve hours of the previous continuing calibration analysis.

_____

_____

_____

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable, "R."

4

	YES	NO	N/A
13.3 Do any volatile compounds have a % Difference (% D) between the initial and continuing RRF which exceeds the ± 25% criteria?	✓	[ ]	

ACTION: Circle all outliers in red.

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated. When % D is above 90%, reject all non-detects for that analyte (R) unusable.

13.4 Do any volatile compounds have a RRF < 0.05?		[✓]	

ACTION: Circle all outliers in red.

ACTION: If the RRF < 0.05, qualify all associated non-detects as unusable ("R") and "J" associated positive values.

13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or % Difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, cheek more.)		[✓]	

ACTION: Circle errors in red.

ACTION: If errors are large, call lab for explanation/resubmittals, make any necessary corrections and note errors under "Conclusions".

4.0 Internal Standard (Form VIII)

14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration?	[✓]		

YES NO N/A

ACTION: List all the outliers below.

Sample#	Internal Std	Area	Lower Limit	Upper Limit

(Attach additional sheets if necessary.)

ACTION:

1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results quantitated with this internal standard.

2. Non-detects associated with IS area counts > 100% should not be qualified.

3. If IS area is below the lower limit (< 50%), qualify all associated non-detects (U values) "J". If extremely low area counts are reported (< 25%), or if performanee exhibits a major abrnpt drop off, flag all associated non-detects as unusable, "R."

14.2 Are the retention times of the internal standards within 30 seconds of the associated calibration standard? ☑ ___ ___

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

	YES	NO	N/A
15.0 Field Duplicates			
15.1 Were any field duplicates submitted for VOA analysis?	[ ]	✓	—

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

YES NO N/A

PART B: BNA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

1.1 Are the Traffic Report Forms present for all samples? ✓ ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data? ___ ✓ ___

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated ("J"). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any BNA technical holding times, determined from date of collection to date of extraction, been exceeded? ✓ ___ ___

Continuous extraction of water samples for BNA analysis must be started within seven days of the date of collection. Soil/sediment samples must be extracted within 7 days of collection. Extracts must be analyzed within 40 days of the date of extraction.

5

YES NO N/A

Table of Holding Time Violations

Sample ID	Sample Matrix	Date Sampled	(See Traffic Report) Date Lab Received	Date Extracted	Date Analyzed
BPL5049	Soil	10/13/94	10/14/94	10/24/94	11/15/94
BPL 50	↓	↓	↓	↓	↓
BPL51	↓	↓	↓	↓	↓
BPL49DL	↓	↓	↓	↓	11/16/94
BPL50DL	↓	↓	↓	↓	↓
BPL51DL	↓	↓	↓	↓	↓

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded.

If analyses were done more than 14 days beyond holding time, either on the first analysis or upon reanalysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results should be qualified "J", but the reviewer may determine that non-detect data are unusable ("R"). If holding times are exceeded by more than 28 days, all non detect data are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the BNA Surrogate Recovery Summaries (Form II) present for each of the following matrices:

a. Low Water [✓] ___ ___

b. Low Soil [✓] ___ ___

c. Med Soil [ ] ___ [✓]

	YES	NO	N/A
3.2 Are all the BNA samples listed on the appropriate Surrogate Recovery Summaries for each of the following matrices:			
a. Low Water	[✓]	___	___
b. Low Soil	[✓]	___	___
c. Med Soil	[ ]	___	✓

ACTION: Call the lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk?	[✓]	___	___

ACTION: Circle all outliers in red.

3.4 Were two or more base-neutral <u>OR</u> acid surrogate recoveries out of specification for any sample or method blank?	___	[✓]	___
If yes, were samples reanalyzed?	[ ]	___	✓
Were method blanks reanalyzed?	[ ]	___	✓

ACTION: If all BNA surrogate recoveries are > 10% but two within the base-neutral or acid fraction do not meet SOW specifications, <u>for the affected fraction only (i.e. base-neutral or acid compounds)</u>:

1. Flag all positive results as estimated ("J").

2. Flag all non-detects as estimated detection limits ("UJ") when recoveries are less than the lower acceptance limit.

3. If recoveries are greater than the upper acceptance limit, do not qualify non-detects.

	YES	NO	N/A
If any base-neutral or aeid surrogate has a recovery of < 10%:			
1. Positive results for the fraction with < 10% surrogate recovery are qualified with "J".			
2. Non-detects for that fraction should be qualified as unusable (R) .			
NOTE: Professional judgement should be used to qualify data that have method blank surrogate recoveries out of specification in both original and reanalyses. Cheek the internal standard areas.			
3.5 Are there any transcription/calculation errors between raw data and Form II?	___	[✓]	___
ACTION: If large errors exist, call lab for explanation/resubmittal, make aury necessary corrections and document effect in data assessments.			
4.0 Matrix Spikes (Form III)			
4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	[✓]	___	___
4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:			
a. Low Water	[ ]	___	[✓]
b. Low Soil	[✓]	___	___
c. Med Soil	[ ]	___	[✓]
ACTION: If any matrix spike data are missing, take the aetion specified in 3.2 above.			

YES NO N/A

4.3 How many BNA spike recoveries are outside the QC limits?

Waters	Soils
NA out of 22	0 out of 22

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Waters	Soils
NA out of 11	0 out of 11

ACTION: No action is taken on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present? [✓] ___ ___

5.2 Frequency of Analysis:

Has a reagent/method blank analysis been reported per 20 samples of similar matrix, or concentration level, and for each extraction batch? [✓] ___ ___

5.3 Has a BNA method blank been analyzed for each GC/MS system used? (See SOW p. D - 59/SV, Section 8.7) [✓] ___ ___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If not available, use professional judgement to determine if the assoeiated sample data should be qualified.

YES NO N/A

5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra.

Is the chromatographic performance (baseline stability) for each instrument acceptable for BNAs? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "drill blanks" and "distilled water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for BNAs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for % moisture where necessary. ✓ [ ] ___

6.2 Do any field/rinse/ blanks have positive BNA results (TCL and/or TIC)? ✓ [ ] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank . Field Blanks must be qualified for surrogate, spectral, instrument performance or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If gross contamination exists, all data in the associated samples should be qualified as unusable (R).

YES NO N/A

For Common Phthalate Esters:	For Other Contaminants:	Action:
Sample cone. > CRQL, but < 10x blank result	Sample cone. > CRQL, but < 5x blank result	Flag sample result with a "U"
Sample cone. < CRQL & < 10x blank result	Sample cone. < CRQL & < 5x blank result	Report CRQL and qualify with a "U"
Sample cone. > CRQL & > 10x blank result	Sample cone. > CRQL & > 5x blank result	No qualification is necessary

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

ACTION: For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated assoeiated blank, flag the sample data "R," unusable.

6.3 Are there field/rinse/equipment blanks assoeiated with every sample? [✓] ___ ___

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 GC/MS Instrument Performance Cheek

7.1 Are the GC/MS Instrument Performance Cheek Forms (Form V) present for decafluorotriphenylphosphine (DFTPP)? [✓] ___ ___

7.2 Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the DFTPP provided for each twelve hour shift? [✓] ___ ___

	YES	NO	N/A
7.3 Has an instrument performanee check solution been analyzed for every twelve hours of sample analysis per instrument?	✓		

ACTION: List date, time, instrument ID, and sample analyses for which no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

ACTION: If mass assignment is in error, flag all associated sample data as unusable (R).

	YES	NO	N/A
7.4 Have the ion abundances been normalized to m/z 198?	✓		
7.5 Have the ion abundance criteria been met for each instrument used?	✓		

ACTION: List all data whieh do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

	YES	NO	N/A
7.6 Are there any transcription/calculation errors between mass lists and Form Vs? (Check at least two values but if errors are found, check more.)		✓	
7.7 Have the appropriate number of significant figures (two) been reported?	✓		

ACTION: If large errors exist, call Iab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

	YES	NO	N/A
7.8 Are the spectra of the mass calibration compound acceptable?	[✓]		

ACTION: Use professional judgement to determine whether associated data should be accepted, qualified, or rejected.

8.0 Target Compound List (TCL) Analytes

	YES	NO	N/A
8.1 Are the Organic Analysis Data Sheets (Form I BNA) present with required header information on each page, for each of the following:			
a. Samples and/or fractions as appropriate	[✓]		
b. Matrix spikes and matrix spike duplicates	[✓]		
c. Blanks	[✓]		
8.2 Has GPC cleanup been performed on all soil/ sediment sample extracts?	[✓]		

ACTION: If data suggests that GPC was not performed, use professional judgement. Make note under "Contract Problems/Non-Compliance".

	YES	NO	N/A
8.3 Are the BNA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
a. Samples and/or fractions as appropriate	[✓]		
b. Matrix spikes and matrix spike duplicates (Mass spectra not required)	[✓]		
c. Blanks	[✓]		

ACTION: If any data are missing, take action specified in 3.2 above.

	YES	NO	N/A
8.4 Are the response factors shown in the Quant Report?	[✓]		

	YES	NO	N/A
8.5 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]	___	___
Resolution?	[✓]	___	___
Peak shape?	[✓]	___	___
Full-scale graph (attenuation)?	[✓]	___	___
Other:_____	[ ]	___	___

ACTION: Use professional judgement to determine the acceptability of the data.

8.6 Are the lab-generated standard mass spectra of identified BNA compounds present for each sample?	[✓]	___	___

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contraet Problems/Non-compliance". If spectra are missing, reject all positive data.

8.7 Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	[✓]	___	___
8.8 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	[✓]	___	___
8.9 Do sample and standard relative ion intensities agree within 20%?	[✓]	___	___

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (Presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the criteria listed in 8.7, 8.8, and 8.9.

6t

	YES	NO	N/A

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

9.1 Are all Tentatively Identified Compound Forms (Form I, Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier? [✓] ___ ___

9.2 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:

a. Samples and/or fractions as appropriate [✓] ___ ___

b. Blanks [✓] ___ ___

ACTION: If any TIC data are missing, take aetion specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

9.3 Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene a VOA TCL - and should not be reported as a TIC)? ___ [✓] ___

ACTION: Flag with "R" any TCL compound listed as a TIC.

9.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum? [✓] ___ ___

9.5 Do TIC and "best match" standard relative ion intensities agree within 20%? [✓] ___ ___

	YES	NO	N/A

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change the identification to "unknown" or to some less specific identifi-cation (example: "C3 substituted benzene") as appropriate. Also, when a compound is not found in any blank, but is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable, "R."

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Cheek at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found? ___ ✓ ___

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and it's associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red " X" across the entire page of all Form I's that should not be used, including any in the summary package.11.0 Standards Data (GC/MS)

11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant, Reports) present for initial and continuing calibration? ✓ ___ ___

6:

	YES	NO	N/A

ACTION: If any calibration standard data are missing, take action specified in 3.2 above.

12.0 GC/MS Initial Calibration (Form VI)

12.1 Are the Initial Calibration Forms (Form VI) present and complete for the BNA fraction? ✓ ___ ___

ACTION: If any calibration standard forms are missing, take action specified in 3.2 above.

12.2 Are response factors stable for BNAs over the concentration range of the calibration? (% Relative standard deviation (%RSD) < 30.0%) ✓ ___ ___

ACTION: Circle all outliers in red.

NOTE: Although 20 BNA compounds have a minimum RRF and no maximum %RSD, the technical eriteria are the same for all analytes.

ACTION: If the % RSD is > 30.0%, qualify positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, flag all non- detect results for that analyte "R," unusable.

NOTE: Analytes previously qualified "U" due to blank contamination are still considered as "hits" when qualifying for calibration eriteria.

2.3 Are all BNA compound RRFs > 0.05? ✓ ___ ___

ACTION: Circle all outliers in red.

ACTION: If any RRF < 0.05:

1. "R" all non-detects.

2. "J" all positive results.

	YES	NO	N/A
12.4 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or % RSD? (Check at least two values but if errors are found, check more.)		[✓]	

ACTION: Circle Errors in red.

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors in data assessments.

13.0 GC/MS Continuing Calibration (Form VII)

	YES	NO	N/A
13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the BNA fraction?	[✓]		
13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	[✓]		

ACTION: List below all sample analyses that were not within twelve hours of a continuing calibration analysis for each instrument used.

_____

_____

_____

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable ("R").

	YES	NO	N/A
13.3 Do any semivolatile compounds have a % Difference (% D) between the initial and continuing RRF whieh exceeds the + 25.0% criteria?	[✓]	[ ]	

ACTION: Circle all outliers in red.

	YES	NO	N/A

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated (J). When %D is above 90%, qualify all non-detects for that analyte as (R) unusable.

13.4 Do any semivolatile compounds have a RRF < 0.05? ___ [ ] ___

ACTION: Circle all outliers in red.

ACTION: If RRF <0.05, qualify as unusable (R) associated non-detects and "J" associated positive values.

13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or % difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, check more). ___ [ ] ___

ACTION: Circle errors in red.

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

14.0 Internal Standards (Form VIII)

14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration? [ ] ✓ ___

ACTION: List all the outlying internal standards below.

Sample ID	IS #	Area	Lower Limit	Upper Limit
BPL49	6	62054	86073	344292
	5	22874	76780	307122 — <25%
BPL50	6	43127	86073	344292 —
	5	18249	76780	307122 — <25%
BPL51	6	40694	86073	344292 — <25%

(Attach additional sheets if necessary.)

YES NO N/A

ACTION:

1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results and non-detects (U values) quantitated with this internal standard.

2. Non-detects assoeiated with IS areas > 100% should not be qualified.

3. If the IS area is below the lower limit (< 50%), qualify all associate non-detects (U-values) "J". If extremely low area counts are reported (< 25%) or if performanee exhibits a major abrnpt drop off, flag all assoeiated non-detects as unusable (R).

14.2 Are the retention times of the internal standards within 30 seconds of the assoeiated calibration standard? [✓] ___ ___

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for BNA analysis? [ ] [✓] ___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

YES NO N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0 Traffic Reports and Laboratory Narrative

1.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of the samples, analytieai problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If any sample analyzed as a soil, other than than TCLP, contains 50%-90% water, all data should be qualified as estimated, "J." If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable, "R."

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded? ___ [✓] ___

Water and soil samples for PEST/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date extraction.

ACTION: If technical holding times are exceeded, flag all positive results as estimated, "J," and sample quantitation limits "UJ" and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon reanalysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable,"R."

	YES	NO	N/A
3.0 Surrogate Recovery (Form II)			
3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?			
a. Low Water	[✓]		
b. Soil	[✓]		
3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?			
a. Low Water	[✓]		
b. Soil	[✓]		
ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.			
3.3 Were outliers marked correctly with an asterisk?	[✓]		
ACTION: Circle all outliers in red.			
3.4 Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or blank? (60-150%)	✓	[ ]	
ACTION: No qualification is done if surrogates are diluted out. If recovery for <u>both</u> surrogates is below the contract limit, but above 10%, flag all results for that sample 'J". If recovery is < 10% for either surrogate, qualify positive results 'J" and flag non-detects "R". If recovery is above the contract advisory limits for <u>both</u> surrogates qualify positive values "J".			
3.5 Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A?	[✓]		

	YES	NO	N/A

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement.

3.6 Are there any transcription/calculation errors between raw data and Form II? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document effect in data assessments.

4.0 Matrix Spikes (Form III)

4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? [✓] ___ ___

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices? (One MS/MSD must be performed for every 20 samples of similar matrix or concentration level.)

a. Low Water [ ] ___ [✓]

b. Soil [✓] ___ ___

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many PEST/PCB spike recoveries are outside QC limits?

Waters	Soils
Na out of 12	3 out of 12

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soil
Na out of 6	1 out of 6

YES NO N/A

ACTION: No action is taken based on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present? [✓] ___ ___

5.2 Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent? [✓] ___ ___

ACTION: If any blank data are missing, take the action specified above in 3.2. If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)?

ACTION: If any blank data are missing, call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in data assessments.

5.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

6.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent/cleanup blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. ___ [✓] ___

6.2 Do any field/rinse blanks have positive PEST/PCB results? ___ [✓] ___

ACTION: Prepare a list of the samples assoeiated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample cone > CRQL but < 5x blank	Sample cone < CRQL & is < 5x blank value	Sample cone > CRQL & > 5x blank value
Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the assoeiated samples should be qualified as unusable (R).

	YES	NO	N/A
6.3 Are there field/rinse/equipment blanks associated with every sample?	[✓]		

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Calibration and GC Performance

	YES	NO	N/A
7.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?			
a. peak resolution check	[✓]		
b. performance evaluation mixtures	[✓]		
c. aroclor 1016/1260	[✓]		
d. aroclors 1221, 1232, 1242, 1248, 1254	[✓]		
e. toxaphene	[✓]		
f. low points individual mixtures A & B	[✓]		
g. med points individual mixtures A & B	[✓]		
h. high points individual mixtures A & B	[✓]		
i. instrument blanks	[✓]		

ACTION: If no, take action specified in 3.2 above.

	YES	NO	N/A
7.2 Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence?	[✓]		

ACTION: If no, take action specified in 3.2 above.

	YES	NO	N/A
7.3 Are there any transcription/calculation errors between raw data and Forms VI?		[✓]	

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

	YES	NO	N/A
7.4 Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence? (For Initial Calibration Standards, Form VI - PEST - 1).	[✓]	___	___

ACTION: If no, all samples in the entire analytieai sequence are potentially affected. Cheek to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable, "R."

For aroclors, RT may be outside the RT window, but the aroclor may still be identified from the individual patterm.

7.5 Are the linearity eriteria for the initial analyses of Individual Standards A & B within limits for both columns? (% RSD must be < 20.0% for all analytes except for the 2 surrogates, which must not exceed 30.0 % RSD). See Form VI PEST - 2.	[ ]	[✓]	___

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD >90%, flag all non-detect results for that analyte R (unusable).

7.6 Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns? (Form VI-PEST - 4)	[✓]	___	___

ACTION: If no, positive results for compounds that were not adequately resolved should be qualified "J". Use professional judgement to determine if non-detects which elute in areas affected by co-eluting peaks should be qualified "N" as presumptive evidence of presence or unusable (R).

	YES	NO	N/A
7.7 Is Form VII - Pest-1 present and complete for each Performanee Evaluation Mixture analyzed during the analytical sequence for both columns?	[✓]	___	___

ACTION: If no, take action as specified in 3.2 above.

7.8 Has the individual % breakdown exceeded 20.0% on either column.	___	[✓]	___
- for 4,4' - DDT?	___	[✓]	___
- for endrin?	___	[✓]	___
Has the combined % breakdown for 4,4'- DDT/endrin exceeded 30.0% on either column (required in all instances)?	___	[✓]	___

ACTION:

1. If any % breakdown has failed the QC criteria in either PEM in steps 2 and 17 in the initial calibration sequence (p. D-38/Pest SOW 3/90), qualify all sample analyses in the entire analytieai sequence as described below.

2. If any % breakdown has failed the QC criteria in a PEM Verification calibration, review data beginning with the samples which followed the last <u>in-eontrol</u> standard until the next acceptable PEM & qualify the data as described below.

a. 4,4'-DDT Breakdown: If 4,4'-DDT breakdown is greater than 20.%:

   i. Qualify all positive results for DDT with 'J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable ("R").

   ii. Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity ("NJ").

YES NO N/A

b. Endrin Breakdown: If endrin breakdown is greater than 20.0%:

i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable ("R").

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity ("NJ").

c. Combined Breakdown: If the combined 4,4'-DDT and endrin breakdown is greater than 30.0%:

i. Qualify all positive results for DDT and endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable ("R"). If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable ("R").

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity ("NJ"). Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity ("NJ").

7.9 Are the relative pereent difference (RPD) values for all PEM analytes < 25.0%? (Form VII-PEST-1) ✓ ___ ___

ACTION: If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".

NOTE: If the failing PEM is part of the initial calibration. all samples are potentially affected. If the offending standard is a verification calibration, the associated samples are those which followed the last in-control standard until the next passing standard.

	YES	NO	N/A
7.10 Have all samples been injected within a 12 hr. period beginning with the injection of an Instrument Blank?	✓		
ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.			
7.11 Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed?	✓		
ACTION: If no, take action specified in 3.2 above.			
7.12 Are there any transcription/calculation errors between raw data and Form VII - Pest-2?		✓	
ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document the effect in data assessments under "Conclusions".			
7.13 Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence?	✓		
ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through patterm recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).			
7.14 Are RPD values for all verification calibration standard compounds < 25.0%?	✓		

YES NO N/A

ACTION: If the RPD is > 25.0% for the compound being quantitated, qualify all assoeiated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard containing the analyte which failed the criteria.

If the RPD is > 90%, flag all non-detects for that analyte R (unusable).

8.0 Analytical Sequence Check (Form VIII-PEST)

8.1 Is Form VIII present and complete for each column and each period of analyses? [✓] ___ ___

ACTION: If no, take action specified in 3.2 above.

8.2 Was the proper analytieai sequence followed for each initial calibration and subsequent analyses (see CLP SOW p. D-39 & D-41/PEST)? [✓] ___ ___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

9.0 Cleanup Efficiency Verification (Form IX)

9.1 Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCB extracts.) [✓] ___ ___

ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in "Contract Problems/Non-Compliance".

9.2 Are all samples listed on the Pesticide Florisil Cartridge Check Form? [✓] ___ ___

ACTION: If no, take action specified in 3.2 above.

9.3 If GPC Cleanup was performed, (mandatory for all soil sample extracts) is Form IX - Pest-2 present? [✓] ___ ___

	YES	NO	N/A
ACTION: If no, take action specified in 3.2 above.			
ACTION: If GPC was not performed when required, make note in" Contract Problems/Non-Compliance" section of data assessment.			
9.4 Are percent recoveries (% R) of the pesticide and surrogate compounds used to cheek the efficiency of the cleanup procedures within QC limits: 80-120% for florisil cartridge check?	[✓]	___	___
80-110% for GPC calibration?	[✓]	___	___

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

NOTE: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5% in the Florisil Cartridge Performance Cheek analysis. Make note in Contract Problems/Non-Compliance section of reviewer narrative.

NOTE: The raw data of the GPC Calibration Check analysis is evaluated for patterm similarity with previously run Aroclor standards.

10.0 Pesticide/PCB Identification

10.1 Is Form X complete for every sample in which a pesticide or PCB was detected?	[✓]	___	___

ACTION: If no, take action specified in 3.2 above.

10.2 Are there any transeription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, B, 10A.	___	[✓]	___

	YES	NO	N/A

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error under "Conclusions".

10.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses? [✓] ___ ___

Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)? [ ] ___ [✓]

ACTION: Use professional judgement to qualify positive results which were not confirmed by GC/MS. Qualify as unusable (R) all positive results whieh were not confirmed by second GC column analysis. Also qualify as unusable (R) all positive results not meeting RT window unless associated standard compounds are similarly biased. (see Functional Guidelines) The reviewer should use professional judgement to assign an appropriate quantitation limit.

10.4 Is the pereent difference (% D) calculated for the positive sample results on the two GC columns < 25.0%? [ ] [✓] ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-50 %	J
50-90 %	JN
> 90 %	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

10.5 Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives? ___ [✓] ___

YES NO N/A

ACTION: Use professional judgement to decide if the compound should be reported. If the appropriate PCB standards were not analyzed, qualify the data unusable (R).

11.0 Compound Quantitation and Reported Detection Limits

11.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? ___ ✓ ___

NOTE: Single-peak pesticide results can be cheeked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whethera much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity (NJ). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, % moisture? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

	YES	NO	N/A
ACTION: Quantitation limits affected by large, off-scale peaks should be qualified as unusable (R). If the interference is on-scale, the reviewer can provide an approximated quantitation limit (UJ) for each affected compound.			
12.0 Chromatogram Quality			
12.1 Were baselines stable?	[✓]		
12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen?		[✓]	
ACTION: Address comments under System Performance of data assessment.			
13.0 Field Duplicates			
13.1 Were any field duplicates submitted for PEST/PCB analysis?	[ ]	[✓]	
ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.			
ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.			

IEA
An Aquarion Company

RECEIVED
NOV 21 1994

NOVEMBER 17, 1994

20940-44030
USEPA REGION II, ESD
2890 WOODBRIDGE AVENUE
BUILDING 209
EDISON, NJ 08837

ATTENTION: DR. RICHARD SPEAR

Two (2) water samples were received on October 14, 1994 for analysis by IEA (NJ Certification # 14530).

DATA RELEASE AUTHORIZED BY:

Deborah H. Smith, Ph.D.
Laboratory Director

8

"SDG NARRATIVE"

LABORATORY NAME: IEA, INC.-NJ
CASE NUMBER: 22774
SDG NUMBER: SDG#BPL52
CONTRACT NUMBER: 68-D20022

RECEIVED
NOV 21 1994

EPA SAMPLE NO.	IEA, INC.-NJ SAMPLE NO.	FRACTION
BPL52	44030001	VOA, BNA, PEST
BPL53	44030002	VOA, BNA, PEST

ANALYTICAL PROBLEMS

VOLATILES

No problems were encountered.

SEMIVOLATILES

No problems were encountered.

PESTICIDES/PCBs

No problems were encountered.

Sample Receival/Log In

No problems were encountered.

Sample pH results

EPA SAMPLE NO.	IEA, INC.-NJ SAMPLE NO.	pH (s.u.)
BPL52	44030001	9.32
BPL53	44030002	9.33

The original Chain of Custody and Airbill have been submitted in the complete SDG File BPL49 to Region II.

"I certify that this data package is in compliance with the terns and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signatures."

Deborah H. Smith

Brian Wood, Organic Laboratory Manager

11/17/94

Date

SAMPLE DELIVERY GROUP (SDG)
TPAFFIC REPORT (TR) COVER SHEET

Lab Name: I.E.A. OF N.J., INC. Contract No: 68- D2-0022

Lab Code: 1EANJ Case No: 22774 SAS No: -

Full Sample Analysis Price in Contract: _____

SDG No/First Sample in SDG: BPL52 Sample Receipt Oate: 10/14/94
(Lowest EPA Sample Number in first shipment of samples received under SDG) (MM/DD/YY)

Last Sample in SDG: BPL53 Sample Receipt Date: 10/14/94
(Highest EPA Sample Number in last shipment of samples received under SDG) (MM/DD/YY)

EPA Sample Numbers in the SDG (listed in alphanumeric order):

1.	BPL52	11.	
2.	BPL53	12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	

Note: There are a maximum of 20 field samples in an SDG.

Attach Traffic Reports to this form in alphanumeric order (i.e., tho order listed on this form).

Sample Custodian

10/14/94
Oate

IEA
An Aquarion Company

RECEIVED
NOV 21 1994

NOVEMBER 17, 1994

20940-44029
USEPA REGION II, ESD
2890 WOODBRIDGE AVENUE
BUILDING 209
EDISON, NJ 08837

ATTENTION: DR. RICHARD SPEAR

Three (3) soil samples, including one (1) matrix spike and one (1) matrix spike duplicate, were received on October 14, 1994 for analysis by IEA (NJ Certification # 14530).

DATA RELEASE AUTHORIZED BY:

Deborah H. Smith, Ph.D.
Laboratory Director

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"SDG NARRATIVE"

LABORATORY NAME: IEA, INC.-NJ
CASE NUMBER: 22774
SDG NUMBER: SDG#BPL49
CONTRACT NUMBER: 68-D20022

RECEIVED
NOV 2 1 1994

EPA SAMPLE NO.	IEA, INC.-NJ SAMPLE NO.	FRACTION
BPL49	44029001	VOA, BNA, PEST
BPL49MS	44029001MS	VOA, BNA, PEST
BPL49MSD	44029001MSD	VOA, BNA, PEST
BPL49DL	44029001DL	BNA, PEST
BPL50	44029002	VOA, BNA, PEST
BPL50DL	44029002DL	BNA, PEST
BPL51	44029003	VOA, BNA, PEST
BPL51DL	44029003DL	BNA, PEST

ANALYTICAL PROBLEMS

VOLATILES

No problems were encountered.

SEMIVOLATILES

Sample 44028001 (BPL49) had to be diluted 20-fold and samples 44029002 (BPL50) and 44029003 (BPL51) had to be diluted 100-fold for target compound concentrations. The results of both analyses are reported.

PESTICIDES/PCBs

No problems were encountered.

Sample Receival/Log In

No problems were encountered.

Sample pH results

EPA SAMPLE NO.	IEA, INC.-NJ SAMPLE NO.	pH (s.u.)
BPL49	44029001	6.90
BPL50	44029002	7.00
BPL51	44029003	6.98

The original Chain of Custody and Airbill have been submitted in the complete SDG File BPL49 to Region II.

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signatures."

Brian W. Wood

Brian Wood, Organic Laboratory Manager

11/17/94

Date

SAMPLS DELIVERY GROUP (SDG)
TRAFFIC REPORT (TR) COVER SHEET

Lab Name: I.E.A. OF N.J., INC. Contract No: 68- D2-0022

Lab Code: IEANJ Case No: 22774 SAS No: -

Full Sample Analysis Price in Contract: $ ____

SDG No/First Sample in SDG: BPL49 Sample Receipt Date: 10/14/94
(Lowest EPA Sample Number in first shipment of samples received under SDG) (MM/DD/YY)

Last Sample in SDG: BPL51 Sample Receipt Date: 10/14/94
(Highest EPA Sample Number in last shipment of samples received under SDG) (MM/DD/YY)

EPA Sample Numbers in the SDG (listed in alphanumeric order):

1.	BPL49	11.	
2.	BPL50	12.	
3.	BPL51	13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	

Note: There are a maximum of 20 field samples in an SDG.

Attach Traffic Reports to this form in alphanumeric order (i.e., the order listed on this form).

Sample Custodian

Date 10/14/94

ANALYSIS: 3NA-TCLT

CLIENT: U.S. E.P.A

GC/MS

JOB: 44029

CASE NARRATIVE

Sample 44029001 (BPL49) had to be diluted 20 folds; 44029002 (BPL50) had to be diluted 100 folds and 44029003 (BPL51) had to be diluted 100 folds for target compound concentrations. Both runs are reported.

SIGNED:

DATE: 11/17/94

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL52

Lab Name: 1EA-NJ Contract: 66D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) Water Lab Sample ID: 44030001

Sample wt/vol: 5 (g/mL) ml Lab File ID: >FJ952

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. _____ Date Analyzed: 10/21/94

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	7	J
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	UJ
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	UJ
75-15-0	Carbon Disulfide	12	
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	4	J
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromotorm	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BPL52

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) Water Lab Sample ID: 44030001

Sample wt/vol: 5 (g/mL) ml Lab File ID: >FJ952

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. _____ Date Analyzed: 10/21/94

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: ____ (uL)

Number TICs Found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
05.				
06.				
07.				
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IA

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

BPL53

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) Water Lab Sample ID: 44030002

Sample wt/vol: 5 (g/mL) ml Lab File ID: >FJ953

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. _____ Date Analyzed: 10/21/94

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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 J
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BPL53

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) Water Lab Sample ID: 44030002

Sample wt/vol: 5 (g/mL) ml Lab File ID: >FJ953

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. _____ Date Analyzed: 10/21/94

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
05.				
06.				
07.				
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92

IB

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000054

BPL52

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) WATER Lab Sample ID: 44030001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >GJ650

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/19/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

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

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
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	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

IC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL52

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) WATER Lab Sample ID: 44030001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >GJ650

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/19/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

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

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	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	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	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	10	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

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BPL52

Lab Name: 1EA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) WATER Lab Sample ID: 44030001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >GJ650

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: __ decanted: (Y/N)_ Date Extracted: 10/19/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

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

Number of TICs found: 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	6.05	5	JB
2.		Unknown	6.40	5	J
3.		Unknown	6.97	5	J
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IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL53-03

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) WATER Lab Sample ID: 44030002

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >GJ651

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/19/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

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

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
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	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

IC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL53

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) WATER Lab Sample ID: 44030002

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >GJ651

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/19/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

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

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	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	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	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	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	1	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-ed)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

EPA SAMPLE NO.

BPL53

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: 1EA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water) WATER Lab Sample ID: 44030002

Sample wt/vol: 1000 (g/mL) ML Lab File ID: >GJ651

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: __ decanted: (Y/N) _ Date Extracted: 10/19/94

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

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

Number of TICs found: 16

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Halogenated Hydrocarb	8.25	50	J
2.	Unknown	11.93	46	J
3.	Unknown	6.04	32	JB
4.	Unknown	6.39	24	J
5.	Unknown	12.02	11	J
6.	Unknown	9.84	10	J
7.	Unknown	7.05	6	J
8.	Unknown	15.39	6	J
9.	Unknown	13.49	5	J
10.	Unknown Halogenated Hydrocarb	6.71	5	J
11.	Unknown Halogenated Hydrocarb	5.87	4	J
12.	Unknown	10.38	4	J
13.	Unknown	19.10	4	J
14.	Unknown	6.98	3	J
15.	Unknown	8.00	3	J
16.	Unknown	14.88	2	J
17.				
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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL52

Lab Name: 1EA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water): WATER Lab Sample ID: 44030001

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP069D_012

Moisture: _____ decanted: __ Date Received: 10/14/94

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/18/94

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/13/94

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U J
68-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-6	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U J
72-43-5	Methoxychlor	0.50	U J
53494-70-5	Endrin Ketone	0.10	U J
7421-36-3	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

ID
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BPL53

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL52

Matrix: (soil/water): WATER Lab Sample ID: 44030002

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP069D_013

Moisture: _____ decanted: __ Date Received: 10/14/94

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/18/94

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/13/94

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	UJ
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	UJ
72-43-5	Methoxychlor	0.50	UJ
53494-70-5	Endrin Ketone	0.10	UJ
7421-36-3	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
6103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000011

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) Soil Lab Sample ID: 44029001

Sample wt/vol: 5 (g/mL) g Lab File ID: A6379

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. 62 Date Analyzed: 10/21/94

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	26	U J
74-83-9	Bromomethane	26	U
75-01-4	Vinyl Chloride	26	U
75-00-3	Chloroethane	26	U
75-09-2	Methylene Chloride	26	U
67-64-1	Acetone	26	U
75-15-0	Carbon Disulfide	26	U
75-35-4	1,1-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
540-59-0	1,2-Dichloroethene(total)	26	U
67-66-3	Chloroform	26	U
107-06-2	1,2-Dichloroethane	26	U
78-93-3	2-Butanone	26	U
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon Tetrachloride	26	U
75-27-4	Bromodichloromethane	26	U
78-87-5	1,2-Dichloropropane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
79-01-6	Trichloroethene	26	U
124-48-1	Dibromochloromethane	26	U
79-00-5	1,1,2-Trichloroethane	26	U
71-43-2	Benzene	26	U
10061-02-6	Trans-1,3-Dichloropropene	26	U
75-25-2	Bromoform	26	U
108-10-1	4-Methyl-2-Pentanone	26	U
591-78-6	2-Hexanone	26	U
127-18-4	Tetrachloroethene	26	U
108-88-3	Toluene	26	U
79-34-5	1,1,2,2-Tetrachloroethane	26	U
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	26	U
100-42-5	Styrene	26	U
1330-20-7	Total Xylenes	26	U

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) Soil Lab Sample ID: 44029001

Sample wt/vol: 5 (g/mL) g Lab File ID: A6379

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. 62 Date Analyzed: 10/21/94

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
05.				
06.				
07.				
08.				
09.				
10.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL50

Lab Name: 1EA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) Soil Lab Sample ID: 44029002

Sample wt/vol: 5 (g/mL) g Lab File ID: A6382

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. 41 Date Analyzed: 10/21/94

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17	U
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene(total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	Trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
108-88-3	Toluene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Total Xylenes	17	U

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BPL50

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) Soil Lab Sample ID: 44029002

Sample wt/vol: 5 (g/mL) g Lab File ID: A6382

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. 41 Date Analyzed: 10/21/94

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown Alkane	19.82	23	JN
02.	Unknown Alkane	19.39	16	J
03.	Unknown Hydrocarbon	18.33	10	J
04.	Unknown Alkane	18.92	10	J
05.	Unknown Hydrocarbon	19.61	10	J
06.	Unknown	7.85	9	J
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IA
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL51

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) Soil Lab Sample ID: 44029003

Sample wt/vol: 5 (g/mL) g Lab File ID: A6383

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. 37 Date Analyzed: 10/21/94

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	16	U
74-83-9	Bromomethane	16	U
75-01-4	Vinyl Chloride	16	U
75-00-3	Chloroethane	16	U
75-09-2	Methylene Chloride	16	U
67-64-1	Acetone	16	U
75-15-0	Carbon Disulfide	16	U
75-35-4	1,1-Dichloroethene	16	U
75-34-3	1,1-Dichloroethane	16	U
540-59-0	1,2-Dichloroethene(total)	16	U
67-66-3	Chloroform	16	U
107-06-2	1,2-Dichloroethane	16	U
78-93-3	2-Butanone	16	U
71-55-6	1,1,1-Trichloroethane	16	U
56-23-5	Carbon Tetrachloride	16	U
75-27-4	Bromodichloromethane	16	U
78-87-5	1,2-Dichloropropane	16	U
10061-01-5	cis-1,3-Dichloropropene	16	U
79-01-6	Trichloroethene	16	U
124-48-1	Dibromochloromethane	16	U
79-00-5	1,1,2-Trichloroethane	16	U
71-43-2	Benzene	16	U
10061-02-6	Trans-1,3-Dichloropropene	16	U
75-25-2	Bromoform	16	U
108-10-1	4-Methyl-2-Pentanone	16	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	16	U
108-88-3	Toluene	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
108-90-7	Chlorobenzene	16	U
100-41-4	Ethylbenzene	16	U
100-42-5	Styrene	16	U
1330-20-7	Total Xylenes	16	U

IE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BPL51

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) Soil Lab Sample ID: 44029003

Sample wt/vol: 5 (g/mL) g Lab File ID: A6383

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: not dec. 37 Date Analyzed: 10/21/94

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
05.				
06.				
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IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029001

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ653

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 62 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: _ (Y/N) Y pH: 6.9

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	880	UJ
111-44-4	bis(2-Chloroethyl)Ether	880	U
95-57-8	2-Chlorophenol	880	U
541-73-1	1,3-Dichlorobenzene	880	U
106-46-7	1,4-Dichlorobenzene	880	U
95-50-1	1,2-Dichlorobenzene	880	U
95-48-7	2-Methylphenol	880	U
108-60-1	2,2'-oxybis(1-Chloropropane)	880	U
106-44-5	4-Methylphenol	880	U
621-64-7	N-Nitroso-di-n-propylamine	880	U
67-72-1	Hexachloroethane	880	U
98-95-3	Nitrobenzene	880	U
78-59-1	Isophorone	880	U
88-75-5	2-Nitrophenol	880	U
105-67-9	2,4-Dimethylphenol	880	U
111-91-1	bis(2-Chloroethoxy)methane	880	U
120-83-2	2,4-Dichlorophenol	880	U
120-82-1	1,2,4-Trichlorobenzene	880	U
91-20-3	Naphthalene	880	U
106-47-8	4-Chloroaniline	880	U
87-68-3	Hexachlorobutadiene	880	U
59-50-7	4-Chloro-3-Methylphenol	880	U
91-57-6	2-Methylnaphthalene	880	U
77-47-4	Hexachloroevclopentadiene	880	U
88-06-2	2,4,6-Trichlorophenol	880	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	880	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethylphthalate	880	U
208-96-8	Acenaphthylene	880	U
606-20-2	2,6-Dinitrotoluene	880	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	880	U

IC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029001

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ653

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 62 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	880	U
121-14-2	2,4-Dinitrotoluene	880	U
84-66-2	Diethylphthalate	880	U
7005-72-3	4-Chlorophenyl-phenylether	880	U
86-73-7	Fluorene	880	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	880	U
101-55-3	4-Bromophenyl-phenylether	880	U
118-74-1	Hexachlorobenzene	880	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	540	J
120-12-7	Anthracene	140	J
86-74-8	Carbazole	880	U
84-74-2	Di-n-butylphthalate	880 ~~308~~	U ~~B~~
206-44-0	Fluoranthene	1300	
129-00-0	Pyrene	1600	
85-68-7	Butylbenzylphthalate	*8400 ~~0300~~	~~B~~
91-94-1	3,3'-Dichlorobenzidine	880	U
56-55-3	Benzo(a)anthracene	640	~~J~~
218-01-9	Chrysene	440	~~J~~
117-81-7	bis(2-Ethylhexyl)phthalate	*48000 ~~41000~~	~~B~~
117-84-0	Di-n-octylphthalate	*17000 ~~18000~~	~~B~~
205-99-2	Benzo(b)fluoranthene	960	
207-08-9	Benzo(k)fluoranthene	690	J
50-32-8	Benzo(a)pyrene	650	J
193-39-5	Indeno(1,2,3-cd)pyrene	290	J
53-70-3	Dibenz(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	280	J

(1) - Cannot be separated from Diphenylamine

* Result taken from BPL49DL.

IF
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029001

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ653

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 62 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/15/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number of TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	6.34	~~96000~~	~~ABR~~
2.	Unknown phthalate ester	30.94	11000	J
3.	Unknown phthalate ester	30.29	6900	J
4.	Unknown alkane	30.06	2900	J
5.	Unknown alkane	30.37	2800	J
6.	Unknown	5.77	2800	J
7.	Unknown	5.58	~~2200~~	~~JBR~~
8. 128370	Phenol, 2,6-bis(1,1-dimethyle	17.37	2200	JN
9.	Unknown	7.66	~~1900~~	~~JBR~~
10. 57103	Hexadecanoic aeid	22.46	~~1300~~	~~JNBR~~
11.	Unknown	32.86	1500	J
12.	Unknown alkane	32.15	1400	J
13.	Unknown	23.47	1100	J
14.	Unknown	5.12	~~730~~	~~JBR~~
15.	Unknown PAH	22.28	620	J
16.	Unknown phthalate ester	27.35	620	J
17.	Unknown aromatic	31.97	600	J
18.	Unknown phthalate ester	27.17	470	J
19.	Unknown	6.45	420	J
20.	Unknown phthalate ester	27.10	410	J
21.	Unknown phthalate ester	27.22	390	J
22.				
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27.				
28.				
29.				
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IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 000146

EPA SAMPLE NO.

BPL50

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029002

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ654

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 41 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/16/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	560	U J
111-44-4	bis(2-Chloroethyl)Ether	560	U
95-57-8	2-Chlorophenol	560	U
541-73-1	1,3-Dichlorobenzene	560	U
106-46-7	1,4-Dichlorobenzene	560	U
95-50-1	1,2-Dichlorobenzene	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	2,2'-oxybis(1-Chloropropane)	560	U
106-44-5	4-Methylphenol	560	U
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	bis(2-Chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
120-82-1	1,2,4-Trichlorobenzene	560	U
91-20-3	Naphthalene	560	U
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
59-50-7	4-Chloro-3-Methylphenol	560	U
91-57-6	2-Methylnaphthalene	560	U
77-47-4	Hexachlorocyclopentadiene	560	U
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	560	U
208-96-8	Acenaphthylene	560	U
606-20-2	2,6-Dinitrotoluene	560	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	560	U

IC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL50

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029002

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ654

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 41 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/16/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: _ (Y/N) Y pH: 7

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
51-28-5	2,4-Dinitrophenol		1400	U J
100-02-7	4-Nitrophenol		1400	U
132-64-9	Dibenzofuran		560	U
121-14-2	2,4-Dinitrotoluene		560	U
84-66-2	Diethylphthalate		560	U
7005-72-3	4-Chlorophenyl-phenylether		560	U
86-73-7	Fluorene		560	U
100-01-6	4-Nitroaniline		1400	U
534-52-1	4,6-Dinitro-2-methylphenol		1400	U
86-30-6	N-Nitrosodiphenylamine (1)		560	U
101-55-3	4-Bromophenyl-phenylether		560	U
118-74-1	Hexachlorobenzene		560	U
87-86-5	Pentachlorophenol		1400	U
85-01-8	Phenanthrene		320	J
120-12-7	Anthracene		82	J
86-74-8	Carbazole		560	U
84-74-2	Di-n-butylphthalate		620	4B
206-44-0	Fluoranthene		660	
129-00-0	Pyrene		3400	
85-68-7	Butylbenzylphthalate	* 35000	~~120000~~	~~B~~
91-94-1	3,3'-Dichlorobenzidine	* 56000	560	~~U~~ UJ
56-55-3	Benzo(a)anthracene		770	
218-01-9	Chrysene		120	J
117-81-7	bis(2-Ethylhexyl)phthalate	* 250000	~~180000~~	~~B~~
117-84-0	Di-n-octylphthalate	* 100000	~~20000~~	~~B~~
205-99-2	Benzo(b)fluoranthene		400	~~U~~
207-08-9	Benzo(k)fluoranthene		220	~~U~~
50-32-8	Benzo(a)pyrene		240	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene		110	~~U~~
53-70-3	Dibenz(a,h)anthracene		560	~~U~~
191-24-2	Benzo(g,h,i)perylene		110	~~U~~

(1) - Cannot be separated from Diphenylamine

* Result from BPL50DL

IF

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BPL50

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029002

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ654

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 41 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/16/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7

Number of TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	6.38	63000	~~AJB~~
2.	Unknown phthalate ester	31.00	12000	J
3.	Unknown phthalate ester	28.89	11000	J
4.	Unknown phthalate ester	30.35	8400	J
5.	Unknown phthalate ester	28.98	7000	J
6.	Unknown phthalate ester	25.51	5900	J
7.	Unknown phthalate ester	28.37	5900	J
8.	Unknown phthalate ester	28.65	5600	J
9.	Unknown	32.89	5000	J
10.	Unknown aromatic	30.53	4600	J
11.	Unknown phthalate ester	28.44	4500	J
12.	Unknown phthalate ester	30.21	3800	J
13.	Unknown phthalate ester	30.12	3700	J
14.	Unknown	27.54	2700	J
15. 57103	Hexadecanoic acid	22.50	2700	JNB
16.	Unknown phthalate ester	28.72	2500	J
17.	Unknown phthalate ester	28.27	2000	J
18.	Unknown	32.04	1900	J
19.	Unknown	31.98	1900	J
20.	Unknown phthalate ester	31.25	1700	J
21.	Unknown phthalate ester	30.00	1600	J
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 000203

EPA SAMPLE NO.

BPL51

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029003

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ655

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/16/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	130	~~J~~ J
111-44-4	bis(2-Chloroethyl)Ether	530	U
95-57-8	2-Chlorophenol	530	U
541-73-1	1,3-Dichlorobenzene	530	U
106-46-7	1,4-Dichlorobenzene	530	U
95-50-1	1,2-Dichlorobenzene	530	U
95-48-7	2-Methylphenol	530	U
108-60-1	2,2'-oxybis(1-Chloropropane)	530	U
106-44-5	4-Methylphenol	530	U
621-64-7	N-Nitroso-di-n-propylamine	530	U
67-72-1	Hexachloroethane	530	U
98-95-3	Nitrobenzene	530	U
78-59-1	Isophorone	530	U
88-75-5	2-Nitrophenol	530	U
105-67-9	2,4-Dimethylphenol	530	U
111-91-1	bis(2-Chloroethoxy)methane	530	U
120-83-2	2,4-Dichlorophenol	530	U
120-82-1	1,2,4-Trichlorobenzene	530	U
91-20-3	Naphthalene	530	U
106-47-8	4-Chloroaniline	530	U
87-68-3	Hexachlorobutadiene	530	U
59-50-7	4-Chloro-3-Methylphenol	530	U
91-57-6	2-Methylnaphthalene	530	U
77-47-4	Hexachlorocyclopentadiene	530	U
88-06-2	2,4,6-Trichlorophenol	530	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	530	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	530	U
208-96-8	Aeenaphthylene	530	U
606-20-2	2,6-Dinitrotoluene	530	U
99-09-2	3-Nitroaniline	1300	U
83-32-9	Acenaphthene	530	U

IC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000210 BPL51

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029003

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ655

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/16/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	U
132-64-9	Dibenzofuran	110	J
121-14-2	2,4-Dinitrotoluene	530	U
84-66-2	Diethylphthalate	530	U
7005-72-3	4-Chlorophenyl-phenylether	530	U
86-73-7	Fluorene	530	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamine (1)	530	U
101-55-3	4-Bromophenyl-phenylether	530	U
118-74-1	Hexachlorobenzene	530	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	410	J
120-12-7	Anthracene	150	J
86-74-8	Carbazole	64	J
84-74-2	Di-n-butylphthalate	620	UB
206-44-0	Fluoranthene	720	
129-00-0	Pyrene	4800	E
85-68-7	Butylbenzylphthalate	* 38000 ~~150000~~	~~E~~
91-94-1	3,3'-Dichlorobenzidine	* 53000 ~~530~~	~~U~~
56-55-3	Benzo(a)anthracene	1000	
218-01-9	Chrysene	190	J
117-81-7	bis(2-Ethylhexyl)phthalate	* 2200000 ~~210000~~	~~E~~
117-84-0	Di-n-octylphthalate	* 130000 ~~27000~~	~~E~~
205-99-2	Benzo(b)fluoranthene	540	
207-08-9	Benzo(k)fluoranthene	310	J
50-32-8	Benzo(a)pyrene	340	J
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenz(a,h)anthracene	69	J
191-24-2	Benzo(g,h,i)perylene	150	J

(1) - Cannot be separated from Diphenylamine

* Result from BPL51DL

IF

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000211

EPA SAMPLE NO.

BPL51

Lab Name: 1EA-NJ Contract: 68D20022

Lab Code: 1EANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water) SOIL Lab Sample ID: 44029003

Sample wt/vol: 30 (g/mL) G Lab File ID: >GJ655

Level: (low/med) LOW Date Received: 10/14/94

% Moisture: 37 decanted: (Y/N) N Date Extracted: 10/24/94

Concentrated Extract Volume: 500 (uL) Date Analyzed: 11/16/94

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7

Number of TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	6.41	~~70000~~	~~AJB~~ R
2.	Unknown phthalate ester	31.02	17000	J
3.	Unknown phthalate ester	30.37	9300	J
4.	Unknown phthalate ester	32.69	4800	J
5.	Unknown phthalate ester	30.12	4100	J
6. 57103	Hexadecanoic acid	22.53	4100	JNB
7.	Unknown phthalate ester	30.53	3800	J
8.	Unknown phthalate ester	28.90	3600	J
9.	Unknown phthalate ester	31.99	1900	J
10.	Unknown phthalate ester	28.98	1800	J
11.	Unknown phthalate ester	32.05	1700	J
12.	Unknown phthalate ester	28.36	1700	J
13.	Unknown phthalate ester	31.26	1600	J
14.	Unknown phthalate ester	28.64	1600	J
15.	Unknown phthalate ester	35.45	1600	J
16.	Unknown	7.66	~~1300~~	~~JB~~ R
17.	Unknown phthalate ester	28.44	1200	J
18.	Unknown phthalate ester	25.51	1200	J
19.	Unknown phthalate ester	29.46	1200	J
20.	Unknown phthalate ester	34.22	920	J
21.	Unknown	5.58	~~890~~	~~JB~~ R
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

ID 000033

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water): SOIL Lab Sample ID: 44029001

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP069E_008

Moisture: 62 decanted: N Date Received: 10/14/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/15/94

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.5	U J
319-85-7	Beta-BHC	4.5	U
319-86-8	delta-BHC	4.5	U
58-89-9	gamma-BHC (Lindane)	4.5	U
76-44-8	Heptachlor	4.5	U
309-00-2	Aldrin	4.5	U
1024-57-3	Heptachlor Epoxide	4.5	U
959-98-8	Endosulfan I	4.5	U
60-57-1	Dieldrin	34	~~P~~
72-55-9	4,4'-DDE	6.4	~~P~~
72-20-8	Endrin	8.7	U
33213-65-9	Endosulfan II	8.7	U
72-54-8	4,4'-DDD	110	~~P~~ N
1031-07-8	Endosulfan Sulfate	8.7	U
50-29-3	4,4'-DDT	8.7	U
72-43-5	Methoxychlor	45	U
53494-70-5	Endrin Ketone	24	
7421-36-3	Endrin Aldehyde	8.7	U
5103-71-9	alpha-Chlordane	* 64 ~~84~~	~~BP~~
5103-74-2	gamma-Chlordane	* 61 ~~82~~	~~B~~
8001-35-2	Toxaphene	450	U
12674-11-2	Aroclor-1016	87	U
11104-28-2	Aroclor-1221	180	U
11141-16-5	Aroclor-1232	87	U
53469-21-9	Aroclor-1242	87	U
12672-29-6	Aroclor-1248	180	
11097-69-1	Aroclor-1254	520	~~P~~
11096-82-5	Aroclor-1260	87	U

* Result from BPL49DL

FORM 1 PEST

3/90

ID

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL50

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water): SOIL Lab Sample ID: 44029002

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP069E 009

Moisture: 41 decanted: N Date Received: 10/14/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/15/94

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.9	U
319-85-7	Beta-BHC	2.9	U
319-86-8	delta-BHC	2.9	U J
58-89-9	gamma-BHC (Lindane)	2.9	U
76-44-8	Heptachlor	2.9	U
309-00-2	Aldrin	2.9	U
1024-57-3	Heptachlor Epoxide	2.3	~~JP~~ U
959-98-8	Endosulfan I	2.9	U
60-57-1	Dieldrin	5.6	U
72-55-9	4,4'-DDE	3.3	~~JP~~ U
72-20-8	Endrin	5.6	U
33213-65-9	Endosulfan II	21	~~P~~ JN
72-54-8	4,4'-DDD	*160 ~~150~~	~~P~~ JN
1031-07-8	Endosulfan Sulfate	5.6	U
50-29-3	4,4'-DDT	5.6	U J
72-43-5	Methoxychlor	29	U J
53494-70-5	Endrin Ketone	53	~~P~~ J
7421-36-3	Endrin Aldehyde	5.6	U
5103-71-9	alpha-Chlordane	*53 ~~61~~	~~JP~~ J
5103-74-2	gamma-Chlordane	*51 59	~~P~~
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	100	~~P~~ JN
11097-69-1	Aroclor-1254	250	~~P~~ J
11096-82-5	Aroclor-1260	56	U

* Result from BPL50DL

FORM 1 PEST

3/90

ID

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000008

EPA SAMPLE NO.

BPL51

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: IEANJ Case No.: 22774 SAS No.: _____ SDG No.: BPL49

Matrix: (soil/water): SOIL Lab Sample ID: 44029003

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP069E_010

Moisture: 37 decanted: N Date Received: 10/14/94

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/18/94

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/16/94

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.7	U
319-85-7	Beta-BHC	2.7	U
319-86-8	delta-BHC	2.7	U J
58-89-9	gamma-BHC (Lindane)	2.7	U
76-44-8	Heptachlor	2.7	U
309-00-2	Aldrin	2.7	U
1024-57-3	Heptachlor Epoxide	2.1	~~J~~ U
959-98-8	Endosulfan I	2.7	U
60-57-1	Dieldrin	5.2	U
72-55-9	4,4'-DDE	3.4	~~J~~ U
72-20-8	Endrin	5.2	U
33213-65-9	Endosulfan II	5.2	U
72-54-8	4,4'-DDD	84	~~E~~ JN
1031-07-8	Endosulfan Sulfate	5.2	U
50-29-3	4,4'-DDT	150	E ~~J~~ JN
72-43-5	Methoxychlor	27	U J
53494-70-5	Endrin Ketone	34	~~E~~ J
7421-36-3	Endrin Aldehyde	5.2	U
5103-71-9	alpha-Chlordane	* 51 56	~~E~~ J
5103-74-2	gamma-Chlordane	* 49 56	~~E~~
8001-35-2	Toxaphene	270	U
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	62	U
12672-29-6	Aroclor-1248	64	~~E~~ JN
11097-69-1	Aroclor-1254	310	
11096-82-5	Aroclor-1260	52	U

* Result from BPL51DL

FORM 1 PEST

3/90

QUALITY ASSURED
EPA-MMB FINAL
CONTRACT LABORATORY DATA

SITE NAME: Cornell Dubilier

CASE NO./SAS NO.: 22774

TYPE OF ANALYSIS (circle one):

VOA only
~~Full~~ TCL
Full TAL ITPA
Full TAL and CN
SAS/Other _____

From: Valerie Smith - CNJ

Sent to: Andrew Ciibanoff - CNJ

Date Sent: 12/1/94

RECORD OF COMMUNICATION
REGIONAL SAMPLE CONTROL CENTER

DATE: 11/8/94
SUBJECT: CLP Data Package for Quality Assurance Review
FROM: RSCC/ESAT
TO: George Karras,
Toxic and Hazardous Waste Section

RECEIVED
NOV 2 5 1994

Attached is the following INORGANIC Data Package to be reviewed for Quality Assurance

SITE	CASE/SAS#	LAB	MATRIX	# SAMPLES
CORNELL DUBILIER ELECTRONICS APER/SI	22774	ITPA	SOIL	3
			WATER	2

REGION II RSCC DATA TRANSFER LOG

Relinquished By		Received By	
Signature	Date/Time	Signature	Date/Time
		John Bulich	11/04/94
John Bulich	11/08/94	J. Trutter	11/8/94
J. Trutter	11/8/94	Eud Sours DCR	11/8/94 2:00pm
J. Trutter	11/15/94	C-Stance	4/15/94
CS	11/18/94	NN	11/18/94
NN	11/23/94	John Bulich	11/23/94
John Bulich	11/25/94	DCR (J Bulich)	11/25/94
DCR	11/25/94 9:20	Hanif Shah	11/25/94 9:2
Hanif Shah	11/25/94 2:55	DCR	11/25/94 2:5

(OVER FOR INSTRUCTIONS) revsd 3/93

Case# 22774 Site CORNELL DUBLIER ELECTRONICS SITE Matrix: Soil 3

SDG# MBLZ89/MBLZ92 Lab ITPA Water 2

Contractor APER Reviewer Nithya Nagalingam Other

A.2.1. Validation flags- The following flags have been applied in red by th data validator and must be considered by the data user.

J- This flag indicates the result qualified as estimated.

Red-Line- A red-line drawn through a sample result indicate unusable value. The red-lined data are known to contain significant errors based on documented information and must not be used by the data user

Fully Usable Data - The results that do not carry "J" or "red-line" are fully usable.

Contractual Qualifiers- The legend of contractual qualifiers applied by the lab on Form I's is found on page B-20 of SOW ILM01.0

A.2.2. The data assessment is given below and on the attached sheets.

This case consisted of two (2) water samples and three (3) soil samples eollecte at the Cornell Dublier Electronics site on October 17, 1994 for Metal analyses as per EPA SOW ILMO2.1 protocols.

This ease consisted of 2 Sample Delivery Group (SDG), MBLZ89 and MBLZ92.
SDG# MBLZ92 consistes of 2 water samples, both of them were field blanks. SDG MBLZ89 consisted of 3 soil samples.
Samples MBLZ92 & 93 were identified as field blanks and assoeiated with th following samples.(As per the trip report)
MBLZ92-------> MBLZ89,90,91.
MBLZ93-------> MBLZ89,90,91.
One pair of field duplicate samples were collected and identified a MBLZ90/MBLZ91(Soil).
MBLZ89 was the designated QC sample for soils.
All data were qualified according to the Region II, revision guidelines.

A.2.2. (continuation)

CRDL Standard Analysis

SDG# MBLZ92
The CRDL standard recoveries for the following were outside the control limit of 80-120%: Se (final), 127.9%; Tl (final), 59.8.

J-----> Se in MBLZ92
J-----> Tl in MBLZ92,93.

SDG # MBLZ89
The CRDL standard recoveries for the following were outside the control limit of 80-120%: As (initial/final), 124.1%/124.8%; Se (final) 137.9%; Tl (final) 66%.
J-----> As in MBLZ89,90,91.
J-----> Tl in MBLZ90,91.
J-----> Se in MBLZ90,91

Field Duplicate: MBLZ90/MBLZ91
The difference between sample and field duplicate for Hg in samples MBLZ90/91 (soil) were >2CRDL. Hence these analytes were estimated.

J-----> Hg in MBLZ90,91.

A.2.2. (continuation)

Matrix Spike Analysis
SDG# MBLZ89
The matrix spike recoveries for the following were outside the control limits c 75-125%; therefore, all associated samples should be qualified as estimated i the % recovery is in the range of 30-74%.
J-----> Sb in MBLZ89,90,91

ICP Serial Dilution
All associated sample results ≥ 10xIDL or ≥ CRDL (if 10xIDL ≤ CRDL) should b qualified as estimated if % difference is >10% but <100%.
The following % difference were outside the control limits for initia concentrations ≥ 10xIDL:

SDG# MBLZ89

Be	26.5%	J-----> No samples were affected.
Pb	10.6%	J-----> MBLZ89,90,91.
V	14.8%	J-----> MBLZ89.
Zn	10.3%	Rounds off to 10.0. Hence no action taken.

Percent Solids
The percent solids of the sample MBLZ89 was 38% < 50% but > 10%; therefore, a analytes not previously qualified as estimated or rejected should be qualifi as estimated: MBLZ89

A.2.2 (continuation)

A.2.2 (continuation)

H.S 11/25/9

A.2.3. Contract-Problems/Non-Compliance

In the trip report, sampling contractor has mentioned the Organic CLP samp numbers under the Inorganic header and vice versa. This was corrected by t Validator.

MMB Reviewer: _____ Date: _____
Signature

Contractor Reviewer: N. Nithya Kalyani Date: 11/23/94.
Signature

Verified by: _____ Date: _____
Signature

CONTRACT NON-COMPLIANCE
(SMD REPORT)

Regional Review of Uncontrolled Hazardous Waste
Site Contract laboratory Data Package

CASE NO. 22774

The hardcopied (laboratory name) ITPA
Inorganic data package received at Region II has been reviewed and the quality assurance and performance data summarized. The data reviewed included:
SMC Sample No.: 2 Water + 3 Soil

Conc. & Matrix:

Contract No. (68-D2-0044) requires that specific analytical work be done and that associated reports be provided by the contractor to the Regions, EMSL-LV, and SMO. The general criteria used to determine the performance were based on an examination of:

- Data Completeness
- Matrix Spike Results
- Calibration Standards Results
- Duplicate Analysis Results
- Blank Analysis Results
- MSA Results

Items of non-compliance with the above contract are described below.

Comments:

NN
Reviewer's Initial

11/23/94
Date

[illegible]

1. USEPA Region I (ESD)
   60 Westview Street
   Lexington, MA 02173
   Oat Baird
   (617) 861-4312
   CT, ME, MA, NH, RI, VT
   CAA Resource Analysts York,
   EDI, Skinner, DGA

2. USEPA Region II (ESD)
   Woodbridge Avenue
   Edison, New Jersey 08837

   (201) 321-6676
   NJ, NY, PR, VI
   Century, Chemical, LS Test, Nance,
   ETC, Gaston, DGS, Galson, ICF

3. USEPA Region III (CBL)
   839 Bestgate Road
   Annapolis, MD 21401
   Chuck Sands
   (301) 266-8182
   DE, MD, PA, VA, WV, DC
   Carlos Mitchell, STL, MAD, VDGAF,
   ITAS, Weston, MWCC, LA Engineering
   Subject Team, Ney, PA

4. USEPA Region IV (ESD)
   Analytical Support Branch
   College Station Road
   Athens, GA 30613
   Tom Barnett, Jr.
   (404) 546-3322
   AL, FL, GA, KY, MS, NC, SC, TN
   Computer, EPS, EST, PRC,
   Triangle Labs

5. USEPA Region V (ESD)
   536 South Clark Street
   Tamar Elder, CBL
   Chicago, IL 60605
   Phil Chaillie
   312-353-8227
   IL, IN, MI, MN, OH, WI
   NEI, TAL, DPC

6. USEPA Region VI (ESD)
   Nationwide Mure Plaza Bldg C
   6602 Westwood Drive
   Houston, TX 77074
   David Stockton
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   ANALYTICAL, RECTAN, SPECS, ETS, Chemar
   Research, Inc., STL Inc., SWRI,
   Allied, Key, TX, EDRA

7. USEPA Region VII Laboratory
   25 Funston Road
   Kansas City, KS 66115
   Dennis Mone,
   (913) 236-3811
   IA, KS, NE, MO
   Wilson Kansas City Scientific
   Enterprises Eagle Picher

8. USEPA Region VIII Laboratory
   MCX 25366
   Denver Federal Center
   Lakewood, CO 80225
   Eva Hofmann
   (303) 236-7371
   CO, MT, ND, UT, WY, MO
   ACS, CSCL, RMCL Data Chem Centers

9. USEPA Region IX (ESD)
   QA Management Section
   215 Fremont Street
   San Francisco, CA 94105
   Kent Kolstenbrander
   (415) 974-0574
   AZ, CA, HI, NV, American Samoa,
   Guam Trust Territories of Pacific
   Islands, Wake Island
   ALS, CAL Western, S-Cubed, IT-CA,
   Vegas

10. USEPA Region X Laboratory
    P.O. MCX 544
    Manchester, WA 98353
    Carole Muth
    (206) 443-0370
    AK, ID, OR, WA
    Laucks Testing Labs, Century Testing
    Labs (90% VOA Only), Manchester Co.
    Columbia Testing, Silver Valley

11. Carole Sargent - (OS-230)
    USEPA
    401 "M" Street, S.W.
    Washington, DC 20460
    FTS 382-5768

12. Edward Kantor
    USEPA
    EMSL-LV
    944 E. Harmon Avenue
    MCX 93478
    Las Vegas NV 89119

13. Sample Management Office
    Viar and Company,
    P.O. BOX 818
    Alexandria, VA 22313

CLP DATA ASSESSMENT SUMMARY FORM (INORGANICS)

Type of Review: Inorganics Date: 11/23/94 Case #: 22774

Site: Cornell + Dublier Electronics Site Lab Name: ITPA

Reviewer's Initials: NN Number of Samples: 2 water 3 soil.

Analytes Rejected Due to Exceeding Review Criteria:*

% solids.

	Holding Times	Calibration	Prep Blank	Field Blank	Interferences	Spike Recovery	Duplicates Lab	Duplicates Field	Detection Limits	LCS	Serial Dilution	MSA	Total Analytes	Rejection
CN														
Flame AA														
Graphite AA														
Mercury														
Total														
Other														

Analytes Flagged as Estimated (J) Due to Exceeding Criteria Only:*

CN		10				3				17	4		110	34
Flame AA														
Graphite AA														
Mercury							2						5	2
Total		10				3	2			17	4		115	36.
Other CN														

Note:
Asterisks (*) indicate additional exceedances of review criteria.

Title: Evaluation of Metals Data for the Contract Laboratory Program
Appendix A.6: CLP Data Assessment Checklist

Date: Jan. 1992
Number: HW-2
Revision: 11

Inorganic Analysis

INORGANIC REGIONAL DATA ASSESSMENT

Region II

CASE NO. 22774

SITE Cornell & Dublier

LABORATORY ITPA

NO. OF SAMPLES/ MATRIX 2 water & 3 Soil.

SDG MBL2891 / MBL2892

REVIEWER (IF NOT ESD) Nikuya Nagal

DATE 3/90

REVIEWER'S NAME NITHYA NAGALIN

PC: ACTION: _____ FYI _____

COMPLETION DATE 11/23/94.

DATA ASSESSMENT SUMMARY

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	O		O	
2. CALIBRATIONS	O		O	
3. BLANKS	O		O	
4. ICS	O		O	
5. LCS	O			
6. DUPLICATE ANALYSIS	O		O	
7. MATRIX SPIKE	O		O	
8. MSA				
9. SERIAL DILUTION				
10. SAMPLE VERIFICATION	O		O	
11. OTHER QC	O		O	
12. OVERALL ASSESSMENT	O		O	

O = Data has no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
I = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS: _____

AREAS OF CONCERN: _____

NOTABLE PERFORMANCE: _____

U.S. EPA – CLP

6
FIELD DUPLICATES

EPA SAMPLE NO.	
MBLZ90	MBLZ

ab Name: ITPA Contract: 68-D2-0044

ab Code: ITPA Case No.: 22774 SAS No.: SDG No.: MBLZ89

atrix (soil/water): Soil Level (low/med): low

Solids Sample: 60.4 % Solids Duplicate: 65.2

Concentration Units (ug/L or mg/kg dry weight): mg/L on wet wt basis

Analyte	Action Limit	Sample (S) Concentration	C	Field Duplicate (D) Concentration	C	RPD	DIFF	Q	M
Aluminum		16217.4000		15876.2000		2.12			P
Antimony		11.7780	U	11.7360	U	–	–		P
Arsenic	10	19.3280		20.2120			0.89		F
Barium	200	332.2000		348.8200			16.60		P
Beryllium	5	2.2650	B	1.6300	B		0.64		P
Cadmium		41.3740		37.8160		9.0			P
Calcium	5000	14224.2000		14702.6000			478		P
Chromium	10	49.2260		49.8780			0.65		P
Cobalt	50	24.7640	B	23.7980	B		0.97		P
Copper		127.7460		127.7920		0.04			F
Iron		32918.0000		35534.0000		7.60			P
Lead		347.3000		378.1600		8.60			P
Magnesium	5000	7248.0000		7758.8000			510		P
Manganese		504.3400		818.2600		47.5			P
Mercury	0.2	0.9422		0.1956	U		0.75		CV
Nickel	40	53.4540		55.4200			2.0		P
Potassium	5000	1404.3000	B	1747.3600	B		343		P
Selenium	5	6.0400		4.5640	B		1.48		F
Silver	10	2.4764	B	3.9120	B		1.43		P
Sodium	5000	365.4200	B	446.6200	B		81		P
Thallium	[illegible]	3.9260	U	3.9120	U	–	–		F
Vanadium	50	47.7160	B	46.6180	B		1.1		P
Zinc		531.5200		550.9400		3.51			P
Cyanide									NR

FORM VI – IN

Cornell Dubilier Electronics Site
22774
2 water 3 Soil
Lab: ITPA.

Evaluation of Metals Data for the Contract Laboratory Program (CLP)

based on

SOW. 3/90

(SOP Revision XI)

PREPARED BY: _____ DATE: 1-30-92
Hanif Sheikh, Quality Assurance Chemist
Toxic and Hazardous Waste Section

APPROVED BY: _____ DATE: 1-30-92
Kevin Kubik, Chief
Toxic and Hazardous Waste Section

APPROVED BY: _____ DATE: 1/30/92
Robert Runyon, Chief
Monitoring Management Branch

Title: Evaluation of Metals Data for the Contract Laboratory Program

Date: Jan. 1992
Number: HW-2
Revision: 11

1.0 Scope

1.1 This procedure is applicable to inorganic data obtained from contractor laboratories working for Hazardous Waste Site Contract Laboratory Program (CLP).

1.2 The data validation is based upon analytical and quality assurance requirements specified in Statement of Work (SOW) 3/90 .

2.0 Responsibilities - Data reviewers will complete the following tasks as assigned by the Data Review Coordinator:

2.1. For a total review:

2.1.1 Data Assessment - "Total Review-Inorganics" Checklist Appendix (A.1). The reviewer must answer every question on the checklist.

2.1.2 Data Assessment - Data Assessment Narrative (Appendix A.2) The answer on the checklist must match the action in the narrative (appendix A.2) and on Form I's. Do not use pencil to write the narrative.

2.1.3 Contract Non-Compliance - SMO Report (Appendix A.3) This report is to be completed only when a serious contract violation is encountered, or upon the request of the Data Validation Task Monitor, or Technical Project Officer (TPO). Forward 5 copies: one each for internal files, appropriate Regional TSO, Sample Management Office (SMO) and last two addresses of Mailing List for Data Reviewers (Appendix A.4). In other cases, all contract violations should be appended to the end of the Data Assessment Narrative (Sec. A.2.2).

2.1.4 CLP Data Assessment Summary Forms

2.1.4.1 Appendix A.5 Fill in the total number of analytes analyzed by different analyses and the number of analytes rejected or flagged as estimated due to corresponding quality control criteria. Place an "X" in boxes where analyses were not performed, or criteria do not apply.

2.1.4.2 Appendix A.6 Data reviewer is also required to fill out Inorganic Regional Data Assessment form (Appendix A.7) provided by EPA Headquarters. Codes listed on the form will be used to describe the Data Assessment Summary.

2.1.5 Data Review Log: It is recommended that each data reviewer should maintain a log of the reviews completed to include: a. date of start of case review

b. date of completion of case review
c. site
d. case number
e. contract laboratory
f. number of samples
g. matrix
h. hours worked
i. reviewer's initials

2.1.6 Telephone Record Log - the data reviewer should enter the bare facts of inquiry, before initiating any phone conversation with CLP laboratory. After the case review has been completed, mail white copy of Telephone Record Log to the laboratory and pink copy to SMO. File yellow copy in the Telephone Record Log folder, and attach a xerox copy of the Telephone Record Log to the completed Data Assessment Narrative (Appendix A.2).

2.1.7 Forwarded Paperwork

2.1.7.1 Upon completion of review, the following are to be forwarded to the Regional Sample Control Center (RSCC) located in the Surveillance and Monitoring Branch:
a. data package
b. completed data assessment checklist (Appendix A.1, original)
c. SMO Contract Compliance Screening (CCS)
d. Record of Communication (copy)
e. CLP Reanalysis Request/Approval Record (original + 3 copies)
f. Appendix A.6 (original).

2.1.7.2 Forward 2 copies of completed Data Assessment Narrative (Appendix A.2) along with 2 copies of the Inorganic Data Assessment Form (Appendix A.6) and Telephone Record Log , if any,: one each for appropriate Regional TPO, and the other one to EPA EMSL office in las Vegas. The addresses of TPOs and EPA office in Las Vegas are given in Appendix A-4.

2.1.8 Filed Paperwork - Upon completion of review, the following are to be filed within MMB files:
a. Two copies of completed Data Assessment Narrative (Appendix A.2) each carrying Appendix A.6.
b. Telephone Record Log (copy)
c. SMO Report (copy Appendix A-3)
d. CLP Reanalysis Request/Approval Record (copy)

3.0 Data Completeness
Each data package is checked by a Regional Sample Control Coordinator (RSSC) for completeness. A data package is assumed to be complete when all the deliverables required under the contract are present. If a data package is incomplete, the RSSC would call the laboratory for missing document(s). If the laboratory does not respond within a week, SMO and MMB coordinator of Region II will be notified.

4.0 Rejection of Data - All values determined to be unacceptable on the Inorganic Analysis Data Sheet (Form I) must be lined over with a red pencil. As soon as any review criteria causes data to be rejected, that data can be eliminated from any further review or consideration.

5.0 Acceptance Criteria - In order that reviews be consistent among reviewers, acceptance criteria as stated in Appendix A.1 (pages 4-25) should be used. Additional guidance can be found in the National Inorganic Functional Guidelines of October 1, 1989.

6.0 SMO Contract Compliance Screening (CCS) - This is intended to aid reviewer in locating any problems, both corrected and uncorrected. However, the validation should be carried out even if CCS is not present. Resubmittals received from laboratory in response to CCS must be used by the reviewer.

7.0 Request for Reanalysis - Data reviewers must note all items of contract non-compliance within Data Assessment Narrative. If holding times and sample storage times have not been exceeded, TPO may request reanalysis if items of non-compliance are critical to data assessment. Requests are to be made on "CLP Re-Analysis Request/Approval Record".

8.0 **Record of Communication** - Provided by the Regional Sample Control Center (RSCC) to indicate which data packages have been received and are ready to be reviewed.

9.0 **Rounding off numbers** - The data reviewer will follow the standard practice.

Title: Evaluation of Metals Data for the Contract Laboratory Program
Appendix A.1: Data Assessment - Contract Compliance (Total Review)

Date: Jan. 1992
Number: HW-2
Revision: 11

	YES	NO	N/A
A.1.1 Contract Compliance Screening Report (CCS) - Present?	[✓]		
ACTION: If no, contact RSCC.			
A.1.2 Record of Communication (from RSCC) - Present?	[✓]		
ACTION: If no, request from RSCC.			
A.1.3 Trip Report - Present and complete?	[✓]		
ACTION: If no, contact RSCC for trip report.			
A.1.4 Sample Traffic Report - Present?	[✓]		
Legible?	[✓]		
ACTION: If no, request from Regional Sample Control Center (RSCC).			
A.1.5 Cover Page - Present?	[✓]		
Is cover page properly filled in and signed by the lab manager or the manager's designee?	[✓]		
ACTION: If no, prepare Telephone Record Log, and contact laboratory.			
Do numbers of samples correspond to numbers on Record of Communication?	[✓]		
Do sample numbers on cover page agree with sample numbers on:			
(a) Traffic Report Sheet?	[✓]		
(b) Form I's?	[✓]		
ACTION: If no for any of the above, contact RSCC for clarification.			

A.1.6	Form I to IX	Yes	No	N/A
A.1.6.1	Are all the Form I through Form IX labeled with:			
	Laboratory name?	[✓]		
	Case/SAS number?	[✓]		
	EPA sample No.?	[✓]		
	SDG No.?	[✓]		
	Contract No.?	[✓]		
	Correct units?	[✓]		
	Matrix?	[✓]		

ACTION: If no for any of the above, note under Contract Problem/Non-Compliance section of the "Data Assessment Narrative".

A.1.6.2	Do any computation/transcription errors exceed 10% of reported values on Forms I-IX for:			
	(NOTE: Check all forms against raw data.)			
	(a) all analytes analyzed by ICP?	[✓]		
	(b) all analytes analyzed by GFAA?	[ ]		✓
	(c) all analytes analyzed by AA Flame?	[ ]		✓
	(d) Mercury?	[✓]		
	(e) Cyanide?	[ ]		✓

ACTION: If yes, prepare Telephone Log, contact laboratory for corrected data and correct errors with red pencil and initial.

Title: Evaluation of Metals Data for the Contract Laboratory Program Appendix A.1: Data Assessment - Contract Compliance (Total Review)

Date: Jan. 1992
Number: HW-2
Revision: 11

		YES	NO	N/A
A.1.7	Raw Data			
A.1.7.1	Digestion Log* for flame AA/ICP (Form XIII) present?	[✓]		
	Digestion Log for furnace AA Form XIII present?	[ ]		✓
	Distillation Log for mercury Form XIII present?	[ ]		✓
	Distillation Log for cyanides Form XIII present?	[ ]		✓
	Are pH values (pH<2 for all metals, pH>12 for cyanide) present?	[✓]		
	*Weights, dilutions and volumes used to obtain values.			
	Percent solids calculation present for soils/sedinents?	[✓]		
	Are preparation dates present on sample preparation logs/bench sheets?	[✓]		
A.1.7.2	Measurenent read out record present? ICP	[✓]		✓
	Flame AA	[ ]		✓
	Furnace AA	[ ]		✓
	Mercury	[✓]		
	Cyanides	[✓]		
A.1.7.3	Are all raw data to support all sample analyses and QC operations present?	[✓]		
	Legible?	[✓]		
	Properly labeled?	[✓]		

ACTION: If no for any of the above questions in sections A.1.7.1 through A.1.7.3, write Telephone Record Log and contact laboratory for resubmittals.

		YES	NO	N/A
A.1.8	**Holding Times** - (aqueous and soil samples)			
	(Examine sample traffic reports and digestion/distillation logs.)			
	Mercury analysis (28 days). . . . . exceeded?	___	[✓]	___
	Cyanide distillation (14 days). . . . . exceeded?	___	[___]	✓
	Other Metals analysis (6 months). . . . exceeded?	___	[✓]	___
	NOTE: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from date of collection to the date of preparation (from raw data). Attach to checklist.			
	ACTION: If yes, reject (red-line) values less than Instrument Detection Limit (IDL) and flag as estimated (J) the values above IDL even though sample(s) was preserved properly.			
A.1.8.2	Is pH of aqueous samples for:			
	Metals Analysis >2?	___	[✓]	___
	Cyanides Analysis <12?	___	[___]	✓
	Action: If yes, flag the associated metals and cyanides data as estimated.			
A.1.9	**Form I (Final Data)**			
A.1.9.1	Are all Form I's present and complete?	[✓]	___	___
	ACTION: If no, prepare telephone record log and contact laboratory for submittal.			
A.1.9.2	Are correct units (ug/l for waters and mg/kg for soils) indicated on Form I's?	[✓]	___	___
	Are soil sample results for each parameter corrected for percent solids?	[✓]	___	___
	Are all "less than IDL" values properly coded with "U"?	[✓]	___	___

		YES	NO	N/A
	Are the correct concentration qualifiers used with final data?	[✓]		
	ACTION: If no for any of the above, prepare Telephone Record Log, and contact laboratory for corrected data.			
A.1.9.3	Are EPA sample # s and corresponding laboratory sample ID # s the same as on the Cover Page, Form I's and in the raw data?	[✓]		
	Was a brief physical description of samples given on Form I's?	[✓]		
	Was the dilution of any sample diluted beyond the requirements of the contract noted on Form I or Form XIV?		[✓]	
	ACTION: If no for any of the above, note under Contract-Problem/Non-Compliance of the "Data Assessment Narrative".			
A.1.10	Calibration			
A.1.10.1	Is record of at least 2 point calibration present for ICP analysis?	[✓]		
	Is record of 5 point calibration present for Hg analysis?	[✓]		
	Is record of 4 point calibration present for:			
	Flame AA?	[ ]		✓
	Furnace AA?	[ ]		✓
	Cyanides?	[ ]		✓
	Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	[ ]		✓

ACTION: If no for any of the above, write in the Contract Problem/Non-Compliance section of the "Data Assessment Narrative".

		YES	NO	N/A
A.1.10.2	Is correlation coefficient less than 0.995 for:			
	Mercury Analysis?	___	[✓]	___
	Cyanide Analysis?	___	[___]	✓
	Atomic Absorption Analysis?	___	[___]	✓

ACTION: If yes, flag the associated data as estimated.

NOTE: The data validator shall calculate the correlation coefficient using concentrations of the standards and the corresponding instrument response (e.g. absorbance, peak area, peak height, etc.).

A.1.10.3	In the instance where less than 4 standards are measured in absorbance (or peak area, peak height, etc.) mode, are the remaining standards analyzed in concentration mode immediately after calibration within ±10% of the true values?	[___]	___	✓

ACTION: If no, flag the associated data as estimated if standards are not within ±10% of true values. Do not flag the data as estimated in linear range indicated by good recovery of standard(s).

A.1.11 Form II A (Initial and Continuing Calibration Verification)-

A.1.11.1	Present and complete for every metal and cyanide?	[✓]	___	___
	Present and complete for AA and ICP when both are used for the same analyte?	[✓]	___	___

ACTION: If no for any of the above, prepare Telephone Record Log and contact laboratory.

A.1.11.2	Circle on each Form IIA all percent recoveries that are outside the contract windows. Are all calibration standards (initial and continuing) within control limits:			
	Metals- 90-110%R?	[✓]	___	___
	Hg - 80-120%R?	[✓]	___	___
	Cyanides- 85-115%R?	[___]	___	✓

	YES	NO	N/A
ACTION: Flag as estimated (J) all positive data (not flagged with a "U") analyzed between a calibration standard with %R between 75-89% (65-79% for Hg; 70-84% for CN) or 111-125% (121-135% for Hg; 116-130% for CN) recovery and nearest good calibration standard. Qualify results <IDL as estimated (UJ) if the ICV or CCV %R is 75-89% (CN, 70-84% ; Hg, 65-79%). Reject (red-line) as unacceptable data if recovery of the ICV or CCV is outside the range 75-125% (CN, 70-130%; Hg, 65-135%). Qualify five samples on either side of verification standard out of control limits.			
A.1.11.3 Was continuing calibration performed every 10 samples or every 2 hours?	[✓]		
Was ICV for cyanides distilled?	[ ]		✓
ACTION: If no for any of the above, write in the Contract-Problem/Non-Compliance section of the "Data Assessment Narrative".			
A.1.12 <u>Form II B (CRDL Standards for AA and ICP)</u> -			
A.1.12.1 Has a CRDL standard (CRA) analyzed after initial calibration for all AA metals (<u>except Hg</u>)?	[✓]		
Was a mid-range calib. verification standard distilled and analyzed for cyanide analysis?	[ ]		✓
Was a 2xCRDL (or 2xIDL when IDL>CRDL) analyzed (CRI) for each ICP run? (Note: CRI for Al,Ba,Ca,Fe,Mg,Na,or K is not required.)	[✓]		
ACTION: If no for any of the above, flag as estimated all data falling within the affected ranges. The affected ranges are: AA Analysis - **True Value ± CRDL; ICP Analysis - **True Value ± 2CRDL; CN Analysis - **True Value ± 0.5 x True Value.			

**True value of CRA, CRI or mid-range standard. Substitute IDL fot CRDL when IDL > CRDL. Compute the concentration of the missing mid-range standard from the calibration range.

		YES	NO	N/A
A.1.12.2	Was CRI analyzed after ICV/ICB and before the final CCV/CCB, and twice every eight hours of ICP run?	[✓]		
	ACTION: If no, write in Contract Problem/Non-Compliance Section of the "Data Assessment Narrative".			
A.1.12.3	Circle on each Form IIB all the percent recoveries that are outside the acceptance windows.			
	Are CRA and CRI standards within control limits:			
	Metals 80 - 120%R?	[ ]	✓	
	Is mid-range standard within control limits:			
	Cyanide 80 - 120%R?	[ ]		✓
	ACTION: Flag as estimated all sample results within the affected range if the recovery of the standard is between 50-79%; flag only positive data within the affected range if the recovery is between 121-150%; reject all data within the affected range if the recovery is less than 50%; reject only positive data within the affected range if the recovery is greater than 150%. Qualify 50% of the samples on either side of CRI standard outside the control limits.			
	Note: Flag or reject the final results only when sample raw data are within the affected ranges and the CRDL standards are outside the acceptance windows.			
A.1.13	Form III (Initial and Continuing Calibration Blanks)			
A.1.13.1	Present and complete?	[✓]		
	For both AA and ICP when both are used for the same analyte?	[✓]		
	Was an initial calibration blank analyzed?	[✓]		
	Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	[✓]		

		YES	NO	N/A
	ACITCN: If no, prepare Telephone Record Log, contact laboratory and write in the Contract-Problems/ Non-Compliance section of the "Data Assessment Narrative".			
A.1.13.2	Circle on each Form III all calibration blank values that are above CRDL (or 2 x IDL when IDL > CRDL).			
	Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLe)?	[✓]	___	___
	Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?	[✓]	___	___
	ACTICN: If no for any of the above, flag as estimated (J) positive sample results when raw sample value is less than or equal to calibration blank value analyzed between calibration blank with value over CRDL (or 2xIDL) and nearest good calibration blank. Flag five samples on either side of the calibration blank outside the control limits.			
A.1.14	FCRM III (Preparation Blank) - (Note: The preparation blank for mercury is the same as the calibration blank.)			
A.1.14.1	Was one prep. blank analyzed for:			
	each Sample Delivery Group (SDG)?	[✓]	___	___
	each batch of digested samples?	[✓]	___	___
	each matrix type?	[✓]	___	___
	both AA and ICP when both are used for the same analyte?	[✓]	___	___
	ACTICN: If no for any of the above, flag as estimated (J) all the associated positive data <10 x IDLs for which prep. blank was not analyzed.			
	NOTE: If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			

		YES	NO	N/A
A.1.14.2	Is concentration of prep. blank value greater than the CRDL when IDL is less than or equal to CRDL?	___	[✓]	___
	If yes, is the concentration of the sample with the least concentrated analyte less than 10 times the prep.blank?	___	[✓]	___
	ACTION: If yes, reject (red-line) all associated data greater than CRDL concentration but less than ten times the prep. blank value.			
A.1.14.3	Is concentration of prep. blank value (Form III) less than two times IDL, when IDL is greater than CRDL?	[✓]	___	___
	ACTION: If no, reject (red-line) all positive sample results when sample raw data are less than 10 times the prep. blank value.			
A.1.14.4	Is concentration of prep. blank below the negative CRDL?	___	[✓]	___
	ACTION: If yes, reject (red-line) all associated sample results less than 10xCRDL.			
A.1.15	Form IV (ICP Interference Check Sample)			
A.1.15.1	Present and complete?	[✓]	___	___
	(NOTE: Not required for furnace AA, flame AA, mercury, cyanide and Ca, Mg, K and Na.)			
	Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	[✓]	___	___
	ACTION: If no, flag as estimated (J) all the samples for which AL, Ca, Fe, or Mg is higher than in ICS.			
A.1.15.2	Circle all values on each Form IV that are more than ± 20% of true or established mean value.			
	Are all Interference Check Sample results inside the control limits (± 20%)?	[✓]	___	___
	If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?	[✓]	___	___

		YES	NO	N/A
	ACTION: If no, flag as estimated (J) those positive results for which ICS recovery is between 121-150%; flag all sample results as estimated if ICS recovery falls within 50-79%; reject (red-line) those sample results for which ICS recovery is less than 50%; if ICS recovery is above 150%, reject positive results only (not flagged with a "U").			
A.1.16	Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation) - (Note: Not required for Ca, Mg, K, and Na (both matrices), Al, and Fe (soil only.)			
A.1.16.1	Present and complete for: each SDG?	[✓]	___	___
	each matrix type?	[✓]	___	___
	each conc. range (i.e. low, med., high)?	[✓]	___	___
	For both AA and ICP when both are used for the same analyte?	[✓]	___	___
	ACTION: If no for any of the above, flag as estimated (J) all the positive data less than four times the spiking levels epecified in SOW for which spiked sample was not analyzed.			
	NOTE: If one spiked sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
A.1.16.2	Was field blank used for spiked sample?	___	[✓]	___
	ACTION: If yes, flag all positive data less than 4 x spike added as estimated (J) for which field blank was used as spiked sample.			
A.1.16.3	Circle on each Form VA all spike recoveries that are outside control limits (75% to 125%).			
	Are all recoveries within control limits?	[✗]	[✓]	___
	If no, is sample concentration greater than or equal to four times spike concentration?	[✓]	___	___

	YES	NO	N/A
ACTION: If yes, disregard spike recoveries for analytes whose concentrations are greater than or equal to four times spike added. If no, circle those analytes on Form V for which sample concentration is less than four times the spike concentration.			
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	[✓]		
ACTION: If no, write in the Contract - Problem/Non - Compliance section of "Data Assessment Narrative".			
A.1.16.4 Aqueous Are any spike recoveries:			
(a) less than 30%?		[✓]	Not need form me
(b) between 30-74%?	✓	[ ]	
(c) between 126-150%?		[✓]	are blan
(d) greater than 150%?		[✓]	
ACTION: If less than 30%, reject all associated aqueous data; if between 30-74%, flag all associated aqueous data as estimated (J); if between 126-150%, flag as estimated (J) all associated aqueous data not flagged with a "U"; if greater than 150%, reject (red-line) all associated aqueous data not flagged with a "U".			
A.1.16.5 Soil/Sediment Are any spike recoveries:			
(a) less than 10%?		[✓]	
(b) between 10-74%?	✓	[ ]	
(c) between 126-200%?		[✓]	
(d) greater than 200%?		[✓]	

		YES	NO	N/A
	ACTION: If less than 10%, reject all associated data; if between 10-74%, flag all associated data as estimated; if between 126-200%, flag as estimated all associated data was not flagged with a "U"; if greater than 200%, reject all associated data not flagged with a "U".			
A.1.17	Form VI (Lab Duplicates)			
A.1.17.1	Present and complete for: each SDG?	[✓]		
	each matrix type?	[✓]		
	each concentration range (i.e. low, med., high)?	[✓]		
	both AA and ICP when both are used for the same analyte?	[✓]		
	ACTION: If no for any the above, flag as estimated (J) all the data ≥CRDL* for which duplicate sample was not analyzed.			
	Note: 1. If one duplicate sample was analyzed for more than 20 samples, then first 20 samples do not have to be flagged as estimated.			
	2. If percent solids for soil sample and its duplicate differ by more than 1%, prepare a Form VI for each duplicate pair, report concentrations in ug/L on wet weight basis and calculate RPD or Difference for each analyte.			
A.1.17.2	Was field blank used for duplicate analysis?		[✓]	
	ACTION: If yes, flag all data ≥CRDL* as estimated (J) for which field blank was used as duplicate.			
A.1.17.3	Are all values within control limits (RPD 20% or difference ≤ ±CRDL)?	[✓]		
	If no, are all results outside the control limits flagged with an * on Form I's and VI?	[✓]		
	ACTION: If no, write in the Contract - Problems/Non-Compliance section of "Data Assessment Narrative".			

* Substitute IDL for CRDL when IDL > CRDL.

	YES	NO	N/A
NOTE: 1. RPD is not calculable for an analyte of the sample - duplicate pair when both values are less than IDL. 2. If the result of lab duplicate analyzed by GFAA is rejectable due to coefficient of correlation of MSA, analytical spike recovery, or duplicate injections criteria, do not apply precision criteria to metals analyzed by GFAA.			

A.1.17.4 Aqueous

Circle on each Form VI all values that are:

RPD > 50%, or
Difference > CRDL*

Is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times *CRDL?	___	[✓]	✓
Is any difference** between sample and duplicate greater than *CRDL where sample and/or duplicate is less than 5 times *CRDL?	___	[✓]	✓

ACTION: If yes, flag the associated data as estimated.

A.1.17.5 Soil/Sediment

Circle on each Form VI all values that are:

RPD > 100%, or

Difference > 2 x CRDL*

Is any RPD (where sample and duplicate are both greater than or equal to 5 times *CRDL) : > 100%?	___	[✓]	___
Is any **difference between sample and duplicate (where sample and/or duplicate is less than 5x*CRDL) : > 2x*CRDL?	___	[✓]	___

* Substitute IDL for CRDL when IDL > CRDL.
** Use absolute values of sample and duplicate to calculate the difference.

		YES	NO	N/A
	ACTION: If yes, flag the associated data as estimated.			
A.1.18	Field Duplicates			
A.1.18.1	Were field duplicates analyzed?	[✓]	___	___

ACTION: If yes, prepare a Form VI for each aqueous field duplicate pair. Prepare a Form VI for each soil duplicate pair, if percent solids for sample and its duplicate differ by more than 1%; report concentrations of soils in ug/l on wet weight basis and calculate RPDs or Difference for each analyte.

NOTE: 1. Do not calculate RPD when both values are less than IDL.
2. Flag all associated data only for field duplicate pair.

A.1.18.2 Aqueous

Circle all values on self prepared Form VI for field duplicates that are:

RPD > 50%, or
Difference > CRDL*

Is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times *CRDL?	___	[ ]	✓
Is any **difference between sample and duplicate greater than *CRDL where sample and/or duplicate is less than 5 times *CRDL?	___	[ ]	✓

ACTION: If yes, flag the associated data as estimated.

* Substitute IDL for CRDL when IDL > CRDL.
** Use absolute values of sample and duplicate to calculate the difference.

		YES	NO	N/A
A.1.18.3	Soil/Sediment			
	Circle all values on self prepared Form VI for field duplicates that are:			
	RPD >100%, or			
	Difference > 2 x CRDL*			
	Is any RPD (where sample and duplicate are both greater than 5 times *CRDL) : >100%?	___	[✓]	___
	Is any **difference between sample and duplicate (where sample and/or duplicate is less than 5x *CRDL): >2x *CRDL?	✓	[___]	___
	ACTION: If yes, flag the associated data as estimated.			
A.1.19	Form VII (Laboratory Control Sample) (Note: LCS - not required for aqueous Hg and cyanide analyses.)			
A.1.19.1	Was one LCS prepared and analyzed for:			
	each SDG?	[✓]	___	___
	each batch samples digested/distilled?	[✓]	___	___
	both AA and ICP when both are used for the same analyte?	[✓]	___	___
	ACTION: If no for any of the above, prepare Telephone Record Log and contact laboratory for submittal of results of LCS. Flag as estimated (J) all the data for which LCS was not analyzed.			
	NOTE: If only one LCS was analyzed for more than 20 samples, then first 20 samples close to LCS do not have be he flagged as estimated.			

* Substitute IDL for CRDL when IDL > CRDL.
** Use absolute values of sample and duplicate to calculate the difference.

		YES	NO	N/A
A.1.19.2	**Aqueous LCS**			
	Circle on each Form VII the LCS percent recoveries outside control limits (80 - 120%) except for aqueous Ag and Sb.			
	Is any LCS recovery: less than 50%?	___	[✓]	___
	between 50% and 79%?	___	[✓]	___
	between 121% and 150%?	___	[✓]	___
	greater than 150%?	___	[✓]	___
	ACTION: Less than 50%, reject (red-line) all data; between 50% and 79%, flag all associated data as estimated (J); between 121% and 150%, flag all positive (not flagged with a "D") results as estimated; greater than 150%, reject all positive results.			
A.1.19.3	**Solid LCS**			
	NOTE: 1. If "Found" value of LCS is rejectable due to duplicate injections or analytical spike recovery criteria, regardless of LCS recovery, flag the associated data as estimated (J). 2. If IDL of an analyte is equal to or greater than true value of LCS, disregard the "Action" below even though LCS is out of control limits.			
	Is LCS "Found" value higher than the control limits on Form VII?	___	[✓]	___
	ACTION: If yes, qualify all associated positive data as estimated.			
	Is LCS "Found" value lower than the Control limits on Form VII?	___	[✓]	___
	ACTION: If yes, qualify all associated data as estimated.			

		YES	NO	N/A
A.1.20	Form IX (ICP Serial Dilution) -			
	NOTE: Serial dilution analysis is required only for initial concentrations equal to or greater than 10 x IDL.			
A.1.20.1	Was Serial Dilution analysis performed for:			
	each SDG?	[✓]		
	each matrix type?	[✓]		
	each concentration range (i.e. low, med.)?	[✓]		
	ACTION: If no for any of the above, flag as estimated all the positive data ≥ 10xIDLs or ≥ CRDL when 10xIDL ≤ CRDL for which Serial Dilution Analysis was not performed.			
A.1.20.2	Was field blank(s) used for Serial Dilution Analysis?		[✓]	
	ACTION: If yes, flag all associated data ≥ 10 x IDL as estimated (J). If 10xIDL ≤ CRDL, flag all data ≥ CRDL.			
A.1.20.3	Are results outside control limit flagged with an "E" on Form I's and Form IX when initial concentration on Form IX is equal he 50 times IDL or greater.	[✓]		
	ACTION: If no, write in the Contract-Problem/Non-Compliance section of the "Data Assessment Narrative".			
A.1.20.4	Circle on each Form IX all percent difference that are outside the control limits for initial concentrations equal to or greater than 10 x IDLs only.			
	Are any % difference values:			
	> 10%?	✓	[ ]	
	≥ 100%?		[✓]	

		YES	NO	N/A
	ACTION: Flag as estimated (J) all the associated sample data ≥ 10xIDLs (or ≥ CRDL when 10xIDL ≤ CRDL) for which percent difference is greater than 10% but less than 100%. Reject (red-line) all the associated sample results equal to or greater than 10xIDLs (or ≥ CRDL when 10xIDL ≤ CRDL) for which PD is greater than or equal to 100%.			
	Note: Flag or reject on Form I's only the sample results whose associated raw data are ≥ 10xIDL (or ≥ CRDL when 10xIDL≤ CRDL)			
A.1.21	Furnace Atomic Absorbtion (AA) QC Analysis			
A.1.21.1	Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	[ ]		✓
	ACTION: If no, reject tts data on Form I's for which duplicate injections were not performed.			
A.1.21.2	Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or Coefficient of Variation (CV) for concentration greater than CRDL?	[ ]		✓
	Was a dilution analyzed for sample with analytical spike recovery less than 40%?	[ ]		✓
	ACTION: If no for any of the above, flag all the associated data as estimated.			
A.1.21.3	Is *analytical spike recovery outside the control limits (85-115%) for any sample?		[ ]	✓
	ACTION: If yes, flag as estimated the affected sample results if the recovery is between 10-84%; if the recovery is between 115-200%, flag the associated positive sample results as estimated; reject the associated sample results if the recovery is less than 10%; reject positive sample results if the recovery is greater than 200%.			

* Analytical spike is not required on the pre-digestion spiked sample.

		YES	WD	N/A
	NOTE: Reject or flag the data only when the affected sample(s) was not subsequently analyzed by Method of Standard Addition.			
A.1.22	Form VIII (Method of Standard Addition Results)			
A.1.22.1	Present?	[ ]		✓
	If no, is any Form I result coded with "S" or a "+"?		[ ]	✓
	ACTION: If yes, write request an Telephone Record Log and contact laboratory for submittal of Form VIII.			
A.1.22.2	Is coefficient of correlation for MSA less than 0.990 for any sample?		[ ]	✓
	ACTION: If yes, reject (red-line) the affected data.			
A.1.22.3	Was *MSA required for any sample but not performed?		[ ]	✓
	Is coefficient of correlation for MSA less than 0.995?		[ ]	✓
	Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?		[ ]	✓
	ACTION: If yes for any of the above, flag all the associated data as estimated (J).			
A.1.22.4	Was proper quantitation procedure followed correctly as outlined in the SOW on page B-23?	[ ]		✓
	ACTION: If no, note exception under Contract Problem/ Non-Compliance section of the "Data Assessment Narrative", and prepare a separate list.			

* MSA is not required on ICS and prep. blank.

		YES	NO	N/A
A.1.23	Dissolved/Total or Inorganic/Total Analytes -			
A.1.23.1	Were any analyses performed for dissolved as well as total analytes on the same sample(s).	___	[___]	✓
	Were any analyses performed for inorganic as well as total (organic + inorganic) analytes on the same sample(s)?	___	[___]	✓
	NOTE: 1. If yes, prepare a list comparing differences between all dissolved (or inorganic) and total analytes. Compute the differences as a percent of the total analyte only when dissolved concentration is greater than CRDL as well as total concentration. 2. Apply the following questions only if inorganic (or dissolved) results are (i) above CRDL, and (ii) greater than total constituents. 3. At least one preparation blank, ICS, and ICS should be analyzed in each analytical run.			
A.1.23.2	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 10%?	___	[___]	✓
A.1.23.3	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 50%?	___	[___]	✓
	ACTION: If more than 10%, flag both dissolved (or inorganic) and total values as estimated (J); if more than 50%, reject (red-line) the data for both values.			
A.1.24	Form I (Field Blank) -			
	(Note: Designate "Field Blank" as such on Form I.)			
A.1.24.1	Circle all field blank values on Form I that are greater than (CRDL, (or 2 x IDL when IEL > CRDL).			
	Is field blank concentration less than CRDL (or 2 x IDL when IEL > CRDL) for all parameters of associated aqueous and soil samples?	[✓]	___	✓

	YES	NO	N/A
If no, was field blank value already rejected due to other QC criteria?	[ ]		✓

ACTION: If no, reject (except field blank results) all associated positive sample data less than or equal to five times the field blank value. Reject on Form I's the soil sample results that when converted to ug/L on wet basis are less than or equal to five times the field blank value in ug/L.

A.1.25 Form X, XI, XII (Verification of Instrumental Parameters).

A.1.25.1 Is verification report present for:

	YES	NO	N/A
Instrument Detection Limits (quarterly)?	[✓]		
ICP Interelement Correction Factors (annually)?	[✓]		
ICP Linear Ranges (quarterly)?	[✓]		

ACTION: If no, contact TPO of the lab.

A.1.25.2 Form X (Instrument Detection Limits) - (Note: IDL is not required for Cyanide.)

	YES	NO	N/A
A.1.25.2.1 Are IDLs present for: all the analytes?	[✓]		
all the instruments used?	[✓]		
For both AA and ICP when both are used for the same analyte?	[✓]		

ACTION: If no for any of the above, prepare Telephone Record Log and contact laboratory.

	YES	NO	N/A
A.1.25.2.2 Is IDL greater than CRDL for any analyte?		[✓]	
If yes, is the concentration on Form I of the sample analyzed on the instrument whose IDL exceeds CRDL, greater than 5 x IEL.	[✓]		

	YES	NO	N/A
Action : If no, flag as estimated all values less than five times IDL of the instrument whose IDL exceeds CRDL.			
A.1.25.3 **Form XI (Linear Ranges)**			
A.1.25.3.1 Was any sample result higher than high linear range of ICP.	___	[✓]	___
Was any sample result higher than the highest calibration standard for non-ICP parameters?	___	[✓]	___
If yes for any of the above, was the sample diluted bo obtain the result on Form I?	[✓]	___	___
ACTION: If no, flag the result reported on Form I as estimated(J).			
A.1.26 **Percent Solids of Sediments**			
A.1.26.1 Are percent solids in sediment(s):			
< 50%?	✓	[___]	___
< 10%?	___	[✓]	___

ACTION: If yes, qualify as estimated all the resulhe of a sample thet has per cent solids between 10%-50% (i.e. moisture content between 50%-90%). Reject all the resulhe of a sanple that has per cent solids less than 10% (i.e. moisture content greater than 90%).

NOTE: Reject or flag(J) only the sanple results thet were not previously rejected or flaged due he other QC criteria.

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November 3, 1994

USEPA National Enforcement
Investigations Center (NEIC)
Denver Federal Center
Building 53
P. O. Box 25227
Denver, CO 80225

Attn: CLP Audit Program

Please be aware, the CSF for Case No. 22774, SDG No. MBLZ89 and MBLZ92, was sent to Richard Spear, Region 2, on November 3, 1994 via Federal Express overnight shipment.

Very truly yours,

David A. Dunlap
Project Manager

DAD:ds

cc: USEPA Contract Laboratory Program - SMO

ITAS PT/11-94/0157/NEIC2

Regional Office
5103 Old William Penn Highway • Export, Pennsylvania 15632 • 412-731-8806

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00001

CASE NARRATIVE

Laboratory Name:	ITAS Pittsburgh, Pennsylvania
Laboratory Code:	ITPA
Project Name:	USEPA
Inorganic SOW:	ILM02.1
Project Number:	662004
Work Order Number:	Q4-10-167
Contract Number:	68-D2-0044
Case Number:	22774
SDG Number:	MBLZ92
Sample Number:	
	MBLZ93
	MBLZ92

Shipment

Two water samples were received at the ITAS Pittsburgh Laboratory on October 14, 1994, for metals analysis.

Metals

A duplicate digestion and a matrix spike were performed on the samples as they were insates. A serial dilution was performed on sample MBLZ92.

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

000092

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 22774 SAS No.: _____ SDG No.: MBLZ89

SOW No.: ILM02.1

EPA Sample No.	Lab Sample ID
MBLZ89	MBLZ89
MBLZ89D	MBLZ89D
MBLZ89S	MBLZ89S
MBLZ90	MBLZ90
MBLZ91	MBLZ91

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David A. Dunlap Name: David A. Dunlap

Date: 11/3/94 Title: Project Manager

REVIEWED BY: MTW
DATE: 11/2/94

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SAMPLE DELIVERY GROUP (SDG) TRAFFIC REPORT (TR) COVER SHEET

Lab Name: IT-Pittsburgh Contract No.: 68-D2-0044

Lab Code: ITPA Case No.: 22774 SAS No.: _____

Full Sample Analysis Price in Contract: $ _____

SDG No./First Sample in SDG: MBL289 Sample Receipt Date: 10 14 94
(Lowest EPA Sample Number in first shipment of samples received under SDG.) (MM/DD/YY

Last Sample io SDG: MBL291 Sample Receipt Date: 10 14 94
(Highest EPA Sample Number in last shipment of samples received under SDG.) (MM/DD/YY

EPA Sample Numbers in the SDG (listed in alphanumeric order)

1	MBL289	11	
2	MBL290	12	
3	MBL291	13	
4		14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	

Note: There are a maximum of 20 field samples in an SDG.

Attach Traffic Reports to this form in alphanumeric order (i.e.. the order listed on this form).

Signature: [signature] Date: 10/20/94

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INTERNATIONAL TECHNOLOGY CORPORATION

November 3, 1994

USEPA National Enforcement
Investigations Center (NEIC)
Denver Federal Center
Building 53
P. O. Box 25227
Denver, CO 80225

Attn: CLP Audit Program

Please be aware, the CSF for Case No. 22774, SDG No. MBLZ89 and MBLZ92, was sent to Richard Spear, Region 2, on November 3, 1994 via Federal Express ovemight shipment.

Very truly yours,

David A. Dunlap
Project Manager

DAD:ds

cc: USEPA Contract Laboratory Program - SMO

ITAS PT/11-94/0157/NEIC2

Regional Office
5103 Old William Penn Highway • Export, Pennsylvania 15632 • 412-731-8806

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C0001

CASE NARRATIVE

Laboratory Name:	ITAS Pittsburgh, Pennsylvania
Laboratory Code:	ITPA
Project Name:	USEPA
Inorganic SOW:	ILM02.1
Project Number:	662004
Work Order Number:	Q4-10-144
Contract Number:	68-D2-0044
Case Number:	22774
SDG Number:	MBLZ89

Sample Number:

MBLZ89
MBLZ90
MBLZ91

Shipment

Three soil samples were received at the ITAS Pittsburgh Laboratory on October 14, 1994, for metals analysis.

Metals

A duplicate digestion and a matrix spike were not performed on sample MBLZ89. A serial dilution was performed on sample MBLZ91.

The matrix spike recovery exceeded the 75 to 125 percent control limit for antimony. All associated results were flagged with an "N" qualifier.

The serial dilution percent difference exceeded the control limit for lead and zinc. All associated results were flagged with an "E" qualifier.

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044 **001002**

Lab Code: ITPA__ Case No.: 22774 SAS No.: _____ SDG No.: MBLZ92

SOW No.: ILM02.1

EPA Sample No.	Lab Sample ID
MBLZ92	MBLZ92
MBLZ93	MBLZ93

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Dan Dunlap Name: David A. Dunlap

Date: 11/3/94 Title: Project Manager

REVIEWED BY: MTW
DATE: 11/1/94

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLZ89

Lab Name: ITAS_PITTSBURGH Contract: 68-D2-0044

Lab Code: ITPA Case No.: 32774 SAS No.: SDG No.: MBLZ89

Matrix (soil/water): SOIL Lab Sample ID: MBLZ89

Level (low/med): LOW Date Received: 10/14/94

% Solids: 38.0

Concentration Units (ug/L or mg/kg dry weight): MG/KS

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12700			P
7440-36-0	Antimony	6.4	U	NJ	P
7440-38-2	Arsenic	9.0		J	P
7440-39-3	Barium	277			P
7440-41-7	Beryllium	0.93	B		P
7440-43-9	Cadmium	16.2			P
7440-70-2	Calcium	6160		J	P
7440-47-3	Chromium	35.1			P
7440-48-4	Cobalt	12.0	B		P
7440-50-8	Copper	109			P
7439-89-6	Iron	21000			P
7439-92-1	Lead	242		EJ	P
7439-95-4	Magnesium	4290			P
7439-96-5	Manganese	253			P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	34.7			P
7440-09-7	Potassium	1190	B		P
7782-49-2	Selenium	1.9	B		P
7440-22-4	Silver	3.7	B		P
7440-23-5	Sodium	325	B		P
7440-28-0	Thallium	2.1	U		P
7440-62-2	Vanadium	40.3		J	P
7440-66-6	Zinc	372		E	P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

ARTIFACTS: ROOTS

FORM I - IN ILM02.1

U.S. EPA - CLP

000004

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLZ90

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 22774_ SAS No.: _____ SDG No.: MBLZ89

Matrix (soil/water): SOIL_ Lab Sample ID: MBLZ90

Level (low/med): LOW__ Date Received: 10/14/94

% Solids: _60.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	5370			P_
7440-36-0	Antimony_	3.9	U	NJ	P_
7440-38-2	Arsenic__	6.4		J	P_
7440-39-3	Barium___	110			P_
7440-41-7	Beryllium	0.75	B		P_
7440-43-9	Cadmium__	13.7			P_
7440-70-2	Calcium__	4710			P_
7440-47-3	Chromium_	16.3			P_
7440-48-4	Cobalt___	8.2	B		P_
7440-50-8	Copper___	42.3			P_
7439-89-6	Iron_____	10900			P_
7439-92-1	Lead_____	115		EJ	P_
7439-95-4	Magnesium	2400			P_
7439-96-5	Manganese	167			P_
7439-97-6	Mercury__	0.78		J	CV
7440-02-0	Nickel___	17.7			P_
7440-09-7	Potassium	465	B		P_
7782-49-2	Selenium_	2.0		J	P_
7440-22-4	Silver___	0.82	B		P_
7440-23-5	Sodium___	121	B		P_
7440-28-0	Thallium_	1.3	U	J	P_
7440-62-2	Vanadium_	15.8	B		P_
7440-66-6	Zinc_____	176		E	P_
_____	Cyanide__				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: ROOTS

FORM I - IN ILM02.1

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

000005

MBLZ91

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 22774_ SAS No.: _____ SDG No.: MBLZ89

Matrix (soil/water): SOIL_ Lab Sample ID: MBLZ91

Level (low/med): LOW__ Date Received: 10/14/94

% Solids: _65.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4870			P
7440-36-0	Antimony	3.6	U	NJ	P
7440-38-2	Arsenic	6.2		J	P
7440-39-3	Barium	107			P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	11.6			P
7440-70-2	Calcium	4510			P
7440-47-3	Chromium	15.3			P
7440-48-4	Cobalt	7.3	B		P
7440-50-8	Copper	39.2			P
7439-89-6	Iron	10900			P
7439-92-1	Lead	116		EJ	P
7439-95-4	Magnesium	2380			P
7439-96-5	Manganese	251			P
7439-97-6	Mercury	0.15	U	J	CV
7440-02-0	Nickel	17.0			P
7440-09-7	Potassium	536	B		P
7782-49-2	Selenium	1.4	B	J	P
7440-22-4	Silver	1.2	B		P
7440-23-5	Sodium	137	B		P
7440-28-0	Thallium	1.2	U	J	P
7440-62-2	Vanadium	14.3	B		P
7440-66-6	Zinc	169		E	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS: ROOTS

FORM I - IN ILM02.1

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLZ92

FIELD BLANK

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 22774_ SAS No.: _____ SDG No.: MBLZ92

Matrix (soil/water): WATER Lab Sample ID: MBLZ92

Level (low/med): LOW__ Date Received: 10/14/94

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	68.8	B		P_
7440-36-0	Antimony_	12.2	U		P_
7440-38-2	Arsenic__	2.3	U		P_
7440-39-3	Barium___	0.50	B		P_
7440-41-7	Beryllium	0.10	U		P_
7440-43-9	Cadmium__	1.5	U		P_
7440-70-2	Calcium__	520	B		P_
7440-47-3	Chromium_	1.8	U		P_
7440-48-4	Cobalt___	1.9	U		P_
7440-50-8	Copper___	2.5	B		P_
7439-89-6	Iron_____	39.7	B		P_
7439-92-1	Lead_____	1.4	U		P_
7439-95-4	Magnesium	18.4	B		P_
7439-96-5	Manganese	0.91	B		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	4.3	U		P_
7440-09-7	Potassium	381	U		P_
7782-49-2	Selenium_	2.7	B	J	P_
7440-22-4	Silver___	2.0	U		P_
7440-23-5	Sodium___	895	B		P_
7440-28-0	Thallium_	4.0	U	J	P_
7440-62-2	Vanadium_	1.4	U		P_
7440-66-6	Zinc_____	3.6	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLZ93

FIELD BLANK

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lab Code: ITPA__ Case No.: 22774_ SAS No.: _____ SDG No.: MBLZ92

Matrix (soil/water): WATER Lab Sample ID: MBLZ93

Level (low/med): LOW__ Date Received: 10/14/94

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	37.6	B		P_
7440-36-0	Antimony_	12.2	U		P_
7440-38-2	Arsenic__	2.3	U		P_
7440-39-3	Barium___	0.78	B		P_
7440-41-7	Beryllium	0.10	U		P_
7440-43-9	Cadmium__	1.5	U		P_
7440-70-2	Calcium__	501	B		P_
7440-47-3	Chromium_	1.8	U		P_
7440-48-4	Cobalt___	1.9	U		P_
7440-50-8	Copper___	1.8	B		P_
7439-89-6	Iron_____	28.9	B		P_
7439-92-1	Lead_____	1.4	U		P_
7439-95-4	Magnesium	14.5	B		P_
7439-96-5	Manganese	0.68	B		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	4.3	U		P_
7440-09-7	Potassium	38i	U		P_
7782-49-2	Selenium_	2.6	U		P_
7440-22-4	Silver___	2.0	U		P_
7440-23-5	Sodium___	902	B		P_
7440-28-0	Thallium_	4.0	U	J	P_
7440-62-2	Vanadium_	1.4	U		P_
7440-66-6	Zinc_____	4.6	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN ILM02.1

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REFERENCE NO. 20

SOUTH PLAINFIELD HEALTH DEPARTMENT

PAX# (201) 754-1179

FAX COVER

TO: Rudy Chilanoff

ATTENTION: Melissa Lirvia

FAX NUMBER: 1-609-860-0250

FROM: Health Department

VOICE NUMBER: 754-1179 EXT.

NUMBER OF PAGES INCLUDING COVER SHEET 3

AUTHORIZED BY: Michael Book

DATE: 2/7/94 LOG NUMBER:

Cornell-Dubilier chronology

1961 Cornell-Dubilier moves out of Spicer plant at 333 Hamilton Blvd.

1983 or 1984 - a complaint to the S.P. Health Dept. from a former C-D employee who thought that waste from manufacture of capacitors, contaminated with PCBs, had been dumped into floodplain area behind the plant, caused Sanitarian Donna Ostman to asked DEP for assistance. A Mike Perotti, from the Solid Waste Maaagement division, investigated. Had trouble contacting the site's owner, decided it would be difficult to determine where the contaminated waste had been dumped; no follow-through.

March, 1986. Environmental Specialist receieved an "anonymous tip" in form of an article in Pollution Engineering about C-D in New Bedford, Mass., being responsible for massive PCB contamination in New Bedford Harbor. Spoke to someone in the DEP Bureau of Environmental Measurement and Site Assessment, who promised to assign somebody to do a preliminary assessment.

June, 1986 My contact in site assessment was no longer working on the project. Told me that the plans to initiate a preliminary assessment of the C-D site in the next fiscal quarter (starting July, 1986) would be scrapped unless the U.S. Congress refunded the Superfund. Gave me a new name to contact for future updates.

September 11, 1986 - Division of Site Evaluation came out to site and took water and soil samples. Donna Ostman and I were on-site, and located what appeared to be a dumping site for capacitors. The sampling team obliged us by taking a soil sample at this area in addition to the locations they had planned to sample.

April, 1987 - telephoned Site Assessment to ask for results. Was told that the data had been sent to the Division of Quality Assurance one month after the sampling date, and QAD had not returned the data yet.

May, 1987 - phoned Site Assessment. Was told that the data had come back "qualified", which means that due to inadequate procedures (in this case, the lab exceeded proper holding times) the data were considered inaccurate and could not be released.
- attended a DEP-sponsored conference on various environmental issues, intended to improve relationship with local level. Approached big-wigs on how to get some action.
-heard from the chief of the Bureau of Site Assessment, who had me talk to one of his people. Was told that there is no money available to resample site; however, not all of the data were qualified,and even though the PCB data were no good, there was enough evidence of toxicity that the site would be scored as a hazardous waste site and prioritized (volatile organics were found in addition to PCBs).
-wrote to the Office of Regulatory Services, formally requesting the data from the site.

July, 1987 - finally received copy of the lab results. Arochlor 1254, a PCB, was listed in concentrations of 25000 ug/kg in sediment,

680,000 ug/kg in soil. Also benzene, methylene chloride, phthalate, , dichloroethene, etc.

September, 1987 - John Bogden writes to John Trela, Director of the Division of Hazardous Waste Management, asking for action.

December, 1987 - Division of Waste Management, Bureau of Compliance and Technical Services, Responsible Party Investigation Unit sent an investigator. He took information from my file and from the building department regarding tenants on the site since C-D moved out. Was still working on this in January, 1988.

Februayy, 1988 - Site Assessment told me the first part of the Responsible Party search had been completed. Cornell-Dubilier had been determined to be the Responsible Party. Now a financial search, to see what assets they have, was being done. If they can get C-D to clean up, they will; if not, the site will be prioritized for eventual DEP clean-up.

April, 1988 - called for a status report. No progress.

September, 1988 - the case went to the Bureau of Case Management in June. Due to a backlog, the case has not been assigned. Probably will be assigned to someone within two months. The responsible parties will be contacted and a remediation plan will be negotiated.

REFERENCE NO. 21

MALCOLM PIRNIE, INC.	PROJECT NOTES

To:File	Date:December 28, 1994
From:Andrew Cibanoff	Project #:8003-306
Subject:NJDEP Analytical Data - Sept. 11, 1986	Site Name:Cornell Dubilier Electronics

The NJDEP inspected the Cornell Dubilier Electronics (CDEI) site on September 11, 1986 and collected three soil, two surface water and two sediment samplea All of the chemical analyses for the site inspection were performed by a NJDEP Certified Laboratory for Target Compound List (TCL) substances and have undergone an organic data validation review. A majority of the organic analytical data results are Contract Laboratory Program (CLP) equivalent; however, the inorganic analytical data were not validated. Most of the organic data was qualified due to exceedances of holding times and other infractions.

The exact sample locations are unknown. SW1/SED1 were taken upstream of the large circular concrete culverts and SW2/SED2 were taken downstream of the culverta The soil samples were all taken on site, though it its uncertain what areas of the site were sampled. Soil Sample No. S3 was designated as background.

The following provides a list of the hazardous substances detected in the soil samples collected from the CDEI site during the September 11, 1986 NJDEP site inspection: antimony (30,500 µg/kg), arsenic (15,900 - 30,500 µg/kg), cadmium (3,200 - 55,300 µg/kg), chromium (15,100 - 242,000 µg/kg), copper (62,400 - 1,600,000 µg/kg), 1,1-dichloroethene, (38J* - 88J µg/kg), diethylphthalate (900,000J µg/kg), lead (441,000 - 1,930,00 µg/kg), mercury (1,000 - 1,500 µg/kg), nickel (16,300 - 589,000 µg/kg), PCBs (100,000J - 680,000J µg/kg), silver (2,400 - 12,400 µg/kg), trichloroethene (35J - 79J µg/kg), and zinc (64,300 - 1,800,000 µg/kg). It should be noted that the designated background sample contained many of the higher concentrations of the contaminants listed above suggesting that an adequate background sample location was not selected.

High concentrations of similar contaminants were also detected in the sediment samples collected from the unnamed tributary of Bound Brook, which traverses the southeastern portion of the site. The upstream sample exhibited generally higher concentrations of metals than the downstream sediment sample. A PCB (Aroclor-1254) was detected at a significantly greater concentration (140,000 J µg/kg) in the downstream sediment sample compared to the upstream sample (25,000 µg/kg).

* Note: The J denotes data qualified as estimated.

* CORNELL DUBILIER DATA

	SOIL SAMPLES (ppb)			SEDIMENT SAMPLES (ppb)		SURFACE WATER SAMPLES (ppb)	
	SI	82	S3	SED1	SED2	SW1	SW2
LOCATION	on-site	on-site	background	upstream	downstream	upstream	downstream
& SOLIDS	59	93	90	56	70	N/A	N/A
METALS							
Antimony	30500		30400	62800			
Arsenic	30800	15900	26200	64300	13200	11.8	
Beryllium	4100	1100	2900	20000	2300		
Cadmium	20300	3200	55300	33900	8600	9	
Chromium	81000	15100	242000	82500	25200	12	
Copper	235000	62400	1600000	427000	75500	80	25
Lead	441000	581000	1930000	321000	257000	135	
Mercury	1500	1000	1400	240			
Nickel	59700	16300	589000	142000	37800		
Selenium	4100	1700					
Silver	12400	2400	11100	3600	2000		
Zinc	450000	64300	1800000	745000	195000	197	21
Phenols		70	70	110			
VOLATILES							
1,1-dichloroethane				46 J			
1,1-dichloroethene	88 J	38 J	61 J				
Trichloroethene	35 J	79 J					
Chloroform		19 J					
Methylene Chloride		5000 J	4000 J		20 J		15 J
SEMI-VOLATILES							
Bis(2-Ethylhexyl)Phthalate				26200 J	18700 J	61 R	
Diethylphthalate	900000 J						
Fluoranthene			40000 R				
Pyrene			25000 R				
Pesticides/PCB's							
Aldrin				990 J			
Alpha-BHC					240 J		
Beta-BHC	50 J	470 J			70 J	0.06 J	
Gamma-BHC (Lindane)	39 J						
Aroclor-1254	680000 J	190000 J	410000 J	25000 J	140000 J		

* Note: The quality of the Inorganics data is unknown since a Data Assessment is not available for that fraction.

14 APR 1987

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS SITE MITIGATION
401 E. State St., CN 028, Trenton, N.J. 08625
(609) 984-2902

ANTHONY J. FARRO
ACTING DIRECTOR

Cornell Dubilier
EPA
APR 13 1987

M E M O R A N D U M

TO: Richard Gervasio, Technical Coordinator
Bureau of Planning and Site Assessment

THROUGH: Nancy E. Spence, Chief
Dr. Barry Frasco, Environmental Scientist I
Quality Assurance Section

FROM: John G. Hunter, Research Scientist III
Quality Assurance Section

SUBJECT: Data Validation Review of Cornell Dubilier Data Package; Laboratory H2M, Inc., Sample Numbers CD910-SED1, SED2,-S1, -S2, -S3, -SW1, -SW2/2SW2Q, -TB and -FB.

The Quality Assurance Section, Bureau of Environmental Measurements and Quality Assurance, has reviewed the above referenced data package according to the NJDEP Tier I deliverable requirements. Samples were analyzed for volatile organics base/neutral extractable organics, acid extractable organics, pesticides, PCB's and Inorganics. There are serious Quality Assurance problems with this package. Specifically:

Volatile Fractions

1. Holding Times - all samples were run after acceptable holding times, and hence all volatiles data is qualified.

2. The continuing calibration was run in two different standards. Thia is not standard laboratory practice and reflects poorly upon the H2M's capabilities and the data are qualified.

BNA's

1. Holding times - samples SED-1, SED-2, S-1, S-2 and S-3 were analyzed 5 days over the holding time and hence are qualified.

2. Method Blank - samples SW-1, SW2/SW2Q, the Trip Blank and the Field Blank were all extracted on different days than the cited method blank and hence are rejected.

3. Sample S-3 had unacceptable surrogate recoveries, was not reextracted and hence is rejected.

PCB-Pesticides

1. Confirmation analyses for all pesticides and PCB's are rejected, hence all identifications are considered tentative.

All other results are acceptable.

If you have any questions please contact this office at (3)0752.

HS:cp
Attachment
c John M. Mateo

ANALYTE SUMMARY

SITE: Cornell Dubilier **

SAMPLE	ANALYTE	METHOD BLANK CONC. (ug/l)	LAB. REPORTED CONC. (ug/kg)	QAS REPORTED CONC. (ug/kg)	QAS DECISION
SED-1	methyiene chloride	-	6	6J	negate 5.
	1,1 dichloroethane	-	46	46J	confirm
	1,1,1-trichloroethane	2	190	190BJ	confirm 3.
	1,2,4-tirchloro benzene	-	1600J	1600J	confirm
	butylbenzyl phthalate	-	1700J	1700J	confirm
	bis(2-ethylhexyl) phthalate	-	26200	26200J	confirm
	delta-BHC	0.05	100	100B	tent. 6.
	aldrin	-	990	990	tent. 6.
	Arochlor 1254	-	25000	25000	tent. 6.
SED-2	methylene chloride	-	20	20J	negate 5.
	cis/trans -1,2 dichloroettene	-	3J	3J	confirm
	1,1,1 trichloroethane	2	32	32BJ	confirm 3.
	1,2,4 trichloro benzene	-	3100J	3100J	confirm
	bis(2-ethylhexyl) phthalate	-	18700	i8700J	confirm
	alpha BHC	-	240	240	tent. 6.
	beta BHC	-	70	70	tent. 6.
	Arochlor 1254	-	140000	140000	tent. 6.
3-1	methylene chloride	-	110	110J	confirm
	1,1-dichloroethene	-	88	88J	confirm
	1,1,1-trichloroethane	2	110	110BJ	confirm 3.
	trichloroethene	-	35	35J	confirm
	benzene	-	2J	2J	confirm
	acenaphthene	-	300J	300J	confirm
	diethylphthalate	-	900000	S00000J	confirm
	phenanthrene	-	2800J	2800J	confirm
	anthracene	-	700J	700J	confirm
	fluoranthene	-	4600J	4600J	confirm
	pyrene	-	3400J	3400J	confirm
	benzo(a)anthracene	-	1800J	i800J	confirm
	bis(2-ethylhexyl) phthalate	-	5100J	5100J	confirm
	chrysene	-	i800J	i800J	confirm
	beta-BHC	-	50	50	tent. 6.
	gammma-BHC	-	39	39	tent. 6.
	Arochlor 1254	-	680000	680000	tent. 6.
3-2	methylene chloride	-	5000	5000J	confirm
	1,1-dichloroethene	-	38	38J	confirm

	cis/trans-1,2-dichloroethene	-	100	100J	confirm
	chloroform	-	19	19J	confirm
	1,1,1-trichloroethane	2	74	74BJ	confirm
	benzene	-	3J	3J	confirm
	toluene	-	5J	5J	confirm
	naphthalene	-	3100J	3100J	confirm
	phenathrene	-	3000J	3000J	confirm
	beta-BHC	-	470	470	confirm
	delta-BHC	0.05	170B	170B	confirm
	Arochlor 1254	-	190000	190000	confirm
S-3	methylene chloride	-	4000	4000J	confirm
	1,1-dichloroethene	-	61	61J	confirm
	1,1,1-trichloro ethane	1	110	110BJ	confirm 3.
	trichloroethene	-	5J	6J	confirm
	toluene	-	3J	3J	confirm
	All BNAs rejected for this sample.				
	Arochlor 1254	-	410000	410000	tent. 5.
SW-1	1,1,1-trichloro ethane	2	4	4BJ	negate 1.
	BNAs rejected for this sample				
SW2/SW2Q	methylene chloride	-	15	15J	negate 5.
	1,1,1-trichloroethane	2	3	3BJ	negate 1.
	toluene	-	1J	1J	confirm
	BNAs rejected for this sample				
Trip Blank	methylene chloride	-	15	15	confirm
	BNAs rejected for this sample				
Field Blank	methylene chloride	-	10	10J	confirm
	1,1,1-trichloroethane	-	4J	4J	confirm
	BNAs rejected for this sample				

FOOTNOTES

1. The value reported is less than 3 times the value in the blank. It is the policy of the QAS to negate reported value due to probable foreign contamination unrelated to the actual sample. It is not possible to accurately quantitate below value reported in the sample, yet the end user is alerted that a reportable quantity was detected.

2. The value reported is between 3x and 5x the value in the method blank and may be due to possible foreign contaminationunrelated to the actual sample. The value reported is not negated and is considered estimated as indicated by the presence of the J qualifier. Resampling is recommended.

3. The value reported is greater than 5x the CRQL and is considered "real". The "B" qualifier alerts the end-user to the presence of this analyte in the method blank.

4. The nontargeted compound detected is less than 3x the value detected in the method blank. It is the policy of QAS to negate the reported value as the presence of the nontargeted compound is attributable to foreign contamination unrelated to the actual sample. It is not possible to accurately quantitate the nontargeted analytes found in the sample, yet the end user is alerted that a reportable quantity was detected.

5. The value found in the sample is less than 3x the concentration found in the field/trip blank, it is QAS policy to negate the value as it is attributable to foreign contamination unrelated to the sample.

6. The confirmatory analysis for PCBs and pesticides was rejected hence all indentifications must be considered tentative.

** Nontargeted compounds have not been evaluated due to time constraints.

EVALUATION OF

ANALYTICAL DATA REPORT PACKAGE

FOR

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS SITE MITIGATION

CN-OSS

TRENTON, NEW JERSEY 08625

Case Name	Field Sample #	Laboratory Sample #	Sample Location	Time and Date of Sample Collection
CORNELL DUBILIER	CD910-SED1			9/11/86
	-SED2			9/11/86
	-S1			9/11/86
	-S2			9/11/86
	-S3			9/11/86
	-SW1			9/11/86
	-SWE/SW20			9/11/86
	-TB			9/11/86
	-FB			9/11/86

Lab Name: HEM LABORATORIES

Immediate User
of Data:

EVALUATION OF DELIVERABLES

Specific Comments on Analytical Deliverables Received

I. Format

Required as deliverables and must be provided:

1. Review page - Acceptable.

2. Title page - Acceptable.

3. Table of contents - Acceptable.

4. Sample Request Form - Acceptable.

5. Chain of Custody - Acceptable.

6. Laboratory chronicle - Acceptable.

7. Non-Conformance Summary - Does not cover significant non-conformance events.

8. Methodology Review - Acceptable.

9. Pagination - Acceptable.

11. Instrumentation Set-up

1. Volatile Fraction

A. GC/MS Tune

Tune check of 9/S4/86 08:29 acceptable.
Tune check of 9/26/86 11:40 acceptable.

B. Calibration

1. Initial Standard Calibration - The initial calibration c 8/S7/86 is acceptable.

2. Continuing Standard Calibration - HSM has combined more one standard run to generate a continuing calibration ch This is not standard laboratory practice, reflects poor upon H2Ms capabilities and leaves all analytical data fo the volatile organics quantitatively suspect.

2. Base Neutral / Acid Extractable Fraction

A. GC/MS Tune

Tune of 8/S1/86 16:21 is acceptable.

Tune of 8/22/86 09:17 is acceptable.
Tune of 10/6/86 13:47 is acceptable.
Tune of 9/22/86 03:27 is acceptable.

B. Calibration

1. Initial Standard Calibration - The initial calibration o 3/22/86 is fully acceptable.

2. Continuing Standard Calibration - The continuing calibra checks were acceptable with the exception of some compou

Calibration check of 9/22/86 08:47

Compound	% Difference (25% maximum)
aniline	77
hexachlorocyclopentadiene	32
4-nitrophenol	32
3,3'-dichlorobenzidine	47

Calibration check of 10/6/86 17:09

Compound	% Difference (25% maximum)
1,2,4-trichlorbenzene	25
2,4-dinitrophenol	56
hexachlorobenzene	28
di-n-butylphthalate	53
terphenyl-d14	30
3,3'-dichlorobenzidine	25

3. Pesticide and PCB Fraction

A. Calibration

1. Initial Standard Calibration - The linearity checks for runs were acceptable.

2. Continuing Standard Calibration - The DDT/Endrin breakdo were found to be acceptable. However, when recalculated samples did not yield the same percent breakdowns that w reported.

B. Retention Time Windows - Acceptable.

C. DBC Retention Time Shift - The confirmation analysis had many samples whose retention time shifts were unacceptable.

Sample	Run #	% Difference(2% maximum for a packed column
Standard mix B	2286	4
Standard mix B	2300	4
CD910-SW1	2301	2
CD910-SW2/SW2Q	2302	2
CD910-TB	2303	2

CD910-FB	2304	3
BLK399	2305	3
Individual mix B	2306	3
CD910-S3	2311	4
Standard mix B	2312	6
Individual mix A	2313	7

All these samples are rejected. As standards are included am the rejected runs and as there are a large number of standar involved the entire confirmatory analysis is rejected.

D. DDT Minumim Retention Time - All acceptable.

III. Chromatagraphic and Quality Control Concerns:

1. Volatile Fraction

A. Holding Times - All the volatile organics were held beyond holding times. Accordingly, the volatile organics are quantitatively qualified.

Sample	Date received	Date analysed	Days over	HT
SW1	9/12/86	9/24/86	5	7
FB	9/12/86	9/24/86	5	7
SW2/SWEQ	9/12/86	9/24/86	5	7
TB	9/12/86	9/24/86	5	7
SED1	9/12/86	9/26/86	4	10
SED2	9/12/86	9/26/86	4	10
S2	9/12/86	9/26/86	4	10
S1	9/12/86	9/26/86	4	10
S3	9/12/86	9/26/86	4	10

B. Surrogates

For the water samples all surrogate recoveries were acceptab For the soil/sediment samples all surrogate recoveries were acceptable.

C. Matrix Spike and Matrix Spike Duplicate

SW2/SW2Q chlorobenzene MSD/MS RPD 21%

D. Blanks
1. Method Blank

Method Blank of 9/26/86
1,1,1 trichloroethene 1ug/l J

Method blank of 9/24/86
1,1,1 trichlorethane 2ug/l J

2. Trip Blank
   Methylene Chloride 13 ug/1

3. Field Blank
   Methylene Chloride 10ug/1
   1,1,1 trichloroethane 1ug/1 J

2. Base Neutral / Acid Extractable Fraction

A. Holding Times - Five samples were extracted after the seven d holding time. Specifically they are;

Sample	Date received	Date extracted	Days over
3ED-1	9/12/86	9/24/86	5
SED-2	9/12/86	9/24/86	5
S-1	9/12/86	9/24/86	5
S-2	9/12/86	9/24/86	5
S-3	9/12/36	9/24/86	5

All samples that are over holding time are qualified.

B. Surrogates

For the water samples SW2 MS had a recovery for phenol D-5 of the limits are 10-94%.

For the soil/sediment samples only one sample with unacceptab surrogate recoveries, 3-3, as it had two unacceptable surroga recoveries it is rejected.

3-3	Surrogate	% Recovery	Limits
	nitrobenzene	6	23-120
	2-fluorobiphenyl	19	30-115

C. Matrix Spike and Matrix Spike Duplicate

Water

Sample	Compound	MS%R	MSD%R	RPD	Criteri
	1,2,4 trichloro benzene	-	38	-	(39-98)
	1,2,4 trichloro benzene	-	-	29	28 max
	acenaphthene	-	38	-	(46-118
	N-nitroso-di-n propylamine	-	36	27	(41-116

D. Blanks
1. Method Blank - Many samples were extracted without being

associated with a method blank.

Date extracted	Sample
9/24/86	SED-1
9/24/86	SED-2
9/24/86	S-1
9/24/86	3-2
9/24/36	S-3
9/15/86	SW-1
9/16/86-9/17/86	SW2/SW2Q
9/16/36-9/17/86	TB
9/16/86-9/17/86	FB
9/24/86	METHOD BLANK

All compounds not associated with a method blank are reject

No analytes were found in the method blank results.

2. Trip Blank - One unknown was identified:

Scan # 141, estimated concentation 11 ug/l

3. Field Blank

Compound	Concentration
bis(2-ethylhexyl)phthaiate	16 ug/l
unknown scan # 143	10 J

3. Pesticide and PCB Fraction

A. Holding Times - Acceptable.

B. Surrogates

Sample	% Recovery
SED-1	811
SED-2	857
3-1	570
8-2	303
S-4	404

C. Matrix Spike and Matrix Spike Duplicate

Sample	Analyte	%Recovery	RPD	Limits
SW2/SW2QMS	Lindane	144	-	56-123
SW2/SW2QMSD	Lindane	155	-	56-128

3W2/SW2Q	Aldrin	-	44	22
SW2/SW2QMS	Dieldrin	24	-	52-126
SW2/SW2QMSD	Dieldrin	23	-	52-126
SW2/SW2Q	Endrin	-	28	21

D. Blanks

1. Method Blank

Date	Compound	Concentration
10/6/86	delta BHC	0.05 ug/l
	unknown	0.81 ug/l
10/7/86	unknown	0.56 ug/l

2. Trip Blank - Not addressed in package.

3. Field Blank - Not addressed in package.

IV. <u>Dioxin (2,3,7,8 TCDD)</u>

Soil and waste matrix deliverables shall include September 1983 Re-
VII protocols as modified by NJDEP July 1984. Water and wastew
matrix deliverables shall include Method 613, July 1982,
Cincinnati protocols.

EVALUATON

Not Applicable.

V. Metals and Limited Chemistry

A defined deliverables package is currently in development, how
areas of detection limits and quality control are to be submittec
per ths appropriate EPA publication.

EVALUATION

Review not perfvormed due to time constraints.

Final Evaluation with date and signature of BEMQA auditor.

_____ acceptable

_____ acceptable, with cautions noted above

_____ missing documentation requested and not received on timely basis, data rejection until received

_____ noncompliance to criteria achievement, quality assurance rejection

_____ signature

_____ date

Review- Division of Hazardous Site Management disposition of rsjected data

Comments/Remedies:

_____ Quality Assurance Officer or DHSM designee

_____ Date

cc: Project Manager and BEMQA on Data Rejection Review.

Analytical Data Report Package

Submitted

H2M HOLZMACHER, McLENOON & MURRELL, P.C.

TITLE PAGE

Analytical Data Report Package

for

New Jersey Department of Environmental Protection

Trenton, NJ 08625

Field Sample No.	Laboratory Sample No.	Date of Sample Collection
CD 910-SED1	660530-533	9-11-86
CD 910-SED2	660534-537	9-11-86
CD 910-S1	660538-541	9-11-86
CD 910-S2	660542-545	9-11-86
CD 910-53	660546-549	9-11-86
CD 910-SW1	660550-553	9-11-86
CD 910-SW2/SW2Q	660554-557	9-11-86
CD 910-TB	660558-561	9-11-86
CD 910-FB	660562-565	9-10-86

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VII. Standard Data Package	501	III
VIII. Raw QC Data Package	737	IV
IX. Chain-of Custody	827	IV

I. Methodology Review

METHODOLOGY SUMMARY

Purgeable Organics:- The procedure used is from 40 CFR Part 136 10/84 edition. The sample is analyzed using the purge and trap technique on a Finnigan OWA GC/MS.

Acid Extractables:- The procedure used is from 40 CFR Part 136 10/84 edition. The sample was extracted by adjusting the pH to <2. The sample was analyzed on a HP GC/MS.

Base/Neutral Extractables:- The procedure used is from the 40 CFR Part 136 10/84 edition. . The sample is extracted in a basic medium and analyzed on a HP GC/MS.

Metals:- The procedures used are from the EPA - CLP July 1985 edition. They are modifications of the 200 series EPA Method which are run on a Perkin Elmer 5000 AA with graphite furnace and a Perken Elmer 2380 AA. The digestion procedures are also form the July 1985 EPA - CLP.

II. Sample Analysis Request Form (s)

6/84

NJDEP File # _____

SAMPLE ANALYSIS REQUEST FORM

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect Street
SAMPLE LOCATION	S Creek Bed		Trenton, NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Gervasio	Agency	DWM BSA	Sampler ID #	HS 26
Name	D Mazur	Agency	DWM BSA	Sampler ID #	HS 143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD 910 - Sed 1	SAMPLING DATE	9-11-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Sed 1	TIME (MIL) SAMPLING BEGAN	1104	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	405	TIME (MIL) SAMPLING FINISHED	1118	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 105	Other
TYPE OF SAMPLER	Code 323	Other Trowel	SAMPLE MATRIX	Code 203	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP. 72°F °C	VALUE	VALUE	VALUE
WEATHER Clear/windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☑ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP +40	F-400 F-401	660530 PURG ORG		
BN/AE, Pest/PCBs, Tot Cyanide		660531 BN/AE		
Total Phenols, PP Metals	K400 K401	660532 Pest/PCB		
		660533 P.P. Metals CN Phen		

ANALYSIS(ES) AUTHORIZED BY Al Plewa. TITLE HS MS I

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Stuart N. Murrell	TITLE	LAB SVCE MGR.
LAB ID #		LAB CONTROL # See Above	DATE 9/12/86	TIME (MIL)	1100 HRS

SAMPLE ANALYSIS REQULST FORM

File # _____

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect Street
SAMPLE LOCATION	Stream Sediment		Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Gervasio	Agency	DHWM/BSA	Sampler ID #	AS 76
Name	D Mazur	Agency	DHWM/BSA	Sampler ID #	143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD910-Sed 2	SAMPLING DATE	9-10-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Sed 2	TIME (MIL) SAMPLING BEGAN	1119	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	405	TIME (MIL) SAMPLING FINISHED	1131	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 105	Other
TYPE OF SAMPLER	Code 323	Other Trowel	SAMPLE MATRIX	Code 203	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP.	°C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP.	72°F °C	VALUE	VALUE	VALUE
WEATHER	Clear/windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compoonds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP +40		660534 Purge Orgs.		
BN/AE, Pest/PCBs, Tot Cyanide		660535 BN/AE		
Total Phenols/PP Metals	K402 K403	660536 Pest/PCB		
Purgeable Organics	F402 F403	660537 P.P. metals Cn Phen		

ANALYSIS(ES) AUTHORIZED BY: A. Pierce

TITLE: HSMS I

ANALYZING LABORATORY

CONTRACT LAB NAME	HZM LAB	PERSON ACCEPTING SAMPLE	Stuart N. Murrell	TITLE	LAB Service Mgr.
LAB ID #		LAB CONTROL # See Above	DATE 9/12/86	TIME (MIL)	1100 HRS

2

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NJDEP File # _____

SAMPLE ANALYSIS REQUEST FORM

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect ST
SAMPLE LOCATION			Trenton NJ 08645

SAMPLE COLLECTOR

SAMPLER(S) Name	R Gervasio	Agency	DRWM / BSA	Sampler ID #	HS 26
Name	D Mazur	Agency	DRWM / BSA	Sampler ID #	HS 143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD910-S2	SAMPLING DATE	9-10-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Soil 2	TIME (MIL) SAMPLING BEGAN	1208	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	401	TIME (MIL) SAMPLING FINISHED	1214	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 105	Other
TYPE OF SAMPLER	Code 323	Other Trowel	SAMPLE MATRIX	Code 203	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP. 72°F °C	VALUE	VALUE	VALUE
WEATHER Clear/Windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP +40				
BN/AE, Pest/PCBs Tot Cyanide		660542	Purg. Org.	
Total Phenols, PP Metals	K404, K405	660543	BN/AE	
Purgeable Organics	F-404, F-405	660544	PP	
		660545	P.P. Metals CN Phen	

ANALYSIS(ES) AUTHORIZED BY Al Plesa TITLE HSMS I

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Stuart W. Mussell	TITLE	LAB Svce. Mgr.
LAB ID #		LAB CONTROL # See Above	DATE 9/12/86	TIME (MIL)	1100 HRS

SAMPLE ANALYSIS REQUEST FORM

File # _____

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect ST
SAMPLE LOCATION			Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Grevasu	Agency	DHWM / BSA	Sampler ID #	HS 7C
Name	D Morse	Aeency	DHWM / BSA	Sampler ID #	HS 147

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD910-33	SAMPLING DATE	9-11-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Background	TIME (MIL) SAMPLING BEGAN	1210	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	401	TIME (MILI SAMPLING FINISHED	1216	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 105	Other
TYPE OF SAMPLER	Code 323	Other Trowel	SAMPLE MATRIX	Code 203	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP. 72°F °C	VALUE	VALUE	VALUE
WEATHER Clear/windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION A ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP 740				
BN/AE, Pest/PCB, Tot Cyanide		660546	Purge Orgs	
Total Phenols, PP Metals	K408, K409	660547	BN/AE	
Purgeable Organics	F408, F409	660548	PP	
		660549	P.P. Metals CN Phen	

ANALYSIS(ES) AUTHORIZED BY Al Plevan TITLE Hsms I

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Stuart W. Murrell	TITLE	LAB Svce. Mgr.
LAB ID #		LAB CONTROL #	See Above	DATE 9/12/86	TIME (MIL) 1100 HRS

NJDEP
File # _____

SAMPLE ANALYSIS REQUEST FORM

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect ST
SAMPLE LOCATION			Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	L Solomon	Agency	D Hwnl BSA	Sampler ID #	HS 160
Name	D Mazur	Agency	D Hwnl BSA	Sampler ID #	HS 143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD 91C- S1	SAMPLING DATE	9-18-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Soil 1	TIME (MIL) SAMPLING BEGAN	1142	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	401	TIME (MIL) SAMPLING FINISHED	1200	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 105	Other
TYPE OF SAMPLER	Code 323-	Other Trowel	SAMPLE MATRIX	Code 203	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP.	°C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP.	72°F °C	VALUE	VALUE	VALUE
WEATHER	Clear/windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compoonds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP + 40	F406 + F407	660538	Purge. Orgs.	
BN/AE, Pest/PCB's TCyanide		660539	BN/AE	
Total Phenols, PP metals	K406, K407	660540	P.P.	
Purgeable Organics	F406, F407	660541	P.P. Metals CN Phen	

ANALYSIS(ES) AUTHORIZED BY Al Plewa TITLE HSMS I

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Stuart W. Munnell	TITLE	LAB Svce Mgr.
LAB ID #		LAB CONTROL #	See Above	DATE 9/12/86	TIME (MIL) 1100 HRS

6/84

NJDEP File # _____

SAMPLE ANALYSIS REQUEST FORM

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect ST
SAMPLE LOCATION	Surface Water		Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Gerwald	Agency	Dittum / BSA	Sampler ID #	HSMS 76
Name	D Meyer	Agency	Dittum / BSA	Sampler ID #	HS 143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD910-SW1	SAMPLING DATE	9-18-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	SW-1	TIME (MILI SAMPLING BEGAN	1056	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	404	TIME (MIL) SAMPLING FINISHED	1101	ELEVATION	
REFERENCE POINT	–				

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 102	Other
TYPE OF SAMPLER	Code 323	Other Glass Bottle	SAMPLE MATRIX	Code 200	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP. 72°F °C	VALUE	VALUE	VALUE
WEATHER Clear/windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP +40				
Priority Pollutant Metals	B402	660550	Purge org	
Total Cyanide	H400, 404	660551	BN/AE	
Total Phenol	(P) 404, 410	660552	PP	
Base Neutrals, Acid Ext, Pest/PCB	I 404, 408 412, 413	660553	P.P. Metals	CN Phen
Purgeable organics	J 406, 409			

ANALYSIS(ES) AUTHORIZED BY Al Plevra TITLE HSMS I

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Sharon W. Mizwell	TITLE	LAB Succ. Mgr.
LAB ID #		LAB CONTROL #	See Above	DATE 9/12/86	TIME (MILI 1100 HRS

6/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

NJDEP File # _____

SAMPLE ANALYSIS REQUEST FORM

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	CORNELL DUBILIER	CODE	MAILING ADDRESS 65 PROSPECT ST.
SAMPLE LOCATION	Surface Water		TRENTON NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	FRANK FARANCA	Agency	DHWM / BSA	Sampler ID #	
Name	DEBBIE MAZUR	Aeency	DHWM / BSA	Sampler ID #	HS 143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD 910 - SW2Q	SAMPLING DATE	9-11-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	SURFACE WATER 2	TIME (MIL) SAMPLING BEGAN	1035	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	404	TIME (MIL) SAMPLING FINISHED	1045	ELEVATION	
REFERENCE POINT	Slightly brn. water				

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 102	Other
TYPE OF SAMPLER	Code 325-	Other Grab Bottle	SAMPLE MATRIX	Code 200	Other
DESCRIPTION	(above - ref. pt.)				

FIELD MEASUREMENTS

SAMPLE TEMP.	°C	PARAMETER	PARAMETER	PARAMETER	
AIR TEMP. 72°F	°C	VALUE	VALUE	VALUE	
WEATHER Clear, windy					

CHAIN-OF-CUSTODY IMPLEMENTED	☒ YES ☐ NO	PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP + 40		660554	Purg Org	
BN/AE, Pesticides/PCB's	I-415, 416 417, 420, 421 423, 424	660555	BN/AE	
		660556	PP	
	427	660557	P.P. Metals CN Phen	
Total Phenols	1P 411			
Purgeable Organics	J403, J408			

ANALYSIS(ES) AUTHORIZED BY	TITLE

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Stuart M. Murrell	TITLE	LAB Service Mgr
LAB ID #		LAB CONTROL #	See Above	DATE 9/12/86	TIME (MIL) 1100 HRS

SAMPLE ANALYSIS REQUEST FORM

File # _____

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect ST
SAMPLE LOCATION	Surface Water		Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Greenwald	Agency	DHWM/BSA	Sampler ID #	HS 76
Name	D Mazur	Agency	DHWM/BSA	Sampler ID #	HS 143

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD910-SW2	SAMPLING DATE	9-11-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Surface Water 2	TIME (MIL) SAMPLING BEGAN	1035	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	404	TIME (MIL) SAMPLING FINISHED	1045	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 1,2	Other
TYPE OF SAMPLER	Code 323 -	Other Glass Bottle	SAMPLE MATRIX	Code 200	Other
DESCRIPTION	Slightly brn. water				

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP. 72°F °C	VALUE	VALUE	VALUE
WEATHER Clear windy			

CHAIN-OF-CUSTODY IMPLEMENTED	☒ YES ☐ NO
PRESERVATION CODE(S)	___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION A ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP 40				
Priority Pollutant Metals	B401	660557	Purg ORGS	
Total Cyanide	H401, 405	660555	BN/AE	
Total Phenol	(P)403, 405	660556	Pest/PCB	
BN/AE, Pesticides/PCB's	I 418, 419 422, 425	660557	P.P. Metals CN	PHCN
Purgeable Organics	I 404, 405			

ANALYSIS(ES) AUTHORIZED BY	Al Plevra	TITLE	Hsms I

ANALYZING LABORATORY

CONTRACT LAB NAME	HZM LAB	PERSON ACCEPTING SAMPLE	Stuart N. Munell	TITLE	LAB SVCE Mgr.
LAB ID #		LAB CONTROL #	See Above	DATE 9/12/86	TIME (MIL) 1100 HRS

6/84

DEPARTMENT OF ENVIRONMENTAL PROTECTION

NJDEP File # _____

SAMPLE ANALYSIS REQUEST FORM

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect St
SAMPLE LOCATION			Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Gervasio	Agency	DHWM/BSA	Sampler ID #	H5-76
Name		Agency		Sampler ID #	

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD910-TB	SAMPLING DATE	9-11-86	ABSCISSA (Longitude)	
SAMPLE POINT ID		TIME (MIL) SAMPLING BEGAN		ORDINATE (Latitude)	
SAMPLE SOURCE CODE		TIME (MIL) SAMPLING FINISHED		ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other		SAMPLE TYPE	Code 108	Other Trip Blank	
TYPE OF SAMPLER	Code	Other		SAMPLE MATRIX	Code 200	Other	
DESCRIPTION							

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER	
AIR TEMP. 72°F °C	VALUE	VALUE	VALUE	
WEATHER Clear/windy				

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LOOTS	REQUESTED TURNOVER (days)
PP + 40				
PP metals	B-400	660558 –	Purge Orgs	
Total Cyanide	H-407411	660559 –	BN/AE	
Total Phenol	P 400, 401	660560 –	Pest/PCB	
BN/AE, Pesticides/PCBS	I400-403	660561 –	P.P. Metals + CN + Phen	
Purgeable Organics	J400-401			

ANALYSIS(ES) AUTHORIZED BY	H Pleva	TITLE	HSMS I

ANALYZING LABORATORY

CONTRACT LAB NAME	H2m LAB	PERSON ACCEPTING SAMPLE	Stuart W. Minnell	TITLE	LAB Service MGR
LAB ID #		LAB CONTROL #	See Above	DATE 9/12/86	TIME (MIL) 1100 HRS

SAMPLE ANALYSIS REQUEST FORM

File # _____

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Cornell Dubilier	CODE	MAILING ADDRESS 65 Prospect Street
SAMPLE LOCATION			Trenton NJ 08618

SAMPLE COLLECTOR

SAMPLER(S) Name	R Gesuiga	Agency	DHLWM / BSA	Sampler ID #	HS 76
Name	D Mozur	Agency	DHLWM / BSA	Sampler ID #	HS 147

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	CD 910- FB	SAMPLING DATE	9-10-86	ABSCISSA (Longitude)	
SAMPLE POINT ID	Field Blank	TIME (MIL) SAMPLING BEGAN	1008	ORDINATE (Latitude)	
SAMPLE SOURCE CODE	404	TIME (MILI SAMPLING FINISHED	1018	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLEECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code 108	Other Field Blank
TYPE OF SAMPLER	Code Bailer / Trowel	Other	SAMPLE MATRIX	Code 200	Other
DESCRIPTION					

FIELD MEASUREMENTS

SAMPLE TEMP.	°C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP.	72°F °C	VALUE	VALUE	VALUE
WEATHER	Clear / Windy			

CHAIN-OF-CUSTODY IMPLEMENTED ☑ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION A ACCURACY LIMITS	REQUESTED TURNOVER (days)
pp + 40				
Total Phenols	(P) 408, 409	660562	Purge Orgs	
Total Cyanide	H-402, H-403	660563	BN/AE	
BN/AE, Pesticides/PCBs	J 409-411, 414	660564	Pest/PCB's	
Priority Pollutant Metals	B-403	660565	P.P. Metals	CN + Phen
Purgeable Organics	J410-411			

ANALYSIS(ES) AUTHORIZED BY Al Plexe TITLE HSMS F

ANALYZING LABORATORY

CONTRACT LAB NAME	H2M LAB	PERSON ACCEPTING SAMPLE	Stuart N. Finnell	TITLE	LAB Svc Mgr
LAB ID #		LAB CONTROL # See Above	DATE 9/12/86	TIME (MIL)	1100 HRS

III. Laboratory Chronicle

LABORATORY CHRONICLE

660552
CD910-SW1

DATE

RECEIPT/REFRIGERATION 9/18/86

ORGANICS
EXTRACTION

1. Acids 9/18/86
2. Base/Neutrals 9/18/86
3. Pesticides/PCBs 9/18/86
~~4. Dioxin~~

ANALYSIS

1. Volatiles 9/24/86
2. Acids 9/22/86
3. Base/Neutrals 9/22/86
4. Pesticides/PCBs 9/30/86, 10/9/86
~~5. Dioxin~~

Section Supervisor Review & Approval

INORGANICS

1. Metals 9/22/86 - 10/7/86
2. Cyanides 10/3/86 - 10/6/86
3. Phenol 9/23/86-9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval

Quality Control Supervisor Review & Approval

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

CD910-FB

DATE

RECEIPT/REFRIGERATION 9/16/86

ORGANICS
EXTRACTION

1. Acids 9/16/86
2. Base/Neutrals 9/16/86
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/24/86
2. Acids 9/22/86
3. Base/Neutrals 9/22/86
4. Pesticides/PCBs 10/1/86, 10/6/86, 10/9/86
5. ~~Dioxin~~

Section Supervisor Review & Approval Middle

INORGANICS

1. Metals 9/22/86 - 10/7/86
2. Cyanides 10/3/86 - 10/6/86
3. Phenol 9/23/86 - 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval

Quality Control Supervisor Review & Approval

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

35

LABORATORY CHRONICLE

DATE

6665568

CD910-SW2/SW2Q

RECEIPT/REFRIGERATION 9/[illegible]/86

ORGANICS
EXTRACTION

1. Acids [illegible]/86
2. Base/Neutrals 9/[illegible]/86
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/24/86
2. Acids 9/22/86
3. Base/Neutrals 9/22/86
4. Pesticides/PCBs 9/30/86, 10/9/86
5. ~~Dioxin~~

Section Supervisor Review & Approval [signature]

INORGANICS

1. Metals 9/22/86 – 10-7-86
2. Cyanides 10/3/86 – 10/6/86
3. Phenol 9/23/86 – 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [signature]

Quality Control Supervisor Review & Approval [signature]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

666560

CD910-TB

DATE

RECEIPT/REFRIGERATION [illegible]

ORGANICS
EXTRACTION

1. Acids [illegible]
2. Base/Neutrals [illegible]
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles [illegible]
2. Acids 9/22/86
3. Base/Neutrals 9/22/86
4. Pesticides/PCBs 10/1/86, 10/6/86, 10/9/86
5. ~~Dioxin~~

Section Supervisor Review & Approval [illegible]

INORGANICS

1. Metals 9/22/86 – 10/7/86
2. Cyanides 10/3/86 – 10/6/86
3. Phenol 9/23/86 – 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [illegible]

Quality Control Supervisor Review & Approval [illegible]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

666532
CD910-SED1

DATE

RECEIPT/REFRIGERATION [illegible]

ORGANICS
EXTRACTION

1. Acids [illegible] 9/22/86
2. Base/Neutrals [illegible] 9/22/86
3. Pesticides/PCBs 9/19/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/26/86
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 10/1/86, 10/2/86, 10/9/86
5. ~~Dioxin~~

Section Supervisor Review & Approval [illegible]

INORGANICS

1. Metals 9/22/86 – 10/7/86
2. Cyanides 10/3/86 – 10/1.86
3. Phenol 9/23/86 – 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [illegible]

Quality Control Supervisor Review & Approval [illegible]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

660536
CD910-SED2

DATE

RECEIPT/REFRIGERATION 9/[illegible]/86

ORGANICS
EXTRACTION

1. Acids [illegible] 9/22/86
2. Base/Neutrals [illegible] 9/22/86
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/26/86
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 10/1/86, 10/7/86, 10/9/86
5. ~~Dioxin~~

Section Supervisor Review & Approval [illegible]

INORGANICS

1. Metals 9/22/86 — 10/7/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [illegible]

Quality Control Supervisor Review & Approval [illegible]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

66054/
CD910-S2

DATE

RECEIPT/REFRIGERATION _____

ORGANICS
EXTRACTION

1. Acids 9/2/86
2. Base/Neutrals 9/2/86
3. Pesticides/PCBs 9/18/86
~~4. Dioxin~~ _____

ANALYSIS

1. Volatiles 9/26/86
2. Acids 9/22/86
3. Base/Neutrals 9/22/86
4. Pesticides/PCBs 10/1/86, 10/7/86, 10/9/86
~~3. Dioxin~~ _____

Section Supervisor Review & Approval [signature]

INORGANICS

1. Metals 9/22/86 — 10/3/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

_____

Section Supervisor Review & Approval [signature]

Quality Control Supervisor Review & Approval [signature]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

4C

LABORATORY CHRONICLE

660540
CD910-S1

DATE

RECEIPT/REFRIGERATION 9/22/86

ORGANICS
EXTRACTION

1. Acids 9/24, 9/24/86
2. Base/Neutrals 9/24, 9/24/86
3. Pesticides/PCBs 9/18/86
4. Dioxin

ANALYSIS

1. Volatiles 9/26/86
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 10/1/86, 10/7/86, 10/9/86
5. Dioxin

Section Supervisor Review & Approval [signature]

INORGANICS

1. Metals 9/22/86 — 10/7/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [signature]

Quality Control Supervisor Review & Approval [signature]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

CD910-S3

LABORATORY CHRONICLE

DATE

RECEIPT/REFRIGERATION [illegible]

ORGANICS
EXTRACTION

1. Acids [illegible]
2. Base/Neutrals [illegible]
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles [illegible]
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 10/1/86, 10/1/86, 10/9/86
5. ~~Dioxin~~

Section Supervisor Review & Approval [illegible]

INORGANICS

1. Metals 9/22/86 — 10/1/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [illegible]

Quality Control Supervisor Review & Approval [illegible]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

6-6-C556-MSD
CD910-SW2/SW2Q

DATE

RECEIPT/REFRIGERATION 9/ 3/86

ORGANICS
EXTRACTION

1. Acids 9/18/86 / 9/24/86
2. Base/Neutrals 9/18/86, 9/24/86
3. Pesticides/PCBs 9/19/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 6/24/86
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 9/30/86, 10/1/86, 10/6/86
5. ~~Dioxin~~

Section Supervisor Review & Approval [signature]

INORGANICS

1. Metals 9/22/86 — 10/7/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [signature]

Quality Control Supervisor Review & Approval [signature]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

60C556MS
CD910-502/502C

DATE

RECEIPT/REFRIGERATION 9-18-86

ORGANICS
EXTRACTION

1. Acids 9/18/86 / 9/24/86
2. Base/Neutrals 9/18/86 / 9/24/86
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 6/24/87
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 9/30/86, 10/1/86, 10/6/86
5. ~~Dioxin~~

Section Supervisor Review & Approval Moddel

INORGANICS

1. Metals 9/22/86 — 10/2/86
2. Cyanides 10/3/86 — 10/6/86
2. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval

Quality Control Supervisor Review & Approval

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

660532MS
CD910-SEDI

DATE

RECEIPT/REFRIGERATION 9/1/86

ORGANICS
EXTRACTION

1. Acids 9/18/86 9/24/86
2. Base/Neutrals 9/18/86 9/24/86
3. Pesticides/PCBs 9/19/86
4. Dioxin

ANALYSIS

1. Volatiles 9/26/86
2. Acids 10/6/86
3. Base/Neutrals ~~10/1/86~~ HLR 10/6/86
4. Pesticides/PCBs 10/1/86, 10/7/86
5. Dioxin

Section Supervisor Review & Approval [signature]

INORGANICS

1. Metals 9/22/86 — 10/7/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval [signature]

Quality Control Supervisor Review & Approval [signature]

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

LABORATORY CHRONICLE

66-0532MSD
CD910-SED1

DATE

RECEIPT/REFRIGERATION 9/12/86

ORGANICS
EXTRACTION

1. Acids 9/18/86 / 9/24/86
2. Base/Neutrals 9/18/86 / 9/24/86
3. Pesticides/PCBs 9/19/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/26/86
2. Acids 10/6/86
3. Base/Neutrals 10/6/86
4. Pesticides/PCBs 10/1/86, 10/7/86
5. ~~Dioxin~~

Section Supervisor Review & Approval Middel

INORGANICS

1. Metals 9/22/86 — 10/7/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 9/23/86 — 9/26/86

OTHER ANALYTES

Section Supervisor Review & Approval

Quality Control Supervisor Review & Approval

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

REVISED 8/85

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IV NON CONFORMANCE SUMMARY AND CASE NARRATIVE

N.J. D.E.P.

X GC/MS Volatiles
X GC/MS Extractables
X Pesticides/PCB's
GC-Volatiles
X Inorganics

IV. Case Narrative for samples

CD 910-SW2 & SW2Q	660554
CD 910-SW1	660550
CD 910-FB	660562
CD 910-TB	660558
CD 910-SED1	660530
CD 910-SED2	660534
CD 910-S1	660538
CD 910-S2	660542
CD 910-S3	660546

GC/MS Volatiles

The samples, trip blank, field blank and method blank contained and early eluting compound. The only mass detected had a mass/charge ratio of 44. When searching the National Bureau of Standard library all three library choices gave an equally good probability of a match. These compounds are 1) carbon dioxide, 2) nitrogen oxide and 3) mono ammonium salt of carbamic acid. Since the mass range necessary to distinguish between these three compounds is lower than the scan range for the analysis of the purgeable organic targets compounds, no definite identification of this compound can be made. The possibility exists that this compound is carbon dioxide, since this is used in the GC/MS laboratory and was found in our method blank as well. Therefore, it is labeled as unknown (carbon dioxide) on the tentatively identified report form.

Unexplained high levels of methylene chloride were found in the matrix spike duplicates of samples 660530 (soil) and 660554 (water). Since these compounds were only found in very low levels in the samples, it is assumed to be a secondary contamination.

IV. Case Narrative for samples: GC/MS extractables

CD 910 - SW 2	660555
CD 910 - SW 1	660551
CD 910 - FB	660563
CD 910 - TB	660559
CD 910 - SED 1	660531
CD 910 - SED 2	660535
CD 910 - S 1	660539
CD 910 - S 2	660543
CD 910 - S 3	660547

The soil and sediment samples reporting limit was elevated to 20,000 ug/kg to adjust for the amount of sample extracted and the inability to concentrate these samples to less than 5 ml. Compounds were identified at concentrations below this level and were therefore reported with the qualifier "J".

Bis-2-ethyl hexyl phthalate was not found in our method blank but usually is found at low levels. Some samples contained low levels of this compound and had to be reported as positive values without the qualifier "B" even though its presence is suspect.

Sample CD 910SED-1 had low recoveries for 2,4-dinitrotoluene and 4-nitrophenol. All other compounds had fair recoveries. The low recoveries may have been matrix related.

Sample CD 910 S 3 was subjected to a GCP cleanup prior to analysis which may account for the poor recovery of the base neutral surrogates nitrobenzene-d 5 and 2-fluorobiphenyl.

Case Narrative for Pesticides/PCB's Analysis

Deviations

After completion of the 72 hour sequence, it was noticed that the response factors for the primary column at the end of the second day did not meet the required limits for difference. All sample analyses performed subsequently were reanalyzed in a new 72 hour sequence.

The retention times of the secondary column exhibited fluctuations. The identifications could therefore not be based soley on the retention time window of only one standard injection, but the first calibration standard of each day was used instead.

Reporting levels

Elevated quantification limits were reported for all soil samples for all pesticides eluting after heptachlor epoxide and before p,p'-DDT due to interference by the high amount of anclor 1254 found. The limits for some early eluting pesticides had to also be elevated because they were masked by unknown compounds.

Unknown compounds were quantified with an average response factor of 100 and reported if the value exceeded 0.5 ug/l or 300 ug/kg. For reporting the aroclor 1260 in the presence of aroclor 1254 it is estimated that approximate levels of one twentith of the aroclor 1254 could be detected.

Sample SW2/SW2Q showed a wide peak within the elution time window of Endosulfan I on both columns. Because Endosulfan I may be present, fused with an unknown compound, the reporting limit was raised.

Matrix Spike (MS) Matrix Spike Duplicate (MSD)

Sample NJDEP #CD910-SED1, which was used for determination of spike recoveries contained aroclor 1254 and early eluting unknown compounds. The levels were so high that they interfered with the detection of the low levels of the spiking compounds therefore no recoveries or precision values could be calculated for the MS and MSD.

For confirmatory identification of non-spiked compounds the confirmatory runs of the unspiked samples were used.

Elevated limits are reported for the targeted compounds pp' DDE found on primary column in the MS/MSD, but was not confirmed on the sample confirmatory run.

The amount of aroclor 1254 was higher in the unspiked sample than in the two analyses of the spiked sample. This could be due to an inhomogeneous sample matrix.

For sample CD910-FB, the recovery of dibutylchlorendate was 1000%, this is probably due to unusually high phthalate contamination of this sample. All soil surrogate recoveries are outside the quality control limits for the recovery of dibutylchlorendate as well. It is assumed that an interference at the DBC retention time is causing these unusually high recoveries.

As mentioned previously the soil samples had elevated detection limits for several compounds due to interferences.

Samples SED1, SED2, S-1, S-2 and S-3 all had levels of the aroclor 1245 that interfered with the reporting of several pesticides. These pesticides include heptaclor epoxide, endosulfan I, dieldrin, 4,4'-DDE, endrin, endosulfan II, 4,4'-DDD, endosulfan sulfate, 4,4'DDT, chlordane, toxaphene and the other aroclors listed.

Uhknown compounds in samples SED1, SED2, S-1, S-2 and S-3 caused elevated reporting limit for certain pesticides. In soil samples SED-1 and SED-2 the reporting limits for lindane and heptachlor were elevated. In samples S-1 and S-2 aldrins reporting limit was raised. Ih sample S-3: alpha BHC, beta BHC, delta BHC, gamma BHC, heptachlor and aldrin were elevated.

Sample S-2 had an elevated reporting limit for heptachlor due to the presence of B-GHC in the sample.

PCB's were identified in the corresponding GC/MS extractable samples for S-1 and S-3. They are listed in the tentatively identified report form for these samples.

No recovery of DBC is listed for method blank B-399 since it was inadvertently not added.

Inorganic Data Comment Page

Lab Name H2M Case No. NJDEP

ICP interelement and background corrections applied? Yes ____ No X.

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnotes:

NR - Not required by contract at this time

Form I:

< - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., <10).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

S - Indicates value determined by Method of Standard Addition.

N - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method fo standard addition is less than 0.995.

M - Indicates duplicate injection results exceeded control limits.

COMMENTS: _____

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Case Narrative for Inorganics

Furnace AA

Selenium- Samples 660541 CD910 SED1 and 660545 CD910 S2 required MSA Procedures. The correlation coefficient for both samples was greater than .995. Results were flagged with "S".

660533 CD910 SED1 spike recovery was less than 40%, sample was diluted 2X and reanalyzed. Result reported as less than 2X CRDL. Digested soil/sed. spike recovery was less than 75%. All soil/sed. samples flagged with N.

Lead- Sample 660557 CD910 SW2/SW2Q was over calibration when first analyzed. Sample was diluted 10 X and reanalyzed. The result was less than CRDL indicating the initial high reading was caused by interference.
The digested spike for this sample shewed the same results, sample was spiked with 10 and 20 ug after digestion. Both the spikes recovered. The liquid matrix samples were flagged with "N" and the 660557 CD910 SW2/SW2Q was also flagged with "E" for possible interference.

Arsenic- Sample 660553 CD910 SW1 duplicate injection on furnace were not within 20% RPD, results were flagged with "*".

Mercury- Samples 660541 CD910-S1 duplicate analysis were not within 20% RPD. The results were averaged and flagged with "*". Spike recovery was less than 75% due to inconsistancy of sample, soil/sed. results were flagged with "N".

Thallium- Digested soil/sed. and liquid spikes were less than 75%. Results reported flagged with "N".

ICP

The clock and date feature on the ARL 3410 was misfunctioning and printing out false dates on ICP printouts. A statement from ARL will be supplied if necessary.
Digested soil/sed. spike recoveries were less than 75% for silver, zinc and antimony. Digested liquid spike recoveries were less than 75% for beryllium and copper. Results were flagged with "N". Sample 660541 CD910 S1 serial dilution for chromdum was not within 10% results flagged with "E".

Phenol- Sample 660557 CD910-SW2 was used for spike duplicate. Spike recovery was 0%. The normal color was not produced in the colormetric procedure. Liquids were flagged with "N". Sample 660557 CD910-SW2 was also flagged with "E" to note interferenoe

V. Q.C. Summary

1. Surrogate Recovery Form
2. MS/MSD Form
3. Method Blank Summary
4. GC/MS Tuning Form
5. Quality Assurance Data Metals
6. Initial and Continuing Calibration Verification

for scans:

__X__ GC/MS Volatiles

__X__ GC/MS Extractables

__X__ Pesticides/PCB's

__X__ Inorganics

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. Contractor : H2M LABS Contract No. NJDEP

SMO TRAFFIC NO.	VOLATILE Toluene d-8 (88-110)	Bromofluo-benzene (88-115)	1,2-Dichlo-roethane-d4 (78-114)	SEMIVOLATILE Nitro-benzene-d5 (35-114)	2-Fluoro-biphenyl (43-116)	Terphenyl-d-14 (33-141)	Phenol-d-5 (10-94)	2-Fluoro-phenol (21-100)	2,4,6-Tri-bromophenol (10-123)	PEST Dibutylchl-orendate ** (24-154)
Std.	100	100	100							
Std.	100	100	100							
Inst.Bl	98	95	85							
SW-1	93	94	84							
B	94	91	81							
FB	96	96	90							
SW2/SW2Q	93	95	83							
SW2/SWQ2	92	100	80							
SW2/SWQ2	95	115	79							
MW-1	91	99	81							
IW-2A	95	98	82							

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS
** ADVISORY LIMITS ONLY

Volatiles: 0 out of 33 ; outside of QC limits
Semi-Volatiles: ____ out of ____ ; outside of QC limits
Pesticides: ____ out of ____ ; outside of QC limits

Comments:

CLP

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. : METHOD 625 Contractor : H2M LABS Contract No. :

	VOLATILE			SEMIVOLATILE						PEST
SMO TRAFFIC NO.	Toluene d-8 (88-110)	Bromofluo-benzene (88-115)	1,2-Dichloroethane-d4 (78-114)	Nitrobenzene-d5 (35-114)	2-Fluorobiphenyl (43-116)	Terphenyl-d-14 (33-141)	Phenol-d-5 (10-94)	2-Fluorophenol (21-100)	2,4,6-Tribromophenol (10-123)	Dibutylchlorendate ** (24-154)
SW-2				66	58	105	22	32	33	
SW-2 MS				69	72	112	4*	39	43	
SW-2 MSD				56	58	83	26	37	42	
SW-1				55	56	89	33	37	41	
FB				72	63	113	35	39	40	
TB				64	58	108	35	39	42	
Blank	137			57	68	97	43	53	23	

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS
** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits
Semi-Volatiles: 1 out of 42 ; outside of QC limits
Pesticides: ____ out of ____ ; outside of QC limits

Comments:

CLP

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. : METHOD 625 Contractor : M2M LABS Contract No. : DEC 1/86

	VOLATILE			SEMIVOLATILE						PEST
SMO TRAFFIC NO.	Toluene d-8 (88-110)	Bromofluo-benzene (88-115)	1,2-Dichloroethane-d4 (78-114)	Nitrobenzene-d5 (35-114)	2-Fluorobiphenyl (43-116)	Terphenyl-d-14 (33-141)	Phenol-d-5 (10-94)	2-Fluorophenol (21-100)	2,4,6-Tribromophenol (10-123)	Dibutylchlorendate ** (24-154)
SW-1										96
SW2/SW2Q										92
SW2/SW2Q MS										120
SW2/SW2Q MSD										150*
TB										95
FB										1000*
B-399										100

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS
** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits
Semi-Volatiles: ____ out of ____ ; outside of QC limits
Pesticides: 2 out of 7 ; outside of QC limits

Comments:

CLP

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SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. : SEMI-VOL Contractor : M2M LABS Contract No. :

Low _____ Medium _____

	VOLATILE			SEMIVOLATILE						PEST
SMO TRAFFIC NO.	Toluene d-8 (61-117)	Bromofluo-benzene (74-121)	1,2-Dichloroethene-d4 (70-121)	Nitro-benzene-d5 (23-120)	2-Fluoro-biphenyl (30-115)	Terphenyl-d-14 (18-137)	Phenol-d-5 (24-113)	2-Fluoro-phenol (25-121)	2,4,6-Tri-bromophenol (19-122)	Dibutylchlorendate ** (20-150)
Std.	100	100	100							
Std.	100	100	100							
Inst.Bl	110	88	80							
SED-1	102	95	97							
SED-1 MS	105	91	81							
SED-1 MSD	100	95	111							
SED-2	110	88	84							
S-1	98	95	86							
S-2	94	96	94							
S-3	111	95	90							

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS
** ADVISORY LIMITS ONLY

Volatiles: 0 out of 30 ; outside of QC limits
Semi-Volatiles: ____ out of ____ ; outside of QC limits
Pesticides: ____ out of ____ ; outside of QC limits

Comments: _____

5c

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. : SEMI-VOL Contractor : M2M LABS Contract No. :

Low _____ Medium _____

SMO TRAFFIC NO.	VOLATILE: Toluene d-8 (61-117)	VOLATILE: Bromofluobenzene (74-121)	VOLATILE: 1,2-Dichloroethane-d4 (70-121)	SEMIVOLATILE: Nitrobenzene-d5 (23-120)	SEMIVOLATILE: 2-Fluorobiphenyl (30-115)	SEMIVOLATILE: Terphenyl-d-14 (18-137)	SEMIVOLATILE: Phenol-d-5 (24-113)	SEMIVOLATILE: 2-Fluorophenol (25-121)	SEMIVOLATILE: 2,4,6-Tribromophenol (19-122)	PEST: Dibutylchlorendate ** (20-150)
SED-1		—		39	62	86	47	56	46	
SED-1	MS			45	56	84	48	40	35	
SED-1	MSD			48	59	92	39	44	35	
SED-2				55	72	100	42	47	30	
S-1				31	68	95	25	28	23	
S-2				56	72	100	46	57	43	
S-3				6*	19*	28	38	52	34	

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS
** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits
Semi-Volatiles: 2 out of 42 ; outside of QC limits
Pesticides: ____ out of ____ ; outside of QC limits

Comments: CD910 S-3 660547 BNA was subjected to a GPC cleanup prior to analysis.

6C

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. : SEMI-VOL Contractor : H2M LABS Contract No. : BNL 8/86

Low _____ Medium _____

	VOLATILE			SEMIVOLATILE						PEST
SMO TRAFFIC NO.	Toluene d-8 (61-117)	Bromofluo-benzene (74-121)	1,2-Dichlo-roethane-d4 (70-121)	Nitro-benzene-d5 (23-120)	2-Fluoro-biphenyl (30-115)	Terphenyl-d-14 (18-137)	Phenol-d-5 (24-113)	2-Fluoro-phenol (25-121)	2,4,6-Tri-bromophenol (19-122)	Dibutylchl-orendate ** (20-150)
SED-1										811**
SED-1 MS										1462**
SED-1 MSD										1481**
SED-2										857**
S-1										570**
S-2										303**
S-3										404**

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS
** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits
Semi-Volatiles: ____ out of ____ ; outside of QC limits
Pesticides: 7 out of 7 ; outside of QC limits

Comments: ** Recovery high due to phthalate contamination.

WATER MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEMi-VOL Contractor : M2M LABS Contract No. : DEC 1/86

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS * RPD	QC LIMITS * RECOVERY
VOA	1,1-Dichloroethene	50	10U	67	134	61	122	9	14	61-145
SMO	Trichloroethene	50	10U	56	112	60	120	7	14	71-120
SAMPLE NO	Chlorobenzene	50	10U	48	96	59	118	21*	13	75-130
SW2/SW2Q	Toluene	50	1J	48	96	54	108	12	13	76-125
	Benzene	50	10U	40	80	40	80	0	11	76-127
	1,2,4-Trichlorobenzene								28	39-98
B/N	Acenaphthene								31	46-118
SMO	2,4-Dinitrotoluene								38	24-96
SAMPLE NO	Pyrene								31	26-127
	N-Nitroso Di-n-Propylamine								38	41-116
	1,4-Dichlorobenzene								28	36-97
ACID	Pentachlorophenol								50	9-103
SMO	Phenol								42	12-89
SAMPLE NO	2-Chlorophenol								40	27-123
	4-Chloro-3-Methylphenol								42	23-97
	4-Nitrophenol								50	10-80
	Lindane								15	56-123
PEST	Heptachlor								20	40-131
SMO	Aldrin								22	40-120
SAMPLE NO	Dieldrin								38	32-126
	Endrin								21	56-121
	4,4'-DDT								27	38-127

* - ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 1 out of 5 ; outside QC limits
Q/Ti ____ out of ____ ; outside QC limits
ACID ____ out of ____ ; outside QC limits
PEST ____ out of ____ ; outside QC limits

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/N ____ out of ____ ; outside QC limits
ACID ____ out of ____ ; outside QC limits
PEST ____ out of ____ ; outside QC lieits

Comments: _____

WATER MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEN1-VOL Contractor : H2M LABS Contract No. :

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS * RPD	QC LIMITS * RECOVERY
VOA	1,1-Dichloroethene								14	61-145
SMO	Trichloroethene								14	71-120
SAMPLE NO	Chlorobenzene								13	75-130
	Toluene								13	76-125
	Benzene								11	76-127
	1,2,4-Trichlorobenzene	592	0	302	51	225	38*	29*	28	39-98
B/N	Acenaphthene	444	0	204	46	169	38*	19	31	46-118
SMO	2,4-Dinitrotoluene	416	0	175	42	150	36	15	38	24-96
SAMPLE NO	Pyrene	436	0	196	45	153	35	25	31	26-127
	N-Nitroso Di-n-Propylamine	492	0	177	36*	133	27*	28	38	41-116
	1,4-Dichlorobenzene	472		241	51	212	45	13	28	36-97
ACID	Pentachlorophenol	748	0	464	62	494	66	6	50	9-103
SMO	Phenol	744	0	201	27	253	34	23	42	12-89
SAMPLE NO	2-Chlorophenol	888	0	447	47	355	40	16	40	27-123
	4-Chloro-3-Methylphenol	776	0	272	35	303	39	11	42	23-97
	4-Nitrophenol	1086	0	766	72	834	79	9	50	10-80
	Lindane								15	56-123
PEST	Heptachlor								20	40-131
SMO	Aldrin								22	40-120
SAMPLE NO	Dieldrin								18	52-126
	Endrin								21	56-121
	4,4'-DDT								27	38-127

* - ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs ____ out of ____ ; outside QC limits
B/N 1 out of 6 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST ____ out of ____ ; outside QC limits

RECOVERY: VOAs ____ out of ____ ; outside QC limits
B/N 4 out of 12 ; outside QC limits
ACID 0 out of 10 ; outside QC limits
PEST ____ out of ____ ; outside QC limits

Comments: _____

WATER MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEMI-VOL Contractor : M2M LABS Contract No. :

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS * RPD	QC LIMITS * RECOVERY
VOA	1,1-Dichloroethene								14	61-145
SMO	Trichloroethene								14	71-120
SAMPLE NO	Chlorobenzene								13	75-130
	Toluene								13	76-125
	Benzene								11	76-127
	1,2,4-Trichlorobenzene								28	39-98
B/N	Acenaphthene								31	46-118
SMO	2,4-Dinitrotoluene								38	24-96
SAMPLE NO	Pyrene								31	26-127
	N-Nitroso Di-n-Propylamine								38	41-116
	1,4-Dichlorobenzene								28	36-97
ACID	Pentachlorophenol								50	9-103
SMO	Phenol								42	12-89
SAMPLE NO	2-Chlorophenol								40	27-123
	4-Chloro-3-Methylphenol								42	23-97
	4-Nitrophenol								50	10-80
	Lindene	0.20	-	0.28	140*	0.31	155*	11	15	56-123
PEST	Heptachlor	0.20	-	0.11	55	0.12	60	9	20	40-131
SMO	Aldrin	0.20	-	0.09	45	0.13	65	44*	22	40-120
SAMPLE NO	Dieldrin	0.50	-	0.12	24*	0.14	28*	17	18	52-126
SW2/SW2Q	Endrin	0.40	-	0.29	73	0.37	93	28*	21	56-121
	4,4'-DDT	0.50	-	0.33	66	0.41	82	24	27	38-127

* - ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 2 out of 6; outside QC limits

RECOVERY: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST 4 out of 12; outside QC limits

Comments: _____

SOIL MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEMI-VOL Contractor : M2M LABS Contract No. :

Low Level _____ Medium Level _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)		SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS * RPD	RECOVERY
VOA	1,1-Dichloroethene	159	175	-	173	108	213	122	12	22	59-172
SMO	Trichloroethene	159*	175*	-	178	112	184	111	2	24	62-137
SAMPLE NO	Chlorobenzene	159	175	-	161	102	158	90	13	21	60-133
SEDI 1	Toluene	159	175	-	172	108	166	95	12	21	59-139
	Benzene	159	175	-	123	77	136	78	1	21	66-142
	1,2,4-Trichlorobenzene									23	38-107
S/N	Acenaphthene									19	31-137
SMO	2,4-Dinitrotoluene									47	28-89
SAMPLE NO	Pyrene									36	35-142
	N-Nitroso Di-n-Propylamine									38	41-126
BNA	1,4-Dichlorobenzene									27	28-104
ACID	Pentachlorophenol									47	17-109
SMO	Phenol									35	26-90
SAMPLE NO	2-Chlorophenol									59	25-102
	4-Chloro-3-Methylphenol									33	26-103
BNA	4-Nitrophenol									50	11-114
	Lindane									50	46-127
PEST	Heptachlor									31	35-130
SMO	Aldrin									43	34-132
SAMPLE NO	Dieldrin									38	31-134
	Endrin									45	42-139
BNA	4,4'-DDT									50	23-134

* - ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 0 out of 5 ; outside QC limits
B/N ___ out of ___; outside QC limits
ACID ___ out of ___; outside QC limits
PEST ___ out of ___; outside QC limits

RECOVERY: VOAs 0 out of 15 : outside QC limits
B/N ___ out of ___ : outside QC limits
ACID ___ out of ___ : outside QC limits
PEST ___ out of ___ : outside QC limits

Comments: _____

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SOIL MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEMI-VOL Contractor : M2M LABS Contract No. : BNL 8/86

Low Level _____ Medium Level _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS * RPD	QC LIMITS * RECOVERY
VOA	1,1-Dichloroethene								22	59-172
SMO	Trichloroethene								24	62-137
SAMPLE NO	Chlorobenzene								21	60-133
	Toluene								21	59-139
BNA	Benzene								21	66-142
	1,2,4-Trichlorobenzene	35300	1589	20102	57	20102	57	0	23	38-107
B/N	Acenaphthene	26500	0	14284	54	14548	55	2	19	31-137
SMO	2,4-Dinitrotoluene	25000	0	0	0*	249	1*	200*	47	28-89
SAMPLE NO	Pyrene	25800	0	16301	63	17594	68	8	36	35-142
	N-Nitroso Di-n-Propylamine	29300	0	9962	34*	12892	44	26	38	41-126
BNA	1,4-Dichlorobenzene	28100	0	17734	63	18578	66	5	27	28-104
ACID	Pentachlorophenol	44500	0	12461	28	16467	37	28	47	17-109
SMO	Phenol	44200	0	11943	27	15482	35	26	35	26-90
SAMPLE NO	2-Chlorophenol	53000	0	19074	36	21194	40	11	58	25-102
	4-Chloro-3-Methylphenol	46000	0	12924	28	14309	31	10	33	26-103
BNA	4-Nitrophenol	63000	0	630	1*	1889	3*	100*	50	11-114
	Lindane								50	46-127
PEST	Heptachlor								31	35-130
SMO	Aldrin								43	34-132
SAMPLE NO	Dieldrin								58	31-134
	Endrin								45	42-139
BNA	4,4'-DDT								50	23-134

* - ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs ____ out of ____ ; outside QC limits
B/N 1 out of 6 ; outside QC limits
ACID 1 out of 5 ; outside QC limits
PEST ____ out of ____ ; outside QC limits

RECOVERY: VOAs ____ out of ____ : outside QC limits
B/N 3 out of 12 ; outside QC limits
ACID 2 out of 10 : outside QC limits
PEST ____ out of ____ : outside QC limits

Comments: _____

SOIL MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEMI-VOL Contractor : M2M LABS Contract No. : BNL 8/86

Low Level _____ Medium Level _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS * RPD	QC LIMITS * RECOVERY
VOA	1,1-Dichloroethene								22	59-172
SMO	Trichloroethene								24	62-137
SAMPLE NO	Chlorobenzene								21	69-133
	Toluene								21	59-139
BNA	Benzene								21	66-142
	1,2,4-Trichlorobenzene								23	38-107
B/N	Acenaphthene								19	31-137
SMO	2,4-Dinitrotoluene								47	28-89
SAMPLE NO	Pyrene								36	35-142
	N-Nitroso Di-n-Propylamine								38	41-126
BNA	1,4-Dichlorobenzene								27	28-104
ACID	Pentachlorophenol								47	17-109
SMO	Phenol								35	26-90
SAMPLE NO	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
BNA	4-Nitrophenol								50	11-114
	Lindane	29.7		**		**			50	46-127
PEST	Heptachlor	29.7		**		**			31	35-130
SMO	Aldrin	29.7		**		**			43	34-132
SAMPLE NO	Dieldrin	74.3		**		**			38	31-134
SED-1	Endrin	59.4		**		**			45	42-139
BNA	4,4'-DDT	74.3		**		**			50	23-134

* - ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs ____ out of ____: outside QC limits
B/N ____ out of ____: outside QC limits
ACID ____ out of ____: outside QC limits
PEST ____ out of ____: outside QC limits

Comments: ** Aroclor 1254 found in soil sample CD910- SED-1 was so high that it interfered with the detection of the spiking compounds. no recoveries could be calculated.

METHOD BLANK SUMMARY

Contracter : M2M LABS

Contract No. : NJDEP

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	Scan #	INST. ID	C.A.S. NUMBER	COMPOUND (NBL,TIC,OR UNKNOWN)	CONC	UNITS	CRQL
PU6427	9/26/86	Purge	Water	328	OWA#1	71-55-6	1,1,1-Trichloroethane	1	ug/l	10
"	"	"	"	13	"	-	Unknown(Carbon Dioxide)	73	"	-
PU6393	9/24/86	Purge.	Water	328	OWA#1	71-55-6	1,1,1-Trichloroethane	2	ug/l	10
"	"	"	"	13	"	-	Unknown(Carbon Dioxide)	57	"	-

Comments :

METHOD BLANK SUMMARY

Contractor : M2M LABS

Contract No. : NJDEP X085

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	Conc. Level	INST. ID	C.A.S. NUMBER	COMPOUND (MSL,TIC,OR UNKNOWN)	CONC	UNITS	CRDL
P2500	10/6/86	BNA	Water	Low	HP#1	-	None found	-	-	10

Comments :

METHOD BLANK SUMMARY

Contractor : M2M LABS

Contract No. : NJDEP XD85

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	Conc. Level	INST. ID	C.A.S. NUMBER	COMPOUND (MSL,TIC,OR UNKNOWN)	CONC	UNITS	CRDL
B-399	10/6/86	PEST	Water	Low	GC/ECD		Delta-BHC	0.05	ug/l	
"	"	"	"	"	"		Unknown	0.81	"	
B-398	10/7/86	"	"	"	"		Unknown	0.56	"	

Comments :

GC/MS TUNING AND MASS CALIBRATION
Bromofluorobenzene (BFB)

Case No. _____ Laboratory H2M Contract No. _____

Instrument Id OWA #1 Date 9/24/86 Time 8:29

Lab ID PU6390 Data Release Authorized By: [signature]

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23.2
75	30.0 - 60.0% of the base peak	45.6
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.4
173	Less than 1.0% of the base peak	0.0
174	Greater than 50.0% of the base peak	95.6
175	5.0 - 9.0% of mass 174	4.8(5.0)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	92.9(97.2)[1]
177	5.0 - 9.0% of mass 176	5.0(5.4)[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

	SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Standard	PU6391	9/24/86	8:38
	Standard	PU6392	"	9:32
	Inst. Blank	PU6393	"	10:28
CD910-SW1	660550	PU6394	"	11:26
CD910-TB	660558	PU6395	"	12:32
CD910-FB	660562	PU6396	"	13:29
SW2G CD910-SW2	660554	PU6397	"	14:22
	660554 MS	PU6398	"	15:15
	660554 MSD	PU6399	"	16:06

GC/MS TUNING AND MASS CALIBRATION
Bromofluorobenzene (BFB)

Case No. _____ Laboratory H2M Contract No. _____

Instrument Id OWA #1 Date 9/26/86 Time 11:40

Lab ID PU6424 Data Release Authorized By: [signature]

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.2
75	30.0 - 60.0% of the base peak	47.4
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	6.6
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	84.5
175	5.0 - 9.0% of mass 174	5.0(5.9)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	83.5(98.8)[1]
177	5.0 - 9.0% of mass 176	4.9(5.8)[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

	SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Standard	PU6425	9/26/86	11:55
	Standard	PU6426	"	12:49
	Inst. Blank	PU6427	"	13:46
CD910-SED 1	660530	PU6428	"	14:40
	660530 MS	PU6429	"	15:33
	660530 MSD	PU6430	"	16:30
CD910-SED 2	660534	PU6431	"	17:27
CD91051	660538	PU6432	"	18:21
CD91052	660542	PU6433	"	19:18
CD91053	660546	PU6434	"	20:09

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WARNING: FMP -6 on ::

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GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. SEMI-VOL Contractor H2M LABS Contract No. BNL 8/86

Instrument ID HP#1 Date / Time 8/21/86 16:21

Lab ID >DFT29::D2 Data Release Authorized By: _____

m/z	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.71 OK
68	less than 2.0% of mass 69	-1.51 OK (-2.67) #1
69	mass 69 relative abundance	56.69
70	less than 2.0% of mass 69	-.06 OK (-.102) #1
127	40.0 - 60.0% of mass 198	45.37 OK
197	less than 1.0% of mass 198	0.00 OK
198	base peak, 100% relative abundance	100.00 OK
199	5.0 - 9.0% of mass 198	5.82 OK
275	10.0 - 30.0% of mass 198	24.56 OK
365	greater than 1.00% of mass 198	3.58 OK
441	present, but less than mass 443	13.19 OK
442	greater than 40.0% of mass 198	91.47 OK
443	17.0 - 23.0% of mass 442	18.33 OK (20.04) #2

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

#1 - Value in parenthesis is % mass 69.
#2 - Value in parenthesis is % mass 442.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
10 ng/ul HSL	P2314	8/21/86	17:30
25 ng/ul HSL	P2316	"	19:93
40 ng/ul HSL	P2320	"	22:40

WARNING: FMP -6 on ::

.....

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. SEHI-VOL Contractor H2M LABS Contract No. BNL 8/86

Instruaent ID HP#1 Date / Tiae 8/22/86 9:17

Lab ID >DFT30::02 Data Release Authorized By: _____

a/z	ION ABUNDANCE CRITERIA	%RELATIVE ASUNDANCE
51	30.0 - 60.0% of aass 198	50.36 OK
68	less than 2.0% of aass 69	0.00 OK (0.00) #1
69	aass 69 relative abundance	57.01
70	less than 2.0% of aass 69	.92 OK (1.607) #1
127	40.0 - 60.0% of aass 198	45.41 OK
197	less than 1.0% of aass 198	0.00 OK
198	base peak, 100% relative abundance	100.00 OK
199	5.0 - 9.0% of aass 198	5.97 OK
275	10.0 - 30.0% of aass 198	22.71 OK
365	greater than 1.00% of aass 198	3.45 OK
441	present, but less than aass 443	11.93 OK
442	greater than 40.0% of aass 198	89.83 OK
443	17.0 - 23.0% of mass 442	10.04 OK (20.09) #2

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

#1 - Value in parenthesis is % aass 69.
#2 - Value in parenthesis is % aass 442.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
60 ng/ul HSL	P2322	8/22/86	10:05
80 ng/ul HSL	P2323	"	10:57

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WARNING: FHP -6 on ::
.....

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. SEMI-VOL Contractor HZM LABS Contract No. BNL 8/86

Instrument ID HP#1 Date / Time 10/06/86 13:47

Lab ID >DFT59::01 Data Release Authorized By:

m/z	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.92 OK
68	less than 2.0% of mass 69	0.00 OK (0.00) #1
69	mass 69 relative abundance	52.46
78	less than 2.0% of mass 69	0.00 OK (0.00) #1
127	40.0 - 60.0% of mass 198	45.42 OK
197	less than 1.0% of mass 198	0.00 OK
198	base peak, 100% relative abundance	100.00 OK
199	5.0 - 9.0% of mass 198	8.57 OK
275	10.0 - 30.0% of mass 198	28.42 OK
365	greater than 1.00% of mass 198	4.65 OK
441	present, but less than mass 443	10.89 OK
442	greater than 40.0% of mass 198	82.27 OK
443	17.0 - 23.0% of mass 442	17.07 OK (20.74) #2

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

#1 - Value in parenthesis is % mass 69.
12 - Value in parenthesis is % mass 442.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
25 ng/ul HSL	P2499	10/6/86	17:09
Blank 137	P2500 BNA	"	18:39
SED-1	660531 BNA P2501	"	19:31
SED-1 MS	660531 BNA P2502	"	20:23
SED-1 MSD	660531 BNA P2503	"	21:15
SED-2	660535 BNA P2504	"	22:06
S-1	660539 BNA P2505	"	22:58
S-2	660543 BNA P2506	"	23:49
S-3	560547 BNA P2507	"	00:40

_UARNING: FMP -6 on ::
.....

GC/MS TUNING AND MASS CALIBRATION

Decafluarotriphenylphosphine (DFTPP)

Case No. SEMI-UOL Contractor H2M LABS Contract No. BNL 8/86

Instrument ID HP#1 Date / Time 9/22/86 8:27

Lab ID >DFT50::01 Data Release Authorized By: _____

a/z	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of aass 198	51.11 OK
68	less thsn 2.0% of aass 69	0.00 OK (0.00) #1
69	mass 69 relative abundance	57.74
70	less than 2.0% of aass 69	0.00 OK (0.00) #1
127	40.0 - 60.0% of aass 198	46.02 OK
197	less than 1.0% of aass 198	0.00 OK
198	base peak, 100% relative abundance	100.00 OK
199	5.0 - 9.0% of aass 198	8.63 OK
275	10.0 - 30.0S of aass 198	23.78 OK
365	greater than 1.00% of aess 198	3.65 OK
441	present, but less than aass 443	6.31 OK
442	greeter than 40.0% of aass 198	65.15 OK
443	17.0 - 23.0% of aass 442	13.50 OK (20.71) #2

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SANPLES, BLANKS AND STANDARDS.

#1 - Ualue in parenthesis is % aass 69.
#2 - Ualoe in parenthesis is % aass 442.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
25 ng/ul HSL	P2456	9/22/86	08:47
SW-2	660555 BNA P2458	"	10:56
SW-2 MS	660555 BNA P2459	"	11:55
SW2 MSD	660555 BNA P2460	"	12:47
SW-1	660551 BNA P2461	"	13:39
FB	660563 BNA P2462	"	14:31
TB	660559 BNA P2463	"	15:23

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CLP Inorganic Form II

Q.C. Report No. _____

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME 42M

CASE NO. _____

SOW NO. _____

DATE 9-30-86

UNITS ug/l

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	NR								
2. Antimony	99	93	94	99	96	96	91	92	P
3. Arsenic	100	101	101	100	98	98	98	98	F
4. Barium	NR								
5. Beryllium	96	93	98	96	90	94	98	102	P
6. Cadmium	94	88	94	94	90	95	92	98	P
7. Calcium	NR								
8. Chromium	163	101	98	103	95	92	103	100	P
9. Cobalt	NR								
10. Copper	103	96	93	103	93	90	101	98	P
11. Iron	NR								
12. Lead	100	98	98	100	100	100	100	100	P, F
13. Magnesium	NR								
14. Manganese	NR								
15. Mercury	5.0	4.8	96	1.0	1.0	100	4.8	96	P
16. Nickel	102	96	94	102	97	95	102	100	P
17. Potassium	NR								
18. Selenium	25	24.5	98	25	23.7	95	23	92	F
19. Silver	99	101	98	99	99	100	93	94	P
20. Sodium	NR								
21. Thallium	101	102	101	101	103	101			F
22. Vanadium	NR								
23. Zinc	101	95	94	101	95	94	98	97	P
Other									
Cyanide	5	4.5	90	50	44	88			

[1] Initial Calibration Source EPA EMSL H2M

[2] Continuing Calibration Source EPA EMSL H2M

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

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Q.C. Report No. _____

BLANKS

LAB NAME H2M CASE NO. _____

DATE 9-30-86 UNITS ug/l

Matrix ~~SOIL~~ WATER

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	NR	NR					
2. Antimony	<60	<60	<60	<60		<60	<60
3. Arsenic	<10						
4. Barium	NR						
5. Beryllium	<5	<5	<5	<5		<5	<5
6. Cadmium	<5	<5	<5	<5		<5	<5
7. Calcium	NR						
6. Chromium	<10	<10	<10	<10		<10	<10
9. Cobalt	NR						
10. Copper	~~<25~~ <25	<25	<25	<25		<25	<25
11. Iron	NR						
12. Lead	<2	<2	<2	<2		<2	<2
13. Magnesium	NR						
14. Manganese	NR						
15. Mercury	<.2	<.2	<.2	<.2			
16. Nickel	<40						
17. Potassium	NR						
18. Selenium	<5	<5	<5	<5	<5	<5	<5
19. Silver	<10	<10	<10	<10		<10	<10
20. Sodium	NR						
21. Thallium	<10	<10	<10	<10	<10	<10 <10	<10 <10
22. Vanadium	NR						
23. Zinc	<20	<20	<20	<20		<20	<20
Other							
Cyanide	<10	<10					

CLP Inorganic Form IV

Q.C. Report No. _____

ICP INTERFERENCE CHECK SAMPLE

LAB NAME H2M

DATE 9-30-86

CASE NO. _____

Check Sample I.D. _____

Check Sample Source Inorganic Ventures

Units ug/l

Compound	Control Limits[1] Mean	Control Limits[1] Std. Dev.	Itue[2]	Initial Observed	%R	Final Observed	%R
Metals:	peak intensity.						
1. Aluminum	NR						
2. Antimony	1734	.95	1.00	1.06	106	1.07	107
3. Arsenic	NR						
4. Barium	NR						
5. Beryllium	2914	.80	.10	.102	102	.103	103
6. Cadmium	1662	.56	.30	.313	104	.314	105
7. Calcium	NR						
8. Chromium	1376	.91	.30	.302	100	.297	99
9. Cobalt	NR						
10. Copper	1668	.39	.30	.288	96	.288	96
11. Iron	NR						
12. Lead	NR						
13. Magnesium	NR						
14. Manganese	NR						
15. Mercury	NR						
16. Nickel	2042	2.26	.30	.300	100	.301	100
17. Potassium	NR						
18. Selenium	NR						
19. Silver	5769	.75					
20. Sodium	NR						
21. Thallium	NR						
22. Vanadium	NR						
23. Zinc	4182	1.58	.30	.297	99	.306	102
Other _____							

[1] Mean value based on n _____.

[2] Itue value of EPA ICP Interference Check Sample or Laboratory standard.

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CLP Inorganic Form V

Q.C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME H2M

DATE 9-30-86

CASE NO. _____

NYSDEC Sample No. SD-910-S1

lab Sample ID No. 660541

Units ug/g

Matrix Soil

Compound	Control Limit tR	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	tR	
Metals:						
1. Aluminum	75-125	—	—	—	—	
2. Antimony		464	93	500	74.2	R
3. Arsenic		105	90	20	75	
4. Barium	NR	—	—	—	—	
5. Beryllium		56	12	50	88	
6. Cadmium		102	62	50	80	
7. Calcium	NR	—	—	—	—	
8. Chromium		438	245	200		
9. Cobalt	NR	—	—	—	—	
10. Copper		924	699	250	90	
11. Iron	NR	—	—	—	—	
12. Lead		1700	1300	500	80	
13. Magnesium	NR	—	—	—	—	
14. Manganese	NR	—	—	—	—	
15. Mercury		See case narrative				R
16. Nickel		561	182	400	95	
17. Potassium	NR	—	—	—	—	
18. Selenium		27	12.5	14.5	72	R
19. Silver		57	36	50	42	R
20. Sodium	NR	—	—	—	—	
21. Thallium		36	< 10	56	72	R
22. Vanadium	NR	—	—	—	—	
23. Zinc	↓	1466	1340	200	63	R
Other _____						
Cyanide						

[1] %R = ((SSR - SR)/SA) x 100

[2] R - out of control

Comments: _____

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CLP Inorganic Form V

Q.C. Report No. _____

SPIKE SAMPLE RECOVERY

LAB NAME HZM

DATE 9-30-86

CASE NO. _____

NYSDEC Sample No. ~~36~~ SW2/SW2Q

Lab Sample ID No. 6080357

Units ug/L

Matrix WATER

Compound	Control Limit 1R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R	
Metals:						
1. Aluminum	75-125	NR	—	—	—	
2. Antimony		452	<60	500	90	
3. Arsenic		19.5	<10	20	97	
4. Barium		NR	—	—	—	
5. Beryllium		37	<5	50	74	R
6. Cadmium		45	<5	50	90	
7. Calcium		NR	—	—	—	
8. Chromium		186	<10	200	95	
9. Cobalt		NR	—	—	—	
10. Copper		204	25	250	72	R
11. Iron		NR	—	—	—	
12. Lead		SEE CASE	NARRATIVE			R
13. Magnesium		NR	—	—	—	
14. Manganese		NR	—	—	—	
15. Mercury		1.05	<.2	1.0	105	
16. Nickel		353	<40	400	82	
17. Potassium		NR	—	—	—	
18. Selenium		10	<5	10	100	
19. Silver		58	9	50	98	
20. Sodium		NR	—	—	—	
21. Thallium		33	<10	50	70	R
22. Vanadium		NR	—	—	—	
23. Zinc		194	22	200	86	
Other _____						
Cyanide						

[1] %R = ((SSR - SR)/SA) x 100

*R - out of control

Comments: _____

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CLP Inorganic Form VI

Q.C. Report No. _____

DUPLICATES

LAB NAME H2M

DATE 9-30-86

CASE NO. _____

NYSDEC Sample No. SW2 / SW2D

Lab Sample ID No. 60 55 +

Units ug/l

Matrix ~~Soil~~ water

Compound	Control Limit[1]	Sample (S)	Duplicate (D)	RPD[2]
Metals:				
1. Aluminum	NR			
2. Antimony	NC	<60	<60	NC
3. Arsenic	NC	<10	<10	NC
4. Barium	NR			
5. Beryllium	NC	<5	<5	NC
6. Cadmium	NC	<5	<5	NC
7. Calcium	NR			
8. Chromium	NC	<10	<10	NC
9. Cobalt	NR			
10. Copper	± 25 *	25	25	0
11. Iron	NR			
12. lead	± 20 %	1300	1300	0
23. Magnesium	NR			
14. Manganese	NR			
15. Mercury	~~NR~~ NC	<.2	<.2	NC
16. Nickel	NC	<40	<40	NC
17. Potassium	NR			
18. Selenium	NC	~~<5~~	~~<5~~	~~NC~~
19. Silver	NC	<10	<10	NC
20. Sodium	NR			
21. Thallium	NC	<10	<10	NC
22. Vanadium	NR			
23. Zinc	± 20 *	22	20	9.5
Other				
Cyanide	± 10*	<10	<10	NC

~~* ABOVE INFO BEFORE CALCULATION TO MG/KG~~

* Out of Control

[1] 10 be added at a later date.

[2] RPD = {|S - D|/((S + D)/2)} x 100

NC - Non calculable RPD due to value(s) less than CRQL

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CLP Inorganic Form VI

Q.C. Report No. _____

DUPLICATES

LAB NAME H2M

DATE 9-30-86

CASE NO. _____

KYSDBC Sample No. CO-910-51

Lab Sample ID No. 660541

Units * mg/kg ✡

Matrix Soil

Compound	Control limit[1]	Sample (S)	Duplicate (D)	RPD[2]
Metals:				
1. Aluminum	NR			
2. Antimony	± 60 * ~~[illegible]~~	93	87	7%
3. Arsenic	± 20%	91	93	2%
4. Barium	NR			
5. Beryllium	± 5 *	12	12	0
6. Cadmium	± 20%	62	59	7%
7. Calcium	NR			
8. Chromium	± 20%	245	233	5%
9. Cobalt	NR			
10. Copper	± 20%	699	684	2%
11. Iron	NR			
12. Lead	± 20%	1,300	1,300	0
13. Magnesium	NR			
14. Manganese	NR			
15. Mercury	± 20%	.88	2.1	82% * See case narrative
16. Nickel	± 40 *	182	169	7%
17. Potassium	NR			
18. Selenium	± 5	9.5	14.8	5.3 mg/kg
19. Silver	± 10 *	36	37	3%
20. Sodium	NR			
21. Thallium	± 10 *	<10	<10	NC
22. Vanadium	NR			
23. Zinc	± 20%	1340	1313	2%
Other				
Cyanide	± 20%	<7.1 mg/kg	<7.1 mg/kg	NC

✡ Samples results before calculation to mg/kg.

* Out of Control

[1] 3D be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

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CLP Inorganic Form VII

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LAB NAME H2m LAB CASE NO. _____

DATE 9/30/86 LCS NO. _____

Compound	Required Detection limits (CRDL)-ug/L	Instrument Detection Limits (ISL)-ug/L ICP/AA	Furnace	Lab Control Sample (circle one) ug/L True	mg/kg Found	%R	
1. Aluminum	200	8					
2. Antimony	60	17		99	93	94	
3. Arsenic	10	—		100	101	101	
4. Barium	200	5					
5. Beryllium	5	.2		96	93	98	
6. Cadmium	5	2		94	88	94	
7. Calcium	5000	3					
8. Chromium	10	3		103	101	98	
9. Cobalt	50	8					
10. Copper	25	1		103	96	93	
11. Iron	100	2					
12. Lead	5	—		100	98	98	
13. Magnesium	5000	7					
14. Manganese	15	.4					
15. Mercury	0.2		.2	5	4.8	96	cold vapor
16. Nickel	40	6		102	96	94	
17. Potassium	5000	300					
18. Selenium	5		2.0				
19. Silver	10	.8		99	101	98	
20. Sodium	5000	7					
21. Thallium	10	—	2.0	101	102	101	
22. Vanadium	50	2.					
23. Zinc	20	.7		101	95	94	
Other:							
Cyanide	10	NR	NR	25	27	108	

NR - Not Required

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Form VII A

Q.C. Report No. _____

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME HZM CASE NO. _____ DATC 9/16/86

ICP FURNACE LCS NO. _____

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA ID# 3410	Instrument Detection Limits (IDL)-ug/l Furnace ID# 5000	Lab Control Sample ug/L mg/kg (circle one) True	Found	%R
Metals:						
1. Aluminum	200	8				
2. Antimony	60	17		990	923	93
3. Arsenic	10	/	2.0	20	18	90
4. Barium	200	5		970	960	99
5. Beryllium	5	.2		960	938	98
6. Cadmium	5	2		940	876	94
7. Calcium	5000	3		5300	5600	106
8. Chromium	10	3		1030	937	91
9. Cobalt	50	8		1000	939	94
10. Copper	25	1		1030	983	95
11. Iron	100	2		100	100	100
12. Lead	5	/	2.0	100	100	100
13. Magnesium	5000	7		1800	1700	94
14. Manganese	15	.4		1020	959	94
15. Mercury	0.2	.2	.2	5	5	100
16. Nickel	40	6		1020	1019	100
17. Potassium	5000	300		1000	1050	105
18. Selenium	5	/	2.0	25	25	100
19. Silver	10	.8		990	990	100
20. Sodium	5000	7		860	800	93
21. Thallium	10	/	2.0	100	100	100
22. Vanadium	50	2		1010	898	90
23. Zinc	20	.7		1010	1010	100
Other:						
Cyanide	10	NR	NR			

NR - Not required

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Form VIII

Q.C. Report No. _____

STANDARD ADDITION RESULTS

LAB NAME Hzw CASE NO. _____

DATE _____ UNITS _____

Sample #	Element	0 ADD ABS.	1 ADD CON./ABS[1]	2 ADD CON./ABS.[1]	3 ADD CON./ABS.[1]	FINAL CON.[2]	r*
660541	Se	.032	5/.051	10/.065	20/.101	9.5	.999
dup 541	Se	.028	5/.038	10/.045	20/.066	14.8	.998
545	Se	.025	5/.038	10/.055	20/.085	8.0	.999

[1] CON is the concentration added, ABS. is the instrument readout in absorbance or concentration.

[2] Concentration as determined by MSA

*"r" is the correlation coefficient.

+ - correlation coefficient is outside of control window of 0.993.

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Form IX

Q.C. Report No. _____

ICP SERIAL DILUTIONS

LAB NAME H2M

DATE 9/30/86

CASE NO. _____

Sample No. CD910S1

Lab Sample ID No. 665541

Units by l *

Matrix SOIL

Compound	Initial Sample Concentration (I)	Serial Dilution[1] Result (S)	% Difference[2]
Metals			
1. Aluminum			
2. Antimony	87	NR	
3. Arsenic			
4. Barium			
5. Beryllium	12	NR	
6. Cadmium	59	56	5
7. Calcium			
8. Chromium	233	276	18.4 E
9. Cobalt			
10. Copper	684	740	8
11. Iron			
12. Lead			
13. Magnesium			
14. Manganese			
15. Nickel	169	180	6.5
16. Potassium			
17. Selenium			
18. Silver	37	36	2.7
19. Sodium			
20. Thallium			
21. Vanadium			
22. Zinc	1313	1404	6.9
Other:			

[1]Diluted sample concentration corrected for 1:4 dilution (see Exhibit D)

[2]Percent Difference = $\frac{|I - S|}{I} \times 100$

* PRIOR TO ug/kg CALC

NR - Not Required, initial sample concentration less than 10 times IDL
NA - Not Applicable, analyte not determined by ICP

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Form XI (Quarterly) A

INSTRUMENT DETECTION LIMITS

LAB NAME (HZM) HOLZMACHER, McLENDON & MURRELL DATE 8-25-86

ICP/Flame AA (Circle One) Model Number ARL 3410 Furnace AA Number P.E. 5000 / HGA 500

Element	Wavelength (nm)	CRDL (ug/L)	IDL (ug/L)	Element	Wavelength (nm)	CRDL (ug/L)	IDL (ug/L)
1. Aluminum	396.152	200	P 8.0	13. Magnesium	279.079	5000	P 7.0
2. Antimony	206.833	60	P 17.0	14. Manganese	257.610	15	P 0.4
3. Arsenic	193.70	10	F 2.0	15. Mercury	253.7	0.2	F 0.2
4. Barium	455.403	200	P 5.0	16. Nickel	231.604	40	P 6.0
5. Beryllium	234.861	5	P 0.2	17. Potassium	766.491	5000	P 283
6. Cadmium	214.438	5	P 2.0	18. Selenium	196.0	5	F 2.0
7. Calcium	422.673	5000	P 3.0	19. Silver	328.068	10	P 0.8
8. Chromium	205.552	10	P 3.4	20. Sodium	588.995	5000	P 7.0
9. Cobalc	237.862	50	P 8.0	21. Thallium	276.8	10	F 2.0
10. Copper	324.754	25	P 1.0	22. Vanadium	292.402	50	P 1.5
11. Iron	259.940	100	P 1.5	23. Zinc	213.856	20	P .7
12. Lead	283.3	5	F 2.0				

Footnotes:
- Indicate the instrument for which the IDL applies with a "P" (for ICP), an "A" (for Flame AA), or an "F" (for Furnace AA) behind the IUL value.
- Indicate elements commonly run with background correction (AA) with a "B" behind che analyclcal wavelengch.
- If more than one ICF/Flame or Furnace AA is used, submlt separace Forms XI-XIII for each instrument.

COMMENTS: _____

Lab Manager _____

88

Form XII (Quarterly)

ICP Interelement Correction Factors / None used

LABORATORY HZM ICP Model Number ARI 3410

DATE 9/16/86

Analyte	Analyce Wavelengch (nm)	Interelemenc Correction Factors for Al 60 mg/l	Ca 300 mg/l	Fe 250 mg/l	Mg 150 mg/l	Na 50 mg/l			
1. Antimony		0	→	→	→	→	→		
2. Arsenic									
3. Barium		0	→	→	→	→	→		
4. Beryllium		0	→	→	→	→	→		
5. Cadmium		0	→	→	→	→	→	→	
6. Chromium		0	→	→	→	→	→	→	
7. Cobalt		0	→	→	→	→	→	→	
8. Copper		0	→	→	→	→	→	→	
9. Lead									
10. Manganese		0	→	→	→	→	→	→	
11. Mercury									
12. Nickel		0	→	→	→	→	→	→	
13. Potassium									
14. Selenium									
15. Silver		0	→	→	→	→	→	→	
16. Sodium									
17. Thallium									
18. Vanadium		0	→	→	→	→	→	→	
19. Zinc		0	→	→	→	→	→	→	

COMMENTS: INORGANIC VENTURES INC. SUPPLIED INTERFERCE STANDARD. EPA WP681 EQ.

Lab Manager

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Form XIII (Quarterly)
ICP Linear Ranges

LAB NAME H2M ICP Model Number ARL 3410

DATE 9/16/86

Analyte	Incegration Time (Seconds)	Concen-traclon (ug/L)	Analyce	Incegracion Time (Seconds)	Concen-traclon (ug/L)
1. Aluminum		NA	13. Magnesium		NA
2. Antimony	1.0	10,000	14. Manganese	1.0	2000
3. Arsenic		NA	15. Mercury		NA
4. Barium	1.0	3000	16. Nickel	1.0	3000
5. Beryllium	1.0	1000	17. Potasslum		NA
6. Cadmium	1.0	3000	18. Selenium		NA
7. Calcium		NA	19. Silver	1.0	3000
8. Chromium	1.0	3000	20. Sodium		NA
9. Cobalt	1.0	3000	21. Thallium		NA
10. Copper	1.0	3000	22. Vanadium	1.0	3000
11. Iron		NA	23. Zinc	1.0	3000
12. Lead		NA			

Footnotes: • Indicate elements not analyzed by ICP with the notation "NA".

COMMENTS: _____

Lab Manager _____

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VI. Sample Data for NJ DEP I.D. #'s: SED-1, SED-2, S-1, S-2, S-3, SW-1, SW2/SW2Q, TB, and FB

1. Reports for scans:

X	GC/MS Volatiles
X	GC/MS Extractables
X	Pesticides/PCB's
X	INORGANICS

2. Reporting Packages for Individual Samples

. Raw Data

DATA REPORTING QUALIFIERS

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The four qualifiers defined below are not subject to modification by the laboratory. Additional flags or footnotes explaining results are encouraged. However, the definition of such flags or footnotes must be explicit.

Value - if the result is a value greater than or equal to the detection limit, report the value.

U - indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g.: if limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.)

G - This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/ul in the final extract should be confirmed by GC/MS.

B - This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Form 1. (continued).

III. 2. Reporting Package
NJ DEP I.D. # SED-1

H2M

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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Lab No. 660530
Type: Misc. - Tier I
Point: SED-1
Date Collected: 9/11/86
Date Received: 9/12/86
Collected By: CL 99

PRIORITY POLLUTANTS ANALYSIS - PURGEABLE ORGANICS

Scan No.	Cas Number	Compound	ug/kg
	74-87-3	Chloromethane	10U
	74-83-9	Bromomethane	10U
	75-01-4	Vinyl chloride	10U
	75-00-3	Chloroethane	10U
113	75-09-2	Methylene chloride	6J
	75-69-4	Trichlorofluoromethane	10U
	75-35-4	1,1-dichloroethene	10U
238	75-34-3	1,1-dichloroethane	46
	156-60-5	Cis/Trans-1,2-dichloroethene	10U
	67-66-3	Chloroform	10U
	107-06-2	1,2-dichloroethane	10U
336	71-55-6	1,1,1-Trichloroethane	190B
	56-23-5	Carbon tetrachloride	10U
	75-27-4	Bromodichloromethane	10U
	79-34-5	1,1,2,2-Tetrachloroethane	10U
	70-87-5	1,2-dichloropropane	10U
	10061-02-6	Trans-1,3-dichloropropene	10U
	79-01-6	Trichloroethene	10U
	124-48-1	Dibromochloromethane	10U
	79-00-5	1,1,2-trichloroethane	10U
	71-43-2	Benzene	10U
	10061-01-5	cis-1,3-Dichloropropene	10U
	110-75-8	2-chloroethylvinyl ether	10U
	75-25-2	Bromoform	10U
	127-10-4	Tetrachloroethene	10U
	106-88-3	Toluene	10U
	106-90-7	Chlorobenzene	10U
	100-41-4	Ethylbenzene	10U
	541-73-1	1,2-Dichlorobenzene	10U
	95-50-1	1,3-Dichlorobenzene	10U
	106-46-1	1,4-Dichlorobenzene	10U

Date Reported: 10/15/86

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S.C. McLendon, P.E.
Laboratory Director

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob. FIT	% Prob. RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Unknown (Carbon Dioxide)	-		12	510B
2.		Unknown	-		30	97
3.	75-18-3	Thiobism.thane	88	65	135	39
4.	110-54-3	Hexane	96	98	483	20
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H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

Lab Name: H2M Labs
Concentration: Low

Sample Lab No. 660531 - SED-1

Date Extracted: 9/24/86
Date Analyzed: 10/6/86

Dil. Factor: 1:2

Semi-Volatile Compounds

C.A.S. Number		ug/kg	C.A.S. Number		ug/kg	Scan No.
65-75-9	N-Nitrosodimethylamine	20000U	83-32-9	Acenaphthene	20000U	
108-95-2	Phenol	20000U	51-28-5	2,4-Dinitrophenol	20000U	
62-53-3	Aniline	20000U	100-02-7	4-Nitrophenol	20000U	
111-44-4	bis(2-Chloroethyl)Ether	20000U	121-14-2	2,4-Dinitrotoluene	20000U	
95-57-8	2-Chlorophenol	20000U	606-20-2	2,6-Dinitrotoluene	20000U	
541-73-1	1,3-Dichlorobenzene	20000U	84-66-2	Diethylphthalate	20000U	
106-46-7	1,4-Dichlorobenzene	20000U	7005-72-3	4-Chlorophenyl-phenylether	20000U	
95-50-1	1,2-Dichlorobenzene	20000U	86-73-7	Fluorene	20000U	
39638329	bis(2-chloroisopropyl)ether	20000U	534-52-1	4,6-Dinitro-2-Methylphenol	20000U	
621-64-7	N-Nitroso-Di-n-Propylamine	20000U	86-30-6	N-Nitrososdiphenylamine (1)	20000U	
67-72-1	Hexachloroethane	20000U	101-55-3	4-Bromophenyl-phenylether	20000U	
98-95-3	Nitrobenzene	20000U	118-74-1	Hexachlorobenzene	20000U	
78-59-1	Isophorone	20000U	87-86-5	Pentachlorophenol	20000U	
88-75-5	2-Nitrophenol	20000U	85-01-8	Phenanthrene	20000U	
105-67-9	2,4-Dimethylphenol	20000U	120-12-7	Anthracene	20000U	
111-91-1	bis(2-Chloroethoxy)Methane	20000U	84-74-2	Di-n-Butylphthalate	20000U	
120-83-2	2,4-Dichlorophenol	20000U	206-44-0	Fluoranthene	20000U	
120-82-1	1,2,4-Trichlorobenzene*	1600J	92-87-5	Benzidine	60000U	
91-20-3	Naphthalene	20000U	129-00-0	Pyrene	20000U	
87-68-3	Hexachlorobutadiene	20000U	85-68-7	Butylbenzylphthalate	1700J	1429
59-50-7	4-Chloro-3-Methylphenol	20000U	91-94-1	3,3'-Dichlorobenzidine	20000U	
77-47-4	Hexachlorocyclopentadiene	20000U	56-55-3	Benzo(a)Anthracene	20000U	
88-06-2	2,4,6-Trichlorophenol	20000U	117-81-7	bis(2-Ethylhexyl)Phthalate	26200	1524
91-58-7	2-Chloronaphthalene	20000U	218-01-9	Chrysene	20000U	
131-11-3	Dimethyl Phthalate	20000U	117-84-0	Di-n-Octyl Phthalate	20000U	
208-96-8	Acenaphthylene	20000U	205-99-2	Benzo(b)Fluoranthene	20000U	
			207-08-9	Benzo(k)Fluoranthene	20000U	
			50-32-8	Benzo(a)Pyrene	20000U	
			193-39-5	Indeno(1,2,3-cd)Pyrene	20000U	
			53-70-3	Dibenzo(a,h)Anthracene	20000U	
			191-24-2	Benzo(g,h,i)Perylene	20000U	

* Scan No. 608

(1) Cannot be separated from diphenylamine

Date Reported: 10/16/86

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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample #: SED-1

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob FIT|RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Unknown		610	13400J
2.					
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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Sample Lab No. 660532
Date Extracted: 9/19/86
Date Analyzed: 10/6/86
Type: Misc. - Tier I
Point: SED-1
Collected By: CL 99

ANALYSIS FOR PESTICIDES/PCB's

C.A.S. No.	Compound	ug/kg
319-84-6	Alpha-BHC	8U
319-87-7	Beta-BHC	8U
319-86-8	Delta-BHC	100B
58-89-9	Gamma-BHC (Lindane)	65U
76-44-8	Heptachlor	120U
309-00-2	Aldrin	990
1024-57-3	Heptachlor Epoxide	1000U
959-98-8	Endosulfan I	250U
68-57-1	Dieldrin	1000U
72-55-9	4,4'-DDE	250U
72-20-8	Endrin	250U
33213-65-9	Endosulfan II	250U
72-54-8	4,4'-DDD	250U
1031-07-8	Endosulfan Sulfate	100U
50-29-3	4,4'-DDT	1000U
72-43-5	Methoxychlor	80U
53494-70-5	Endrin Ketone	16U
57-74-9	Chlordane	250U
8001-35-2	Toxaphene	250U
12674-11-2	Aroclor 1016	S0U
11104-28-2	Aroclor 1221	S0U
11141-16-5	Aroclor 1232	S0U
53469-21-9	Aroclor 1242	S0U
12672-29-6	Aroclor 1248	80U
11097-69-1	Aroclor 1254	25000
11096-82-5	Aroclor 1260	1000U

Vi = Volume of extract injected (uL)
Ws = Weight of sample extracted (g)
Vs = Ws = 6.73 g Vt = 10 mL
Date Reported: 10/17/86

Vs = Volume of water extracted (mL)
Vt = Volume of Total extract (mL)
Vi = 5 uL

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****
S.C. McLendon, P.E.
Laboratory Director

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Lab Name : H2M LABS

ORGANICS ANALYSIS DATA SHEET

Sample Number
660532

NJDEP #CD910-SE01
Pun 2262

Tentatively Identified Compounds

C.A.S. Number	Compound Name	% Probability (Fit / Ref.)	RT or Scan Number	Estimated Concentration (ug/L or ug/kg) (Dry Wt.)
1.	Unknown		0.79	280
2.	"		1.79	410
3.	"		2.79	650
4.	"		3.3B	1200
5.	"		19.65	720
6.	"		21.94	420
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Date Reported 10-16-86

S.C. McLendon, P.E.
Laboratory Director

99
78

H2M
Environmental Engineers & Scientists
HOLZMACHER, McLENDON and MURRELL, P.C.
575 BROAD HOLLOW ROAD, MELVILLE, NEW YORK 11747 (516) 694-3040

WATER RESOURCES • WATER SUPPLY & TREATMENT • SEWERAGE & TREATMENT • ECOLOGICAL & IMPACT STUDIES
MODEL STUDIES • PILOT PLANT STUDIES • WATER/WASTE WATER LABORATORY AND ANALYTICAL SERVICES

LABORATORY REPORT

LAB NO. 660533
PROJECT NO. 2C

CLIENT'S NAME AND ADDRESS

NEW JERSEY D.E.P.
65 PROSPECT ST.
TRENTON, NEW JERSEY 08618

TYPE OF SAMPLE - MISCELLANEOUS
COLLECTED BY CL 99
DATE COLLECTED - 9/11/86
DATE RECEIVED - 9/12/86

NJDLP SAMPLE #CD910-SED1
NJDEP SAMPLE POINT I.D. #SED1

PARAMETER	RESULT	PARAMETER	RESULT
ANTIMONY	62.8 N	SELENIUM	<3.60 N
ARSENIC	64.3	SILVER	3.60 N
BERYLLIUM	20.0	THALLIUM	<3.60 N
CADMIUM	33.9	ZINC	745. N
CHROMIUM	82.5	PHENOLS	0.11
COPPER	427.	CYANIDE	<7.30
LEAD	321.	TOTAL SOLIDS	56.0 %
MERCURY	0.24 N		
NICKEL	142.		

ALL RESULTS REPORTED IN mg/kg DRY WEIGHT

ALL RESULTS IN (MG/L) EXCEPT AS NOTED BY # (UG/L) OR % (PERCENT) AND
T.COLI BACT. % FECAL COLI (MPN/100ML)
COLOR, ODOR, TURBIDITY I PH (UNITS)
APC % FECAL STREP (COUNTS/ML)
SPEC.COND. (UMHOS) SETT.SOLIDS(ML/L)

DATE REPORTED 10/ 8/86

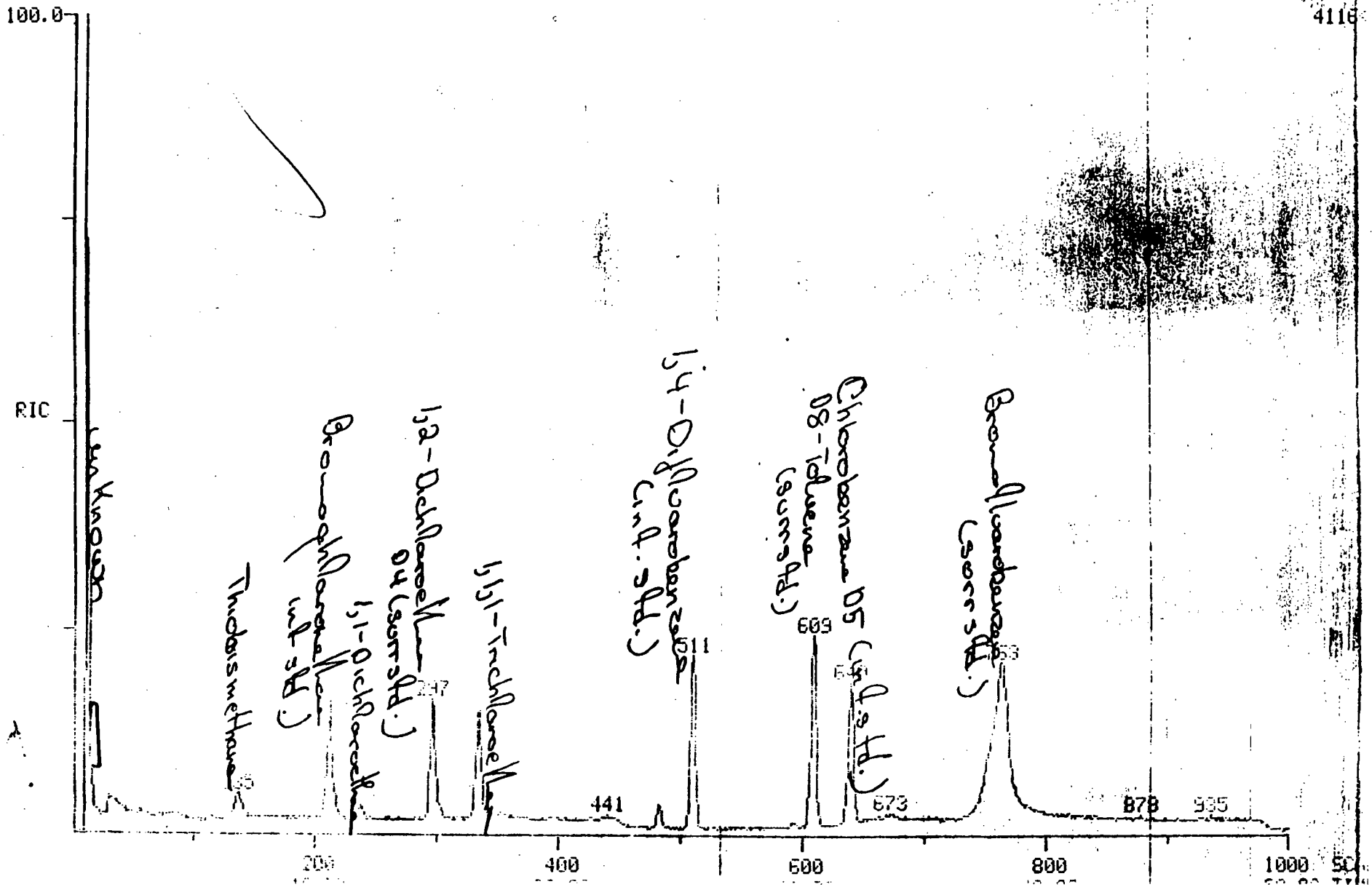
S. C. McLENDON, P.E., LABORATORY DIRECTOR

THE LIABILITY OF H2M CORP. SHALL BE LIMITED TO THE PRICE OF THE SERVICE RENDERED AND PAID.

RIC
03/26/86 14:40:00
SAMPLE: 660530
COMDE.:
RANGE: G 1,1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: PU6428 #1
CAL1: PU6428 #2

SCANS 1 TO 1000



TCA FINISHED FOUND
FINISHED AT 3/24/86 17 55:33

QUANTITATION REPORT FILE: PU6429

ATA: PU6429.TI
09/26/86 15:32:00
SAMPLE: 1.5697G 660530
ONOS :
UBMITTED BY: NJDEP ANALYST: CC

MOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
ESP. FAC. FROM LIBRARY ENTRY

No	Name
1	BROMOCHRLOROMETHANE (INT. STD.)
2	1,2-DICHLOROETHANE 04 (SURR. STO)
3	CHLOROMETHANE
4	BROMOMETHANE
5	VINYL CHLORIDE
6	CHLOROETHANE
7	METHYLENE CHLORIDE (C)
8	ACETONE
9	CARBON DISULPHIDE
10	1,1-DICHLOROETHENE (B)
11	1,1-DICHLOROETHANE(E)
12	TRANS -1,2-DICHLOROETHENE (D)
12	CHLOROFORM
14	1,2-DICHLOROETHANE(H)
15	TRICHLOROFLUOROMETHANE
16	DICHLOROFLUOROMETHANE
17	ACROLEIN
18	ACRYLONITRILE
19	1,4-DIFLUOROBENZENE(INT. STD)
20	2-BUTANONE (MEK)
21	1,1,1-TRICHLOROETHANE (I)
22	CARBON TETRA CHLORIDE
23	BROMODICHLOROMETHANE(L)
24	1,2-DICHLOROPROPANE(X)
25	TRANS-1,3-DICHLOROPROPENE (AA)
26	TRICHLOROETHENE(K)
27	DIBROMOCHLOROMETHANE(O)
28	1,1,2-TRICHLOROETANE(M)
29	BENZENE(BEN)
30	CIS-1,3-DICHLOROPROPENE(Z)
31	2-CHLOROETHYLVINYLETHER(NN)
32	BROMOFORM(P)
33	CHLOROBENZENE-D5 (INT. STD)
34	2-HEXANONE(MBK)
35	4-METHYL-2-PENTANONE(MIBK)
36	TETRACHLOROETHENE(N)
37	ETHANE, 1,1,2,2-TETRACHLORO-
38	TOLUENE(TOL)
39	CHLOROBENZENE(Q)
40	ETHYLBENZENE(FB)
41	STYRENE
42	META-XYLENE
43	ORTHO/PARA-XYLENE
44	META-DICHLOROBENZENE(MDCB)
45	ORTHO-DICHLOROBENZENE(ODCB)
46	PARA-DICHLOROBENZENE(PDCB)
47	D8-TOLUENE(SURR STD)
48	BROMOFLUOROBENZENE(SURR. STD)

102

No	M/Z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	Unit

3	NOT FOUND									
4	NOT FOUND									
5	NOT FOUND									
6	NOT FOUND									
7	84	123	5:39	1	0.533	A BB	2133.	8.693	NG	0.40
8	43	145	7:15	1	0.684	A BB	2626.	28.588	NG	1.30
9	NOT FOUND									
10	NOT FOUND									
11	63	238	11:54	1	1.123	A BB	19005.	71.617	NG	3.26
12	96	261	13:03	1	1.231	A BB	160.	0.805	NG	0.04
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	114	511	25:33	19	1.000	A BB	159683.	250.000	NG	11.37
20	43	304	15:12	19	0.595	A VB	15024.	101.409	NG	4.61
21	97	336	16:46	19	0.658	A BV	82422.	295.287	NG	13.43
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	117	639	31:57	33	1.000	A BB	93569.	250.000	NG	11.37
34	43	531	26:33	33	0.831	A BB	654.	262.888	NG	11.96
35	43	566	23:18	33	0.886	A*BV	1870.	110.034	NG	5.00
36	NOT FOUND									
37	NOT FOUND									
38	92	614	30:42	33	0.961	A BB	890.	2.383	NG	0.11
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	100	609	30:27	33	0.953	A BB	61292.	253.729	NG	11.54
48	95	762	38:06	33	1.192	A BB	83822.	236.980	NG	10.78

QUANTITATION REPORT FILE: PU642S

DATA: PU64 TI
9/26/86 14:40:00
SAMPLE: 660530
COMPS:
SUBMITTED BY: DEP ANALYST: CC

AMOUNT=AREA * REF AMNT/(REF AREA * RESE FACT)
REF AREA FROM LIBRARY ENTRY

No	NAME
*1	BROMOCHLOROMETHANE (INT. STD.)
2	1,2-DICHLOROETHANE D4 (SURR. STD)
3	CHLOROMETHANE
4	BROMOMETHANE
5	VINYL CHLORIDE
6	CHLOROETHANE
7	METHYLENE CHLORIDE (C)
8	ACETONE
9	CARBON DISULPHIDE
10	1,1-DICHLOROETHENE (B)
11	1,1-DICHLOROETHANE(E)
12	TRANS -1,2-DICHLOROETHENE (D)
13	CHLOROFORM
14	1,2-DICHLOROETHANE(H)
15	TRICHLOROFLUOROMETHANE
16	DICHLOROFLUOROMETHANE
17	ACROLEIN
18	ACRYLONITRILE
19	1,4-DIFLUOROEENZENE(INT. STD)
20	2-BUTANONE (MEK)
21	1,1,1-TRICHLOROETHANE (I)
22	CARBON TETRA CHLORIDE
23	BROMODICHLOROMETHANE(L)
24	1,2-DICHLOROPROPANE(X)
25	TRANS-1,3-DICHLOROPROPENE (AA)
26	TRICHLOROETHENE(K)
27	DIBROMOCHLOROMETHANE(O)
28	1,1,2-TRICHLOROETANE(M)
29	BENZENE(BEN)
30	CIS-1,3-DICHLOROPROPENE(Z)
31	2-CHLOROETHYLVINYLETHER(NN)
32	BROMOFORM(P)
33	CHLOROBENZENE-D5 (INT. STD)
34	2-HEXANONE(MBK)
35	4-METHYL-2-PENTANONE(MIBK)
36	TETRACHLOROETHENE(N)
37	ETHANE, 1,1,2,2-TETRACHLORO-
38	TOLUENE(TOL)
39	CHLOROBENZENE(G)
40	ETHYLBENZENE(EB)
41	STYRENE
42	META-XYLENE
43	ORTHO/PARA-XYLENE
44	META-DICHLOROBENZENE(MDCB)
45	ORTHO-DICHLOROBENZENE(ODCB)
46	PARA-DICHLOROBENZENE(PDCB)
47	D8-TOLUENE(SURR. STD)
48	BROMOFLUORBENZENE(SURR. STD)

No	M/Z	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TOT

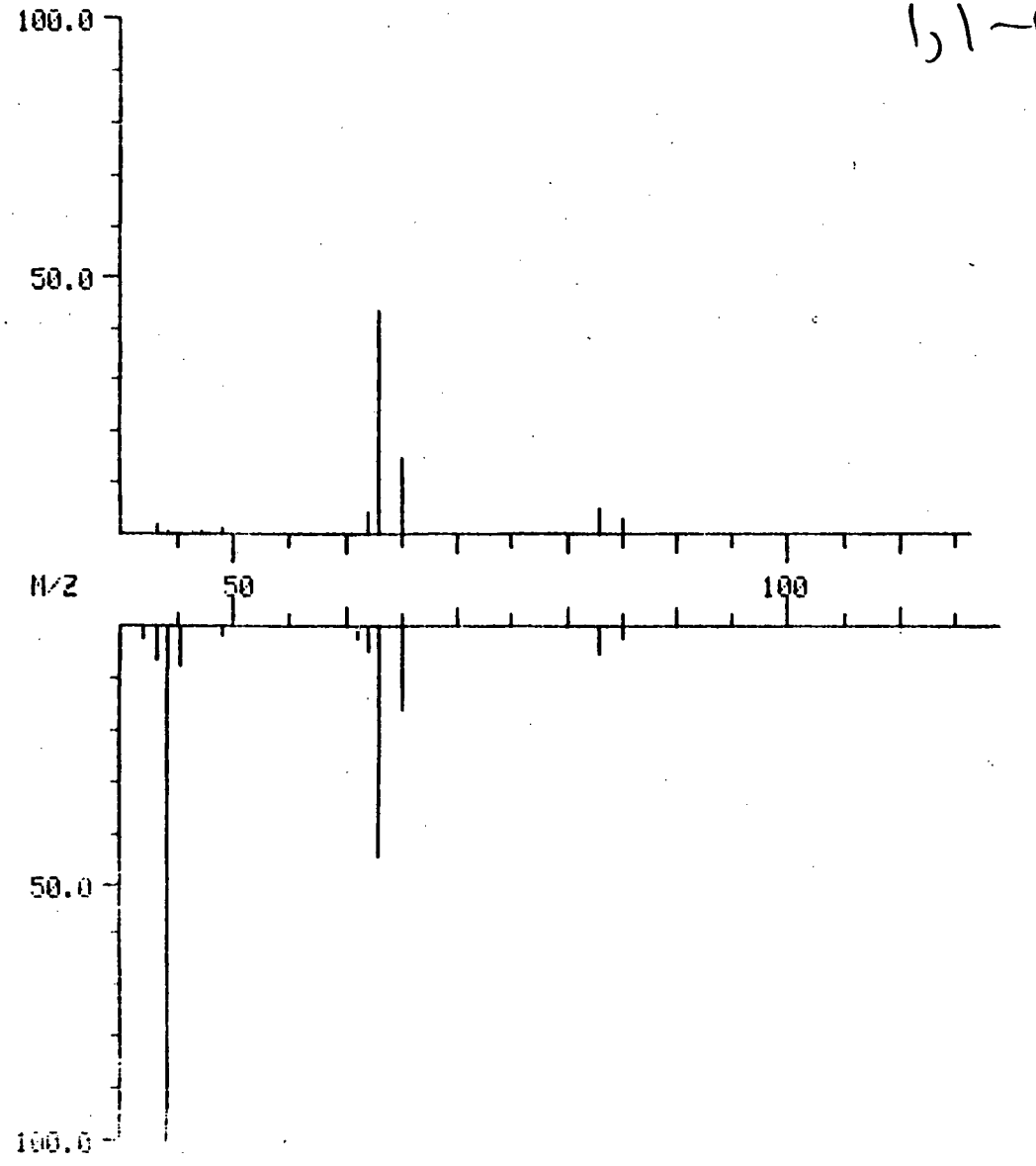
104

DUAL MASS SPECTRUM
09/26/86 14:40:00 + 11:54
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2M 0T)

DATA: PU6428 #238
CALI: PU5423 #2

BASE M/Z: 63/ 44
RIC: 5599./ 14703.

1,1-Dichloroethane



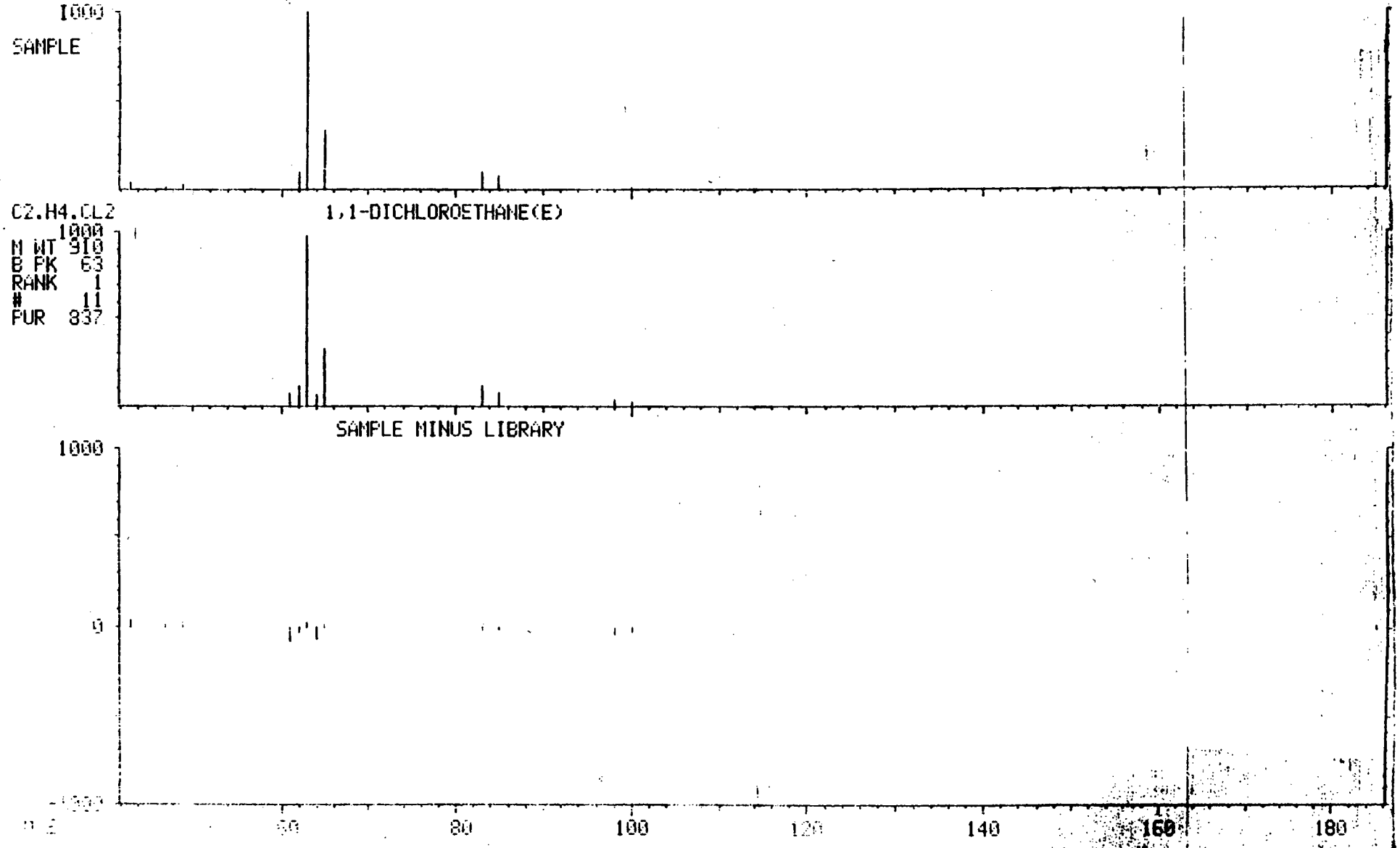
7536.

10

LIBRARY SEARCH
09/26/86 14:40:00 + 11:54
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6428 # 238
CALI: PU6428 # 2

BASE M/Z: 63
RIC: 5599.

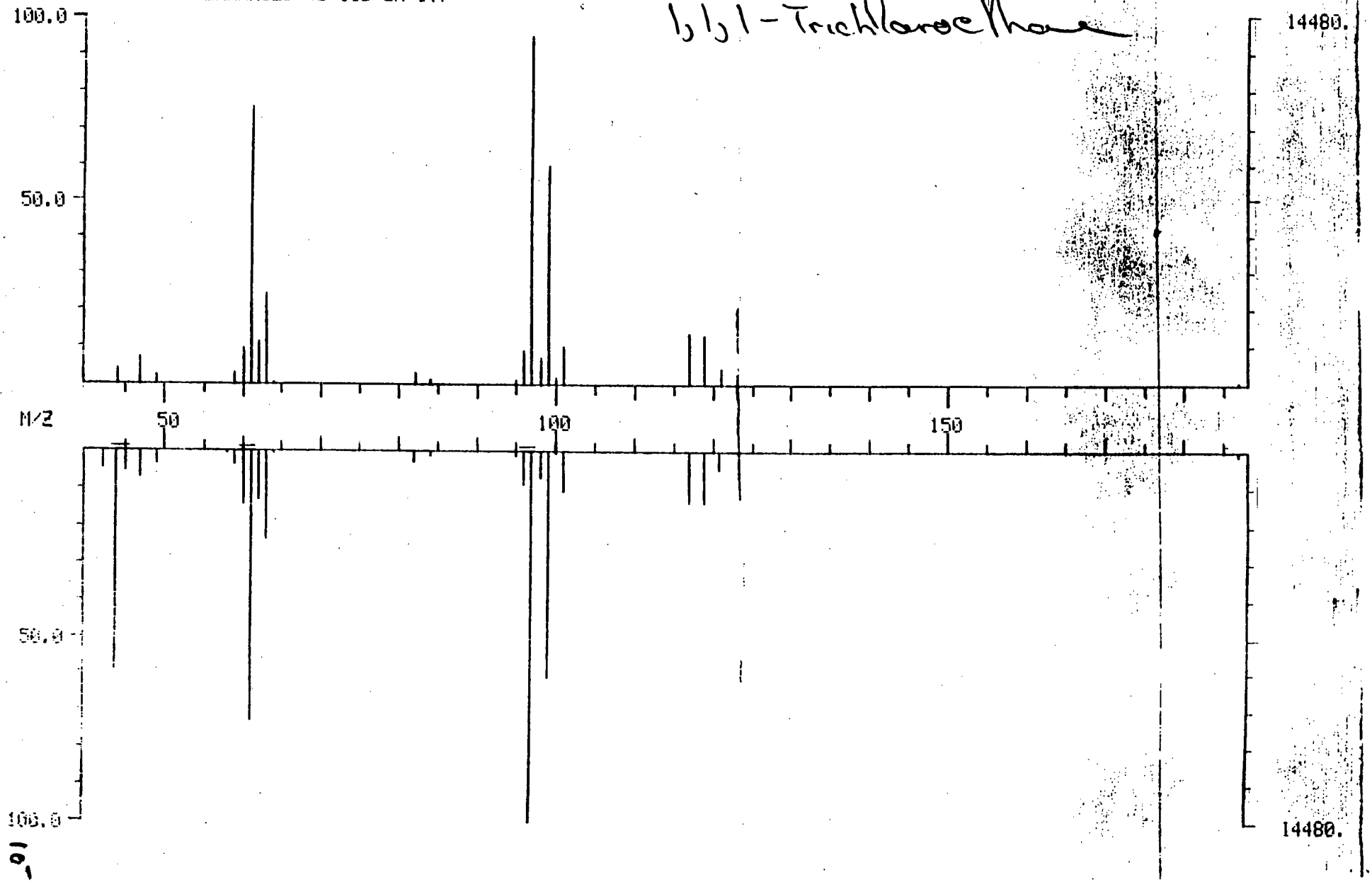


FUAL MASS SPECTRUM
05 25 96 14:40:00 + 16:48
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 #336
CALI: PU6428 #2

BASE M/Z: 97/ 37
RIC: 52031./ 62733.

1,1,1-Trichloroethane

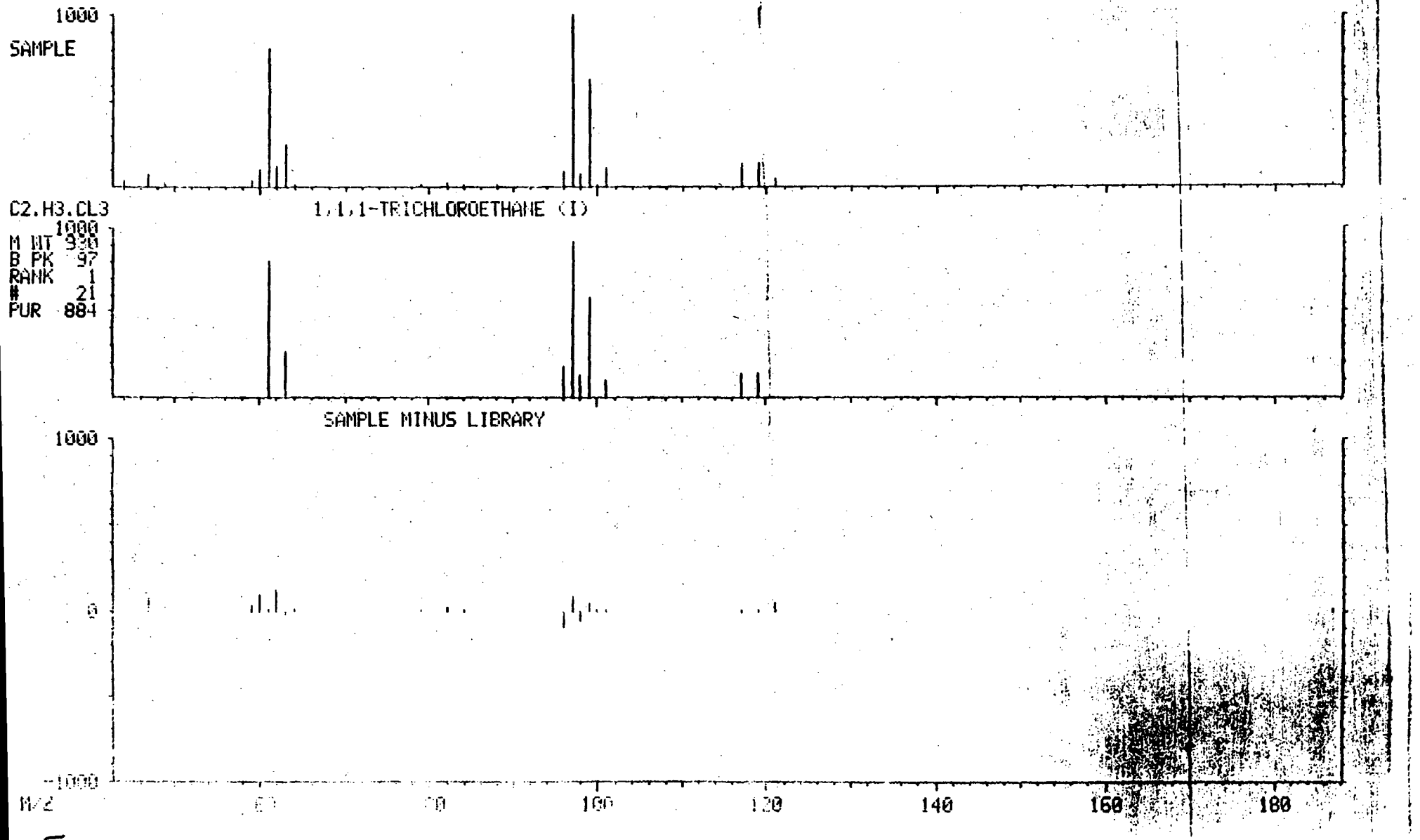


10

[illegible] SPECTRUM
[illegible] 16:48
[illegible]
[illegible]
[illegible] (S 15B 2N 0T)

DATA: PUE428 # 336
CALI: PUE428 # 2

BASE M/Z: 97
RIC: 51775.

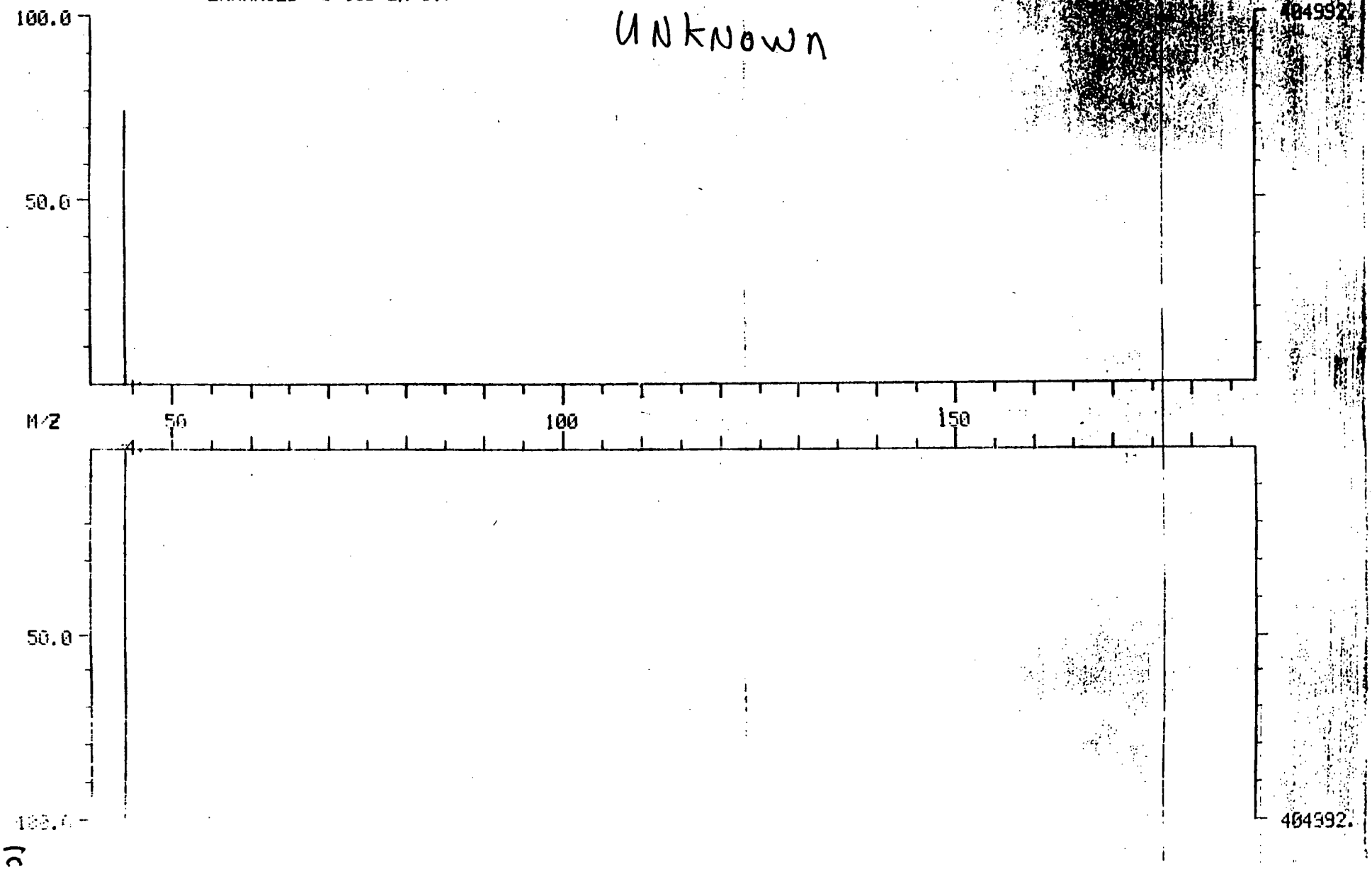


DUAL MASS SPECTRUM
09/26/86 14:10:00 + 0:36
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2M 0T)

DATA: PU6428 #12
CALI: PU6428 #2

BASE M/Z: 44/ 44
RIC: 307711./ 411647.

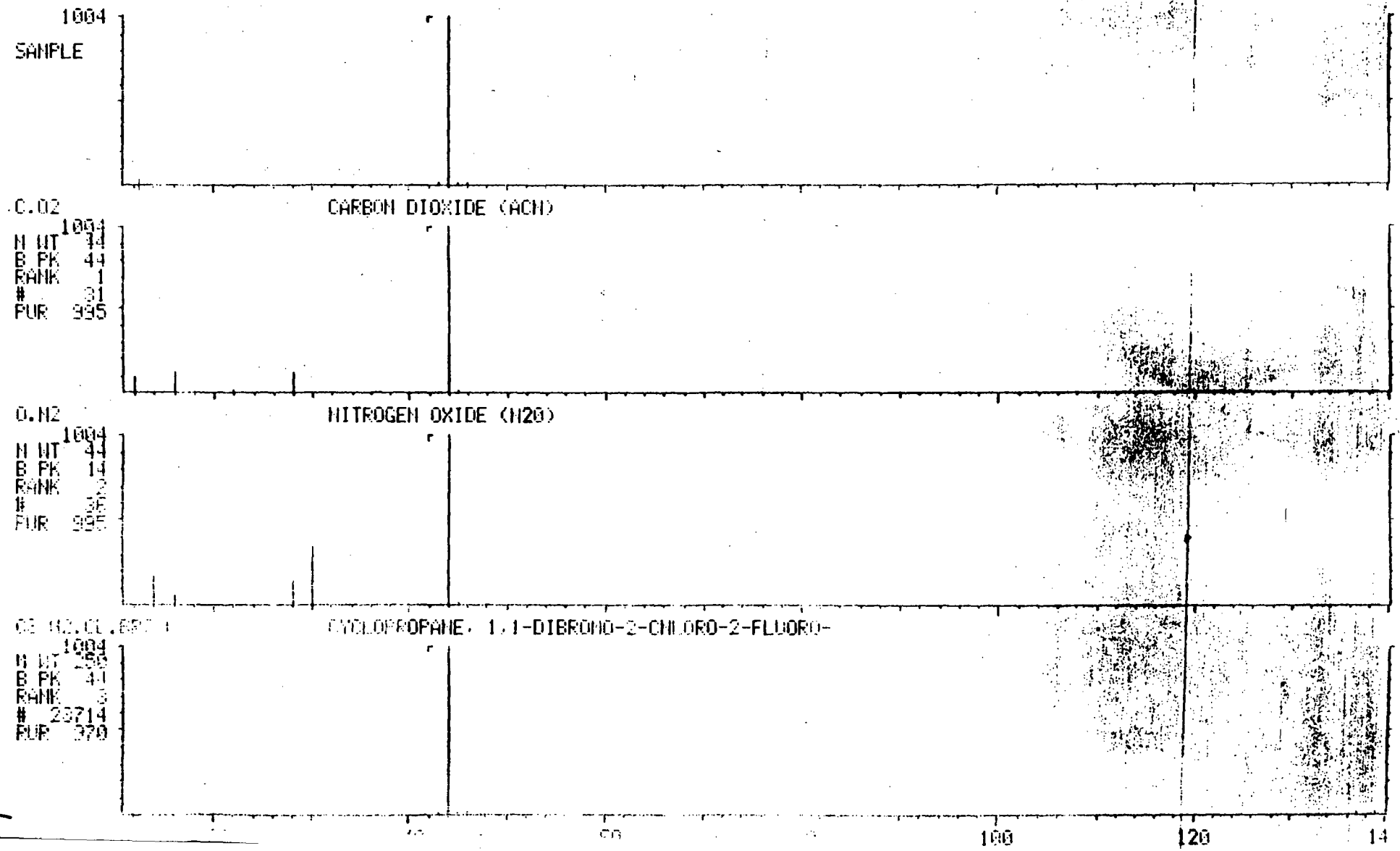
Unknown



LIBRARY SEARCH
09/26/86 14:40:00 + 0:36
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6428 # 12
CALI: PU6428 # 2

BASE N/Z: 44
PIC: 307711.

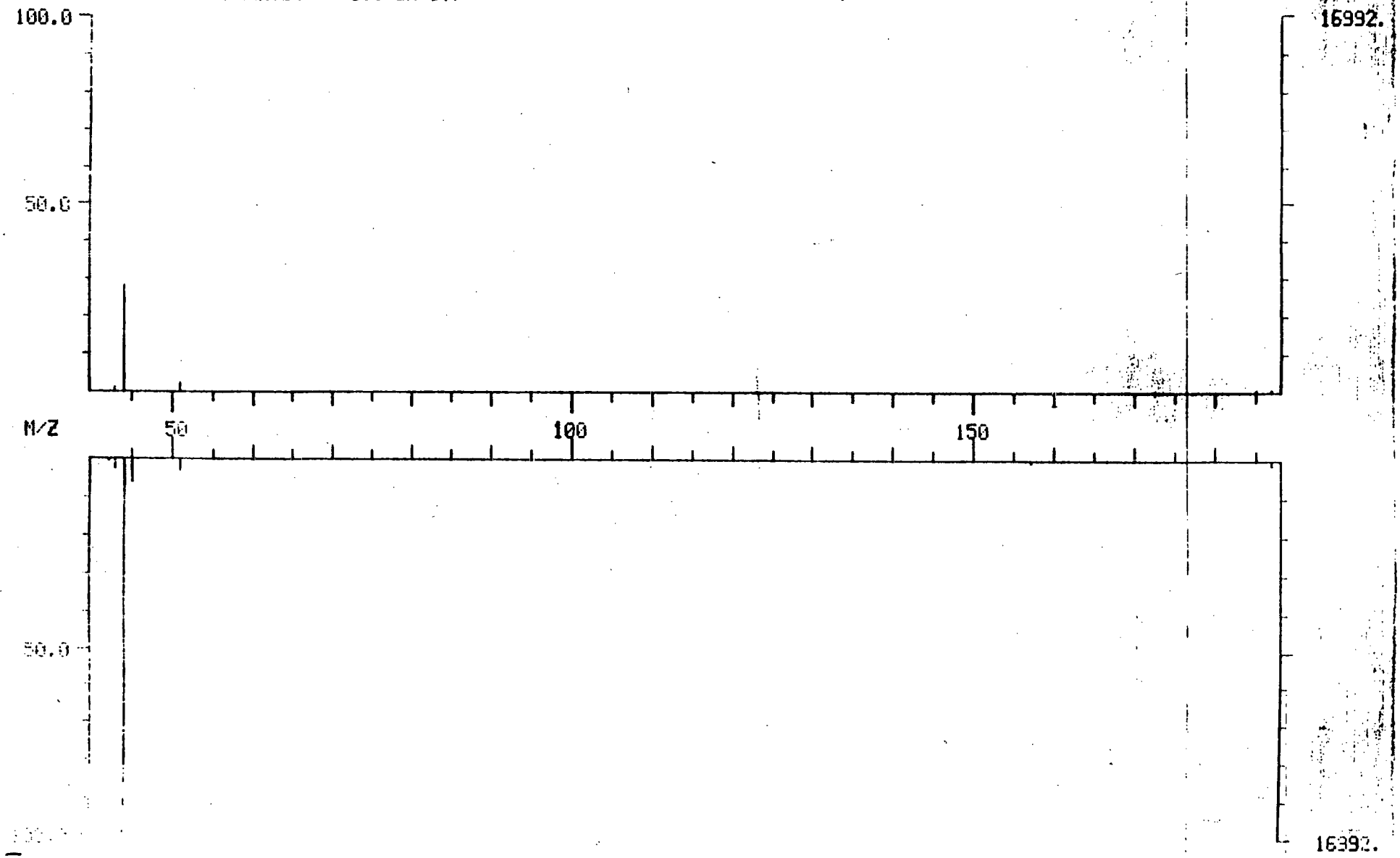


FINAL MASS SPECTRUM
[illegible] 26/06 14:49:08 + 1:30
SAMPLE: [illegible]
COMMENT.:
ENHANCED (5 150 2N OT)

DATA: FU6428 #30
CALI: FU6428 #2

BASE M/Z: 44/ 44
RIC: 5695./ 19199.

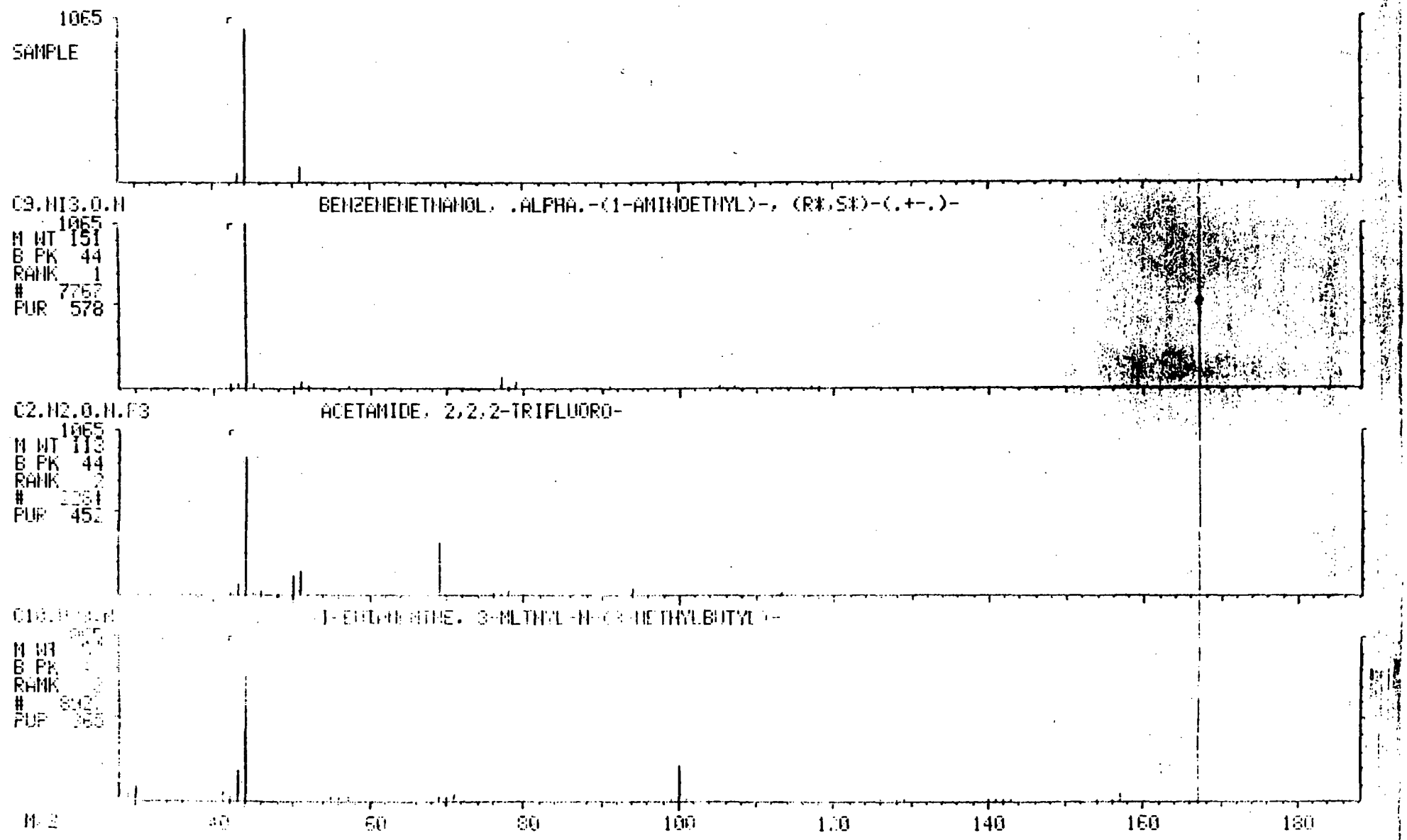
Unknown



LIBRARY SEARCH
DT 26-SE 14:40:08 + 1:30
SAMPLE: [illegible]
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6428 # 30
CALI: PU6428 # 2

BASE M/Z: 44
PIC: 5695.

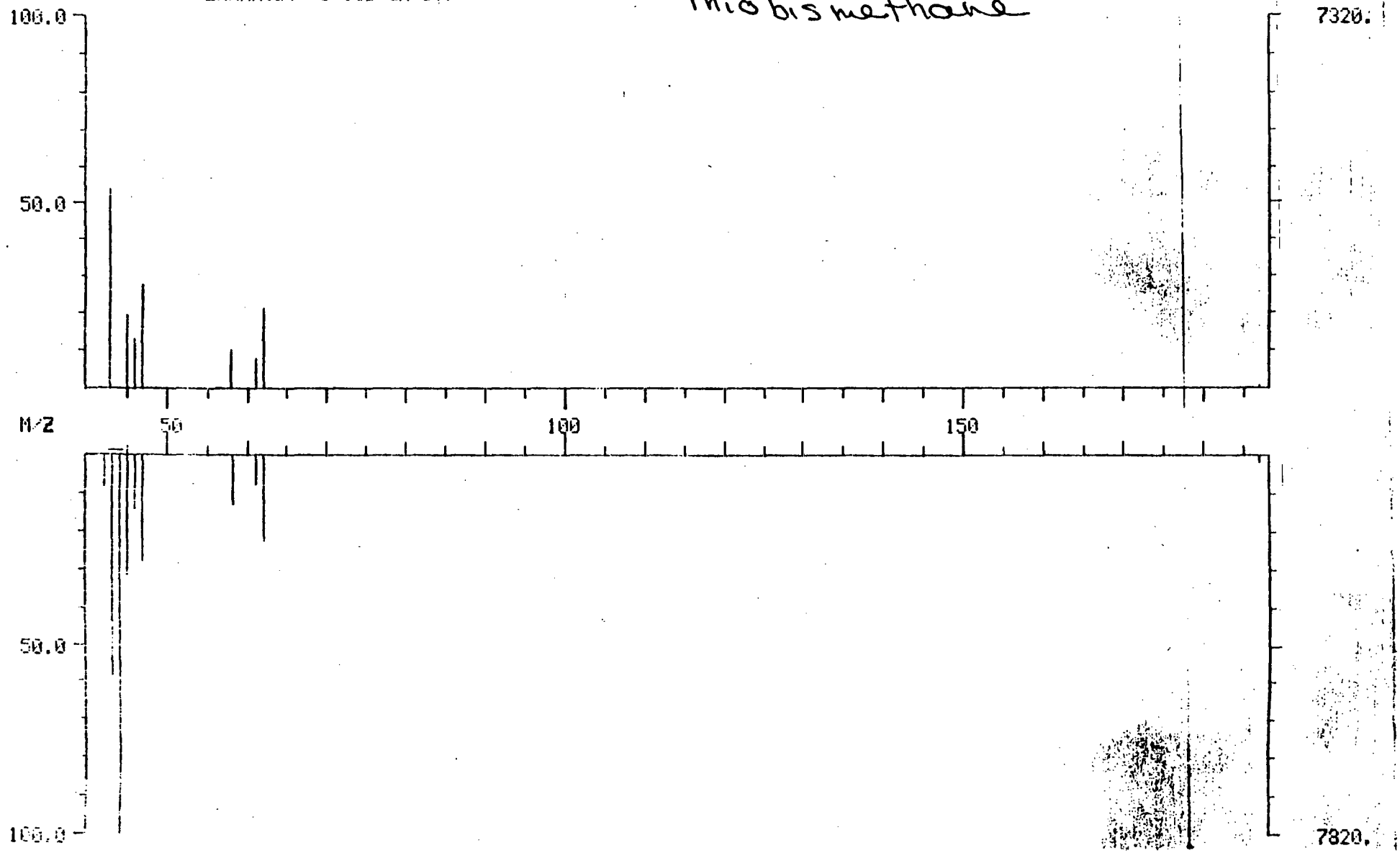


DUAL MASS SPECTRUM
09/25/88 14:40:00 + 6:45
SAMPLE: 660520
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 #135
CALI: PU6428 #2

BASE M/Z: 43/ 44
RIC: 11279./ 20831.

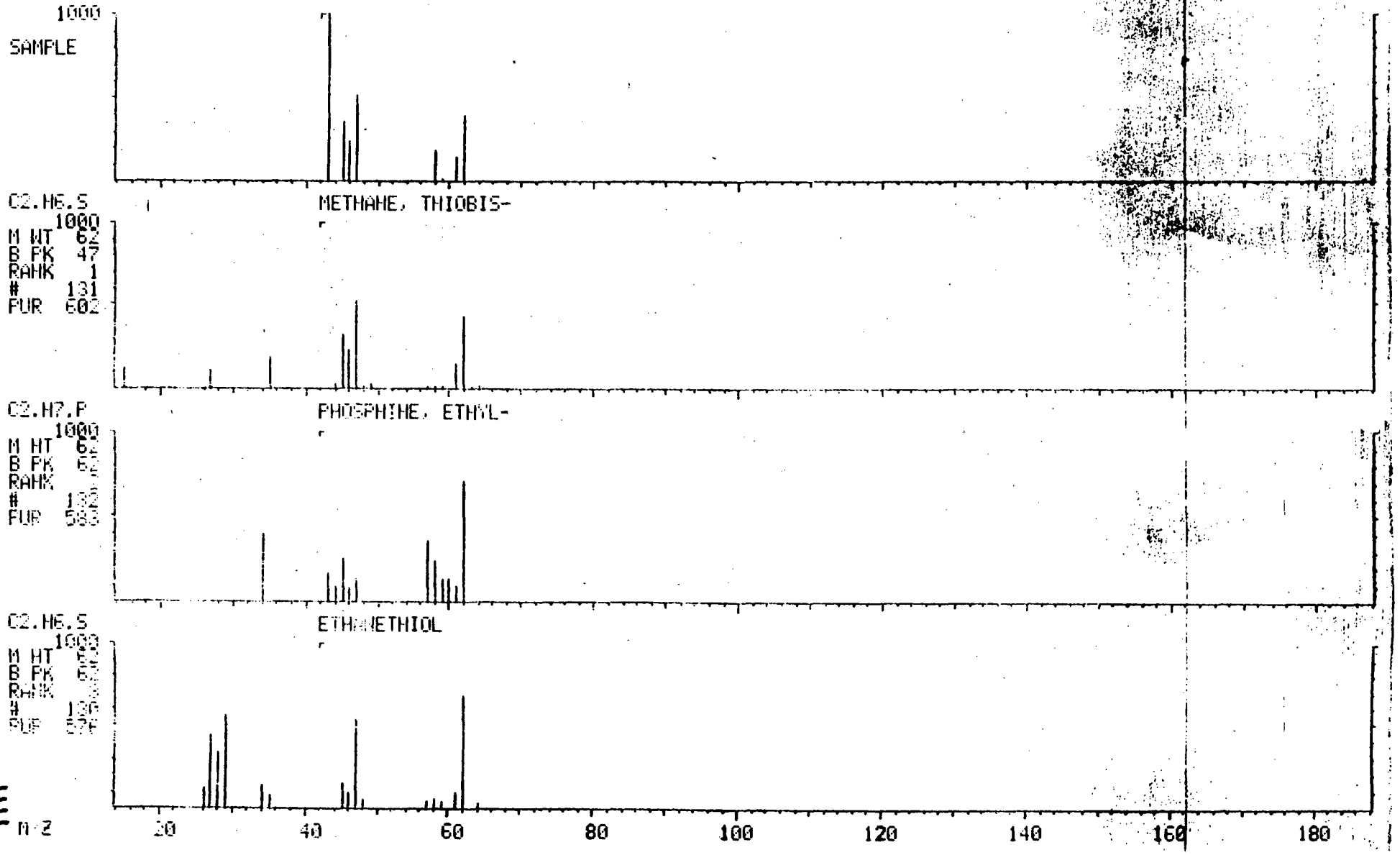
Thiobismethane



LIBRARY SEARCH
09/26/86 14:40:00 + 6:45
SAMPLE: 660570
COMDS.:
ENHANCED (S 15B 2H OT)

DATA: PU6428 # 135
CALI: PU6428 # 2

BASE: 43
RIC: 11279.

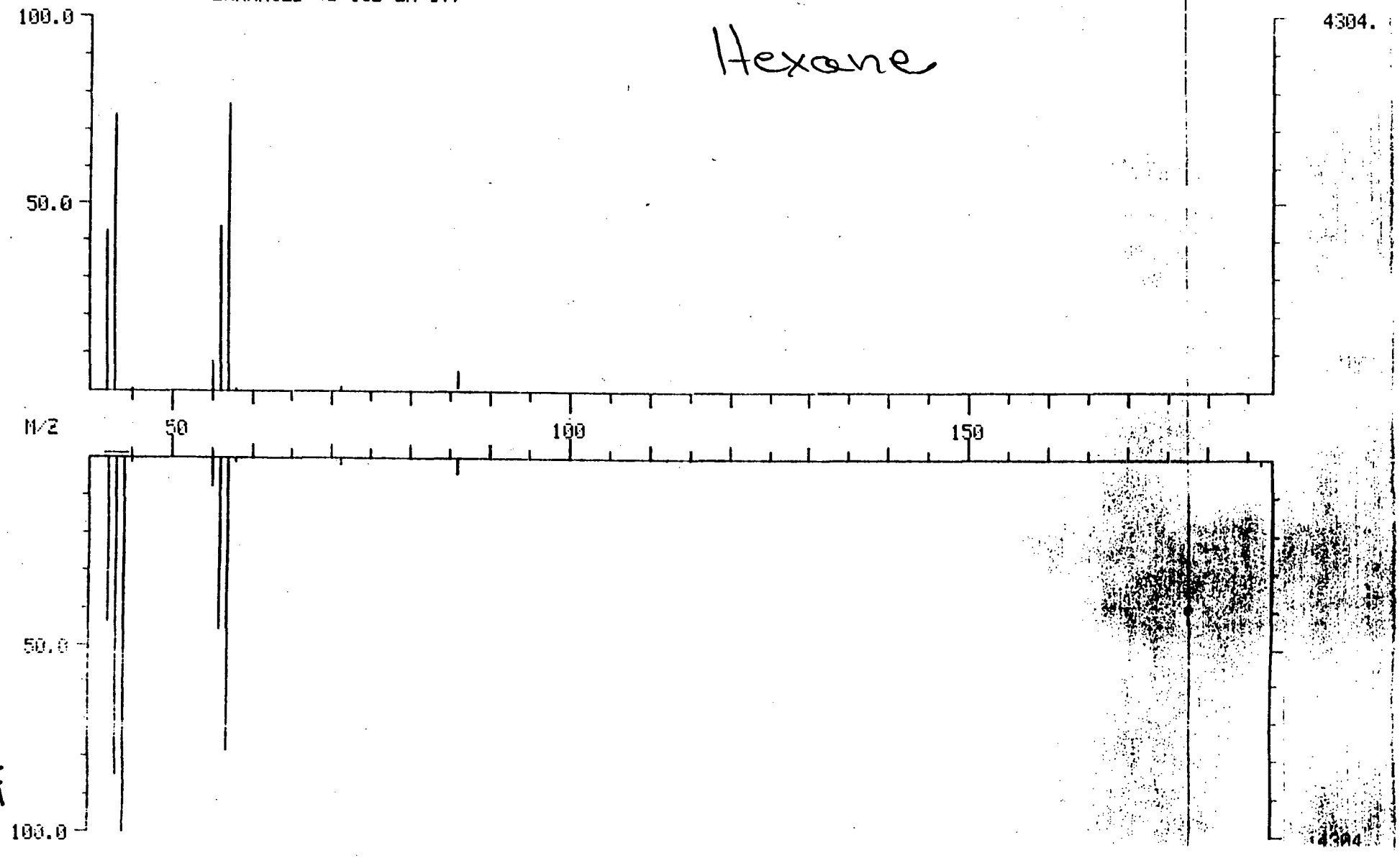


DUAL MASS SPECTRUM
03/26/86 14:40:00 + 24:09
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 #433
CALI: PU6428 #2

BASE M/Z: 57/ 44
RIC: 10911./ 15335.

Hexane

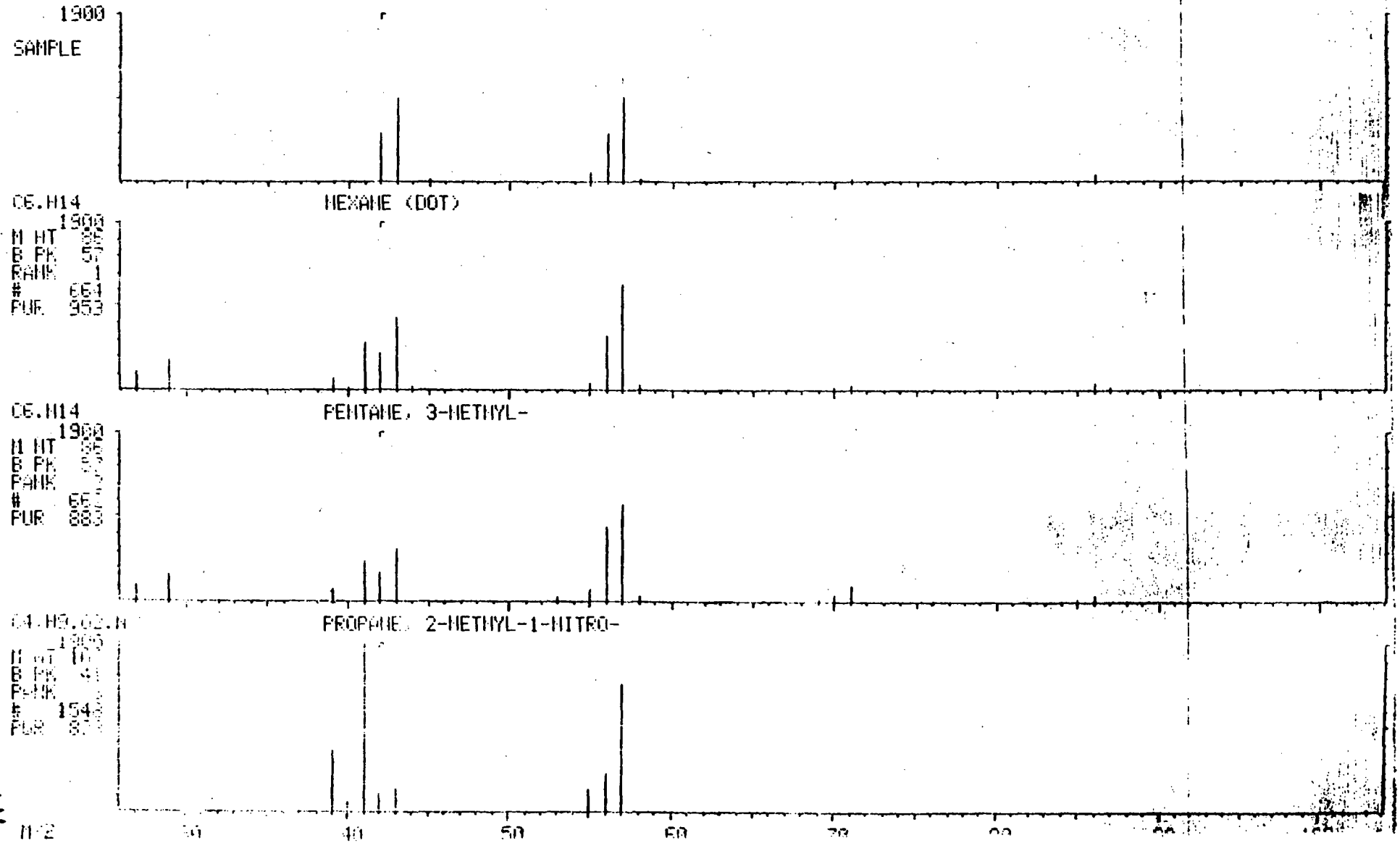


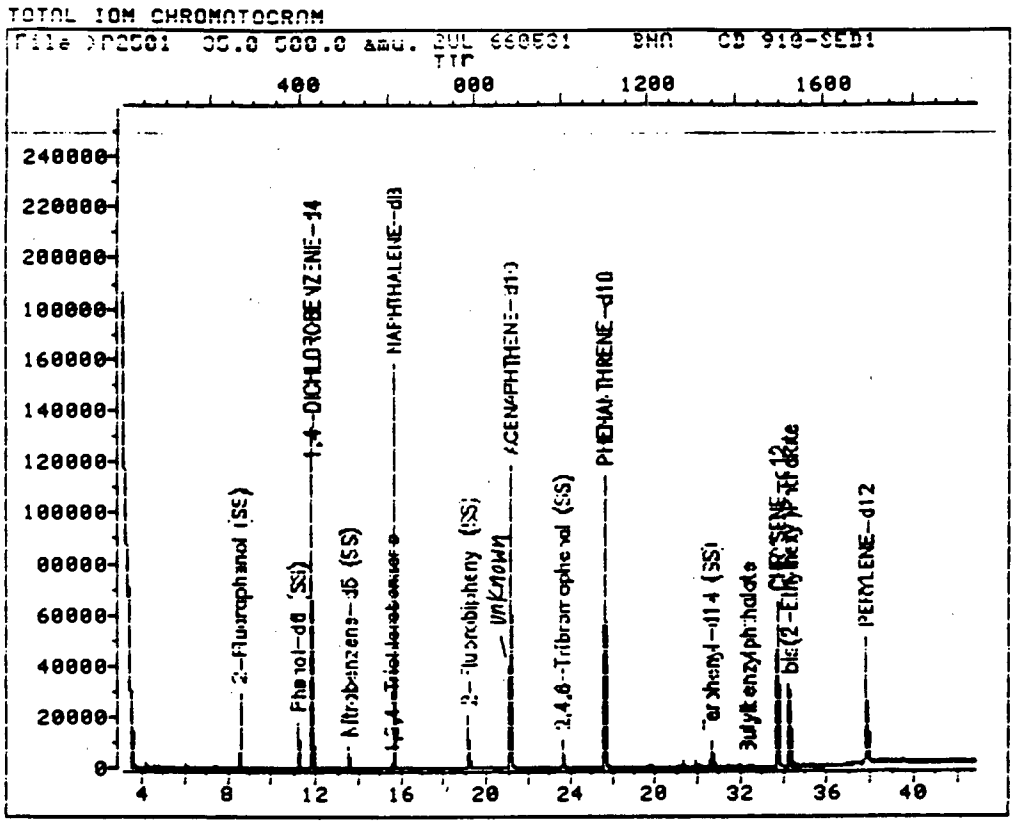
115

LIBRARY SEARCH
09/26/86 14:40:00 + 24:09
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 # 483
CALI: PU6428 # 2

BASE PEAK 57
RIC: 10911.





Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1

BTL#91

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861006 20:16
Injected at: 861006 19:31

QUANT REPORT

Operator ID: STEVE
Output File: ^P2501::OP
Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1

Quant Rev: 4
Quant Time: 861006 20:16
Injected at: 861006 19:31
Dilution Factor: 1.00

BTL#91

ID File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	11.82	427	52154	40.00	NG	92
3)	2-Fluorophenol (SS)	8.51	265	17091	11.71	NG	84
7)	Phenol-d6 (SS)	11.19	396	15764	9.75	NG	74
15)	*NAPHTHALENE-d8	15.63	613	169025	40.00	NG	49
16)	Nitrobenzene-d5 (SS)	13.54	511	6379	4.08	NG	97
23)	1,2,4-Trichlorobenzene	15.52	608	1256	.69	NG	92
27)	*ACENAPHTHENE-d10	21.11	881	70463	40.00	NG	87
31)	2-Fluorobiphenyl (SS)	19.12	784	19793	7.00	NG	98
42)	2,4,6-Tribromophenol (SS)	23.58	1002	6508M	10.33	NG	
43)	*PHENANTHRENE-d10	25.61	1101	113689	40.00	NG	52
54)	*CHRYSENE-d12	33.70	1497	84298	40.00	NG	46
55)	Terphenyl-d14 (SS)	30.59	1345	11420	8.45	NG	38
58)	Butylbenzylphthalate	32.31	1429	1151	.74	NG	93
61)	bis(2-Ethylhexyl)Phthalate	34.25	1524	25220	11.17	NG	89
63)	*PERYLENE-d12	37.77	1696	78941	40.00	NG	79

* Compound is ISTD

MS data file header from : >P2501

Sample: 2UL 660531 BNA Operator: STEVE MS 10/06/86 19:31
Misc : CD 910-SED1 BTL#91
Sys. #: 1 MS model: 96 SU/HW rev.: CA ALS # : 0
Method file: EXTRII Tuning file: MT9301 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 280

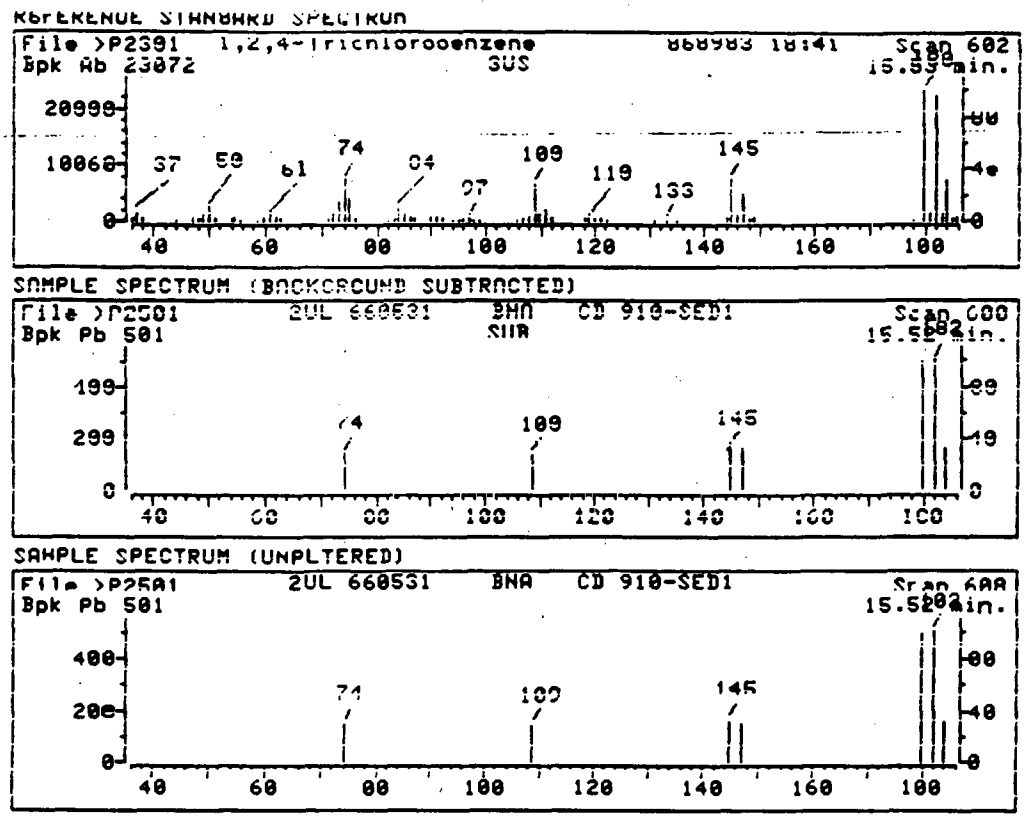
Chromatographic temperatures :	30.	300.	0.	0.	0.
Chromatographic times, min. :	4.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

>P2501 2UL 660531 BNA CD 910-SED1
35.01 500.0 CLP ADC TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.566	605	610	610	14748	54355	54355	14.56	4.67
2	15.627	610	613	616	157725	378729	373407	100.00	32.08
3	21.189	877	885	893	2131	19612	19612	5.25	1.68
4	23.581	999	1002	1010	10950	38125	38125	10.21	3.27
5	25.605	1097	1101	1106	114027	304894	304894	81.65	26.20
6	33.703	1493	1497	1504	64246	207909	202206	54.15	17.37
7	37.773	1692	1696	1703	47929	203304	171099	45.82	14.70

Sum of corrected areas: 1163698.

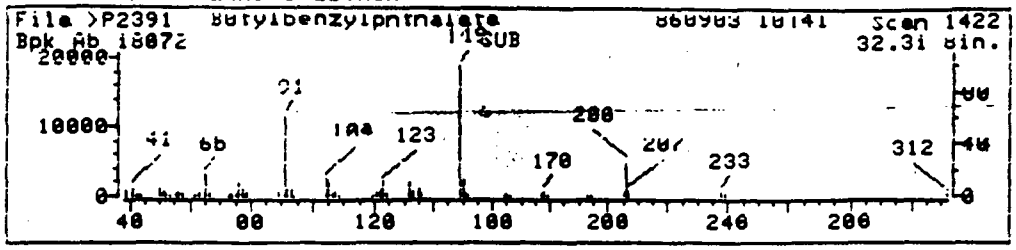
1:57 PM TUE., 7 OCT., 1986



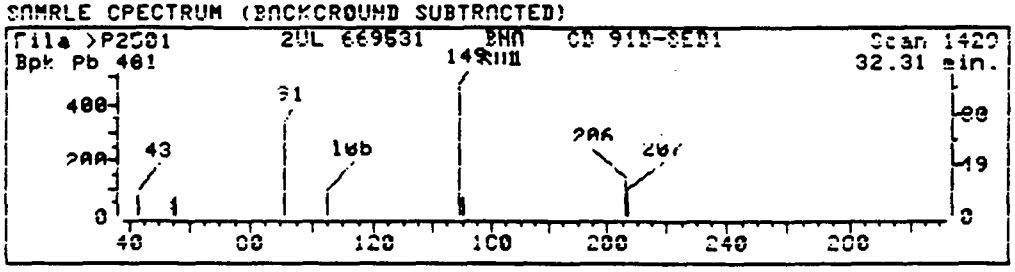
Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1 BTL#91
Quant Time: 861006 20:16
Injected at: 861006 19:31

Compound No: 23
Compound Name: 1,2,4-Trichlorobenzene
Scan Number: 608
Retention Time: 15.52 min.
Area: 1256
Concentration: .69 NG
a-value: 92

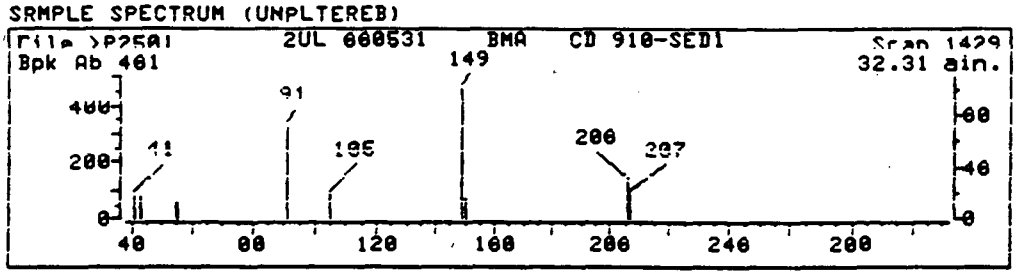
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



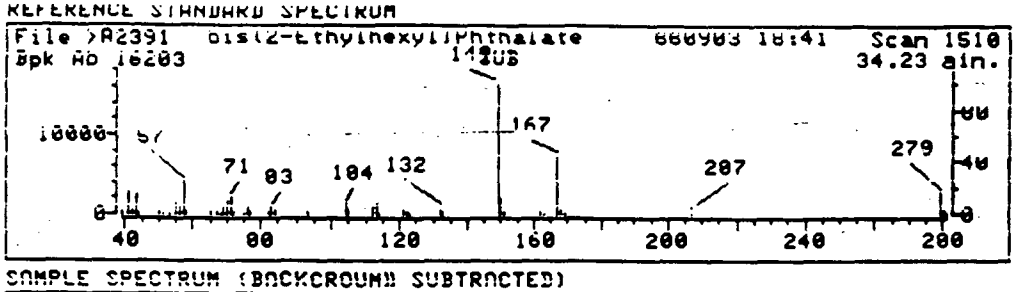
SAMPLE SPECTRUM (UNPLTERED)



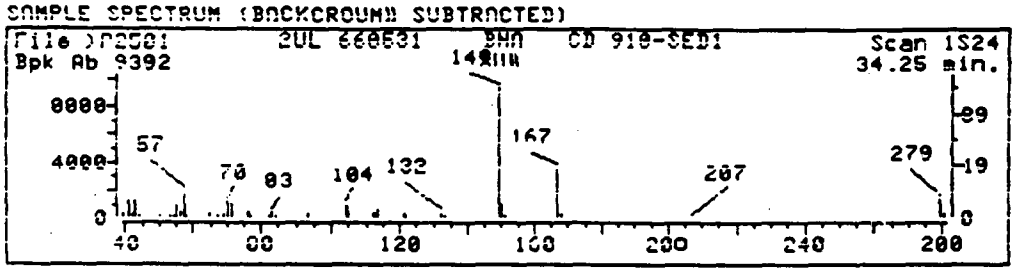
Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1 BTL#91
Quant Time: 861006 20:16
Injected at: 861006 19:31

Compound No: 58
Compound Name: Butylbenzylphthalate
Scan Number: 1429
Retention Time: 32.31 min.
Area: 1151
Concentration: .74 NG
q-value: 93

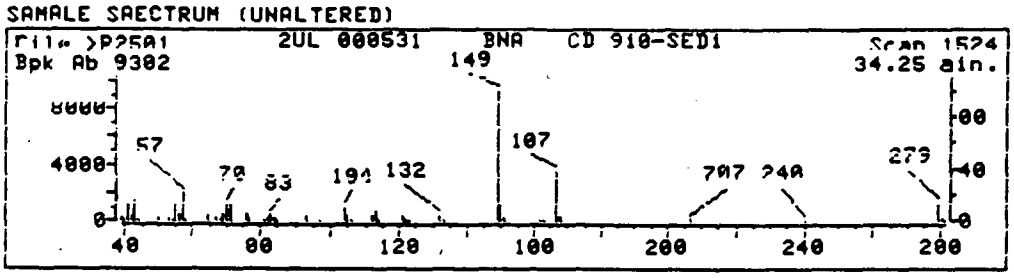
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

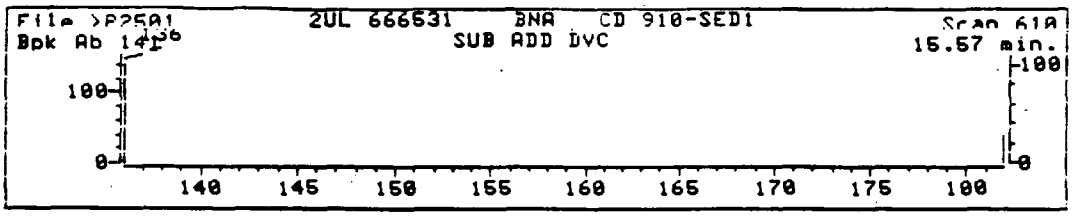


SAMPLE SPECTRUM (UNALTERED)



Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1 BTL#91
Quant Time: 861006 20:16
Injected at: 861006 19:31

Compound No: 61
Compound Name: bis(2-Ethylhexyl)Phthalate
Scan Number: 1524
Retention Time: 34.25 min.
Area: 25220
Concentration: 11.17 NG
q-value: 89



Sample file: >P2501 Spectrum #: 610

No data base entries were retrieved.

QUANTITATION FOR HSL COMPOUNDS AND TENTATIVELY IDENTIFIED COMPOUNDS

FOR SOIL/SEDIMENT SAMPLES

CD910SED1: Example quantitation HSL Compound

1,2,4-Trichlorobenzene: $\frac{(1256)(80)(10000)}{(169025)(.434)(2.0)(5.2456)\left(\frac{100-19}{100}\right)}$

$= 1590\ \mu g/kg$

$$\mu g/kg = \frac{(A_x)\ (I_s)\ (V_t)}{(A_{IS})\ (RF)\ (V_l)\ (W_s)\ (D)}$$

Example quantitation TIC

CD910SED1 Scan 610

$\frac{(54355)(80)(10000)}{(373407)(1.00)(2.0)(5.2456)\left(\frac{100}{1}\right.}$

$= 13400\ \mu g/kg$

A_x = EICP AREA OF CHARACTERISTIC ION (FROM TABLES 4–6) FOR ANALYTIC*

A_{IS} = AREA OF CHARACTERISTIC ION OF ASSIGNED IS.

I_S = NG OF IS

V_o = VOLUME OF H_2O EXTRACTED IN ML.

V_l = VOLUME OF EXTRACT INJECTED IN μL.

V_t = TOTAL VOLUME OF EXTRACT (2000 μL. WHEN NO DILUTIONS)

V_t = 1000 FOR LOW LEVEL (UNLESS GPC'd)

V_t = 2000 FOR MEDIUM LEVEL

$D = \frac{100 - \%\ MOISTURE}{100}$ (AFTER DECANTATION)

W_s = G. SAMPLE

*IF SECONDARY ION MUST BE USED BECAUSE OF INTERFERENCES A RF MUST BE GENERATED USING THE SECONDARY ION.

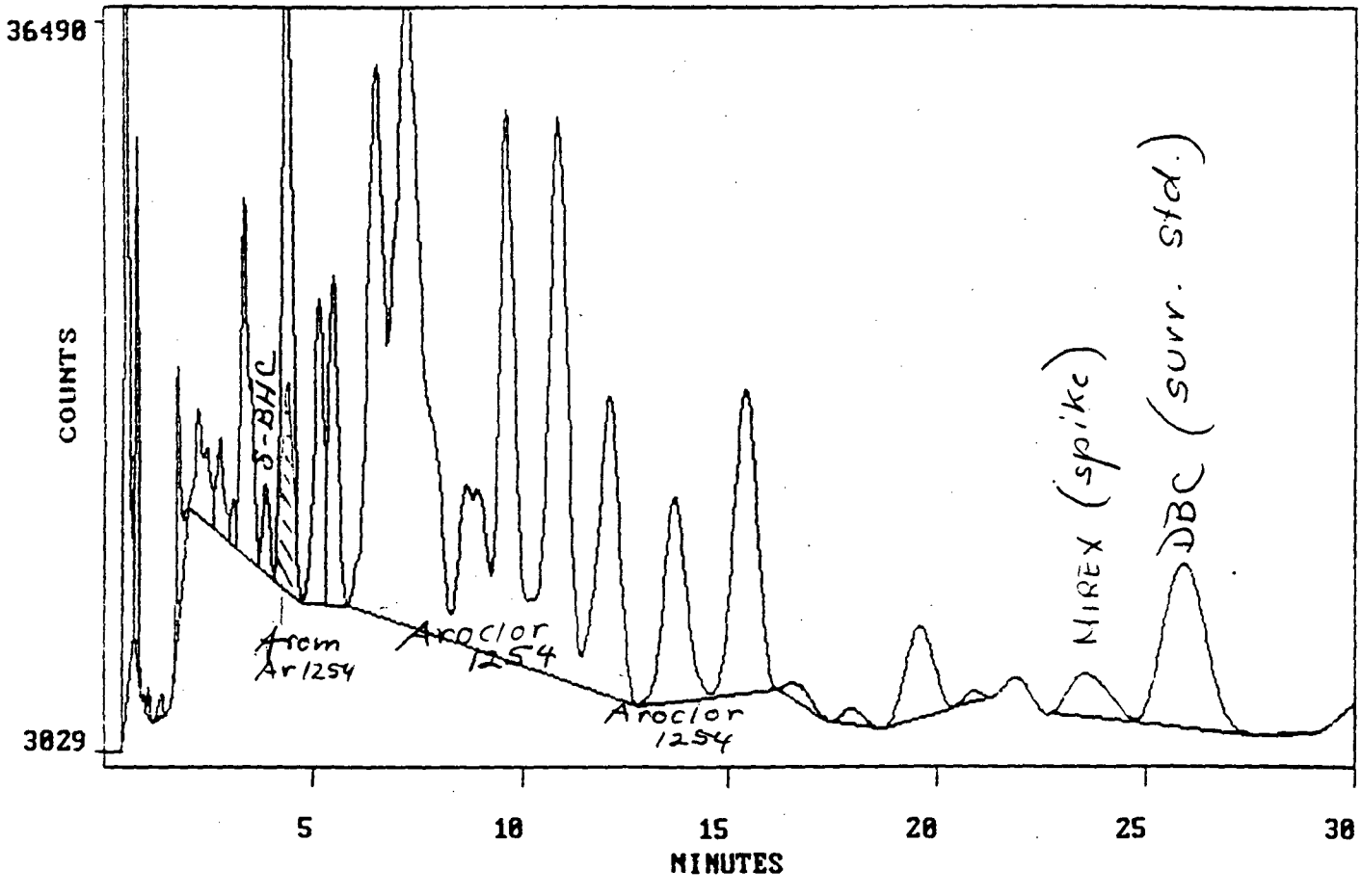
660532
CD910-SED!
PRIMARY COLUMN

Time:13:45:33 Date:MON 13 OCT 86

RECONSTRUCT SCREEM DUMP
Data Acquisition

Time:14:04:02 Date:TUE 07 OCT 86
Method:ARO1254C

FILE: PEST2262 SCALE: 25 RANGE (MIN.): 0.03 TO 30.00



Channel # . . . . REINT Time 13.44.48 Date MON 13 OCT 36

Sample name . .
Data file PEST2262
Method name ARO1254C

Author . . . . . LAL
Instrument . . . Tracor 550 - ECD
Column . . . . . 1.5% SF-2250/1.95% SF-2401 on 100/120
Notes . . . . . Reintegration of Aroclors

Run time . . . . 30.00 min. Delay time . . 0.00 min.
Acq. time . . . 14:04:02 Acq. date . . TUE 07 OCT 86
Start FW . . . . 20.00 sec. End FW . . . . 150.00 sec.
Actual FW . . 140.0
Slope sens . . . . 0.75 uv/sec.

Area reject 500
peaks found . . 22
Vol. Inj . . . . . 5.0 ul Sample amount . . 1.000
Conv. factor . . 1.000

==========

METHOD NOT CALIBRATED!

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AREA PERCENT REPORT

==========

Peak	R.T. (min)	R/S	Peak name	Area %	Area	Peak Ht.	EL
1	0.567			32.421	3715838	814819	EB
2	0.792			0.815	93374	23687	BB
3	1.100			0.044	5026	1340	BB
4	1.411			0.068	7805	1051	BB
5	1.790			0.860	98618	12028	BE
6	2.278		α-BHC	0.794	91020	4862	BV
7	2.792			0.467	53503	4385	VV
8	3.143			0.160	18391	2110	VV
9	3.380		unknown	1.990	228064	16180	VV
10	3.897		δ-BHC	0.403	46235	4060	VV
11	4.401		Aldrin	4.651	533023	35468	VB
12	5.135		AROCLOR 1254	1.902	217978	13684	BV
13	5.468			1.917	219757	14779	VB
14	7.201			37.777	4329658	30523	BE
15	15.421			7.772	890779	13630	BB
16	16.503			0.254	29092	714	FB
17	17.969			0.225	25751	748	BB
18	19.604			1.640	187969	4081	EB
19	20.905			0.114	13032	458	BB
20	23.610		MIREX	1.156	132471	1951	BV
21	26.010		DDC	4.556	522141	7332	VB
22	28.449			0.014	1653	55	BB

-10000 = 523000 = 668 pg/uL → 99%

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660532
CD910-SED1

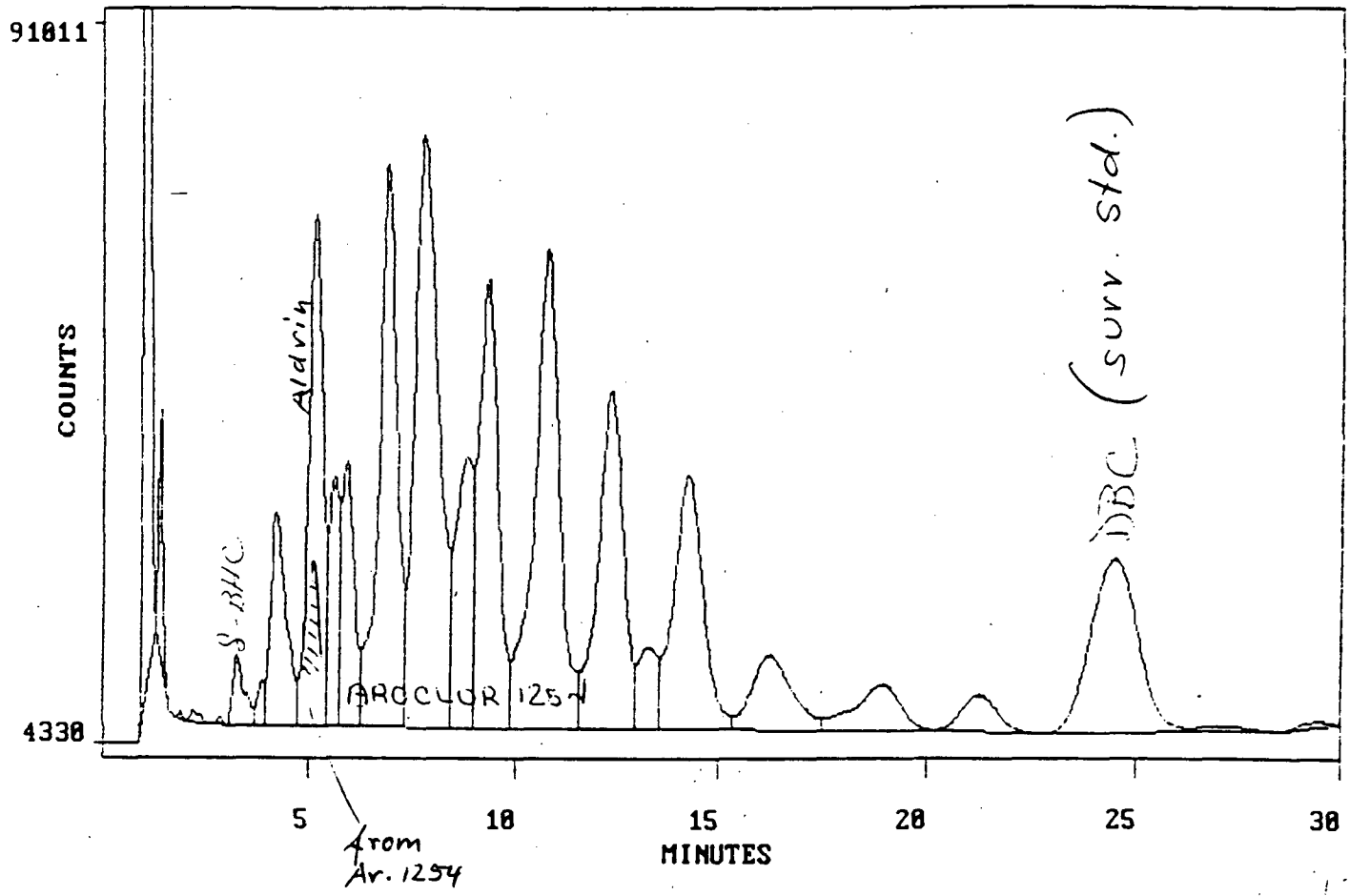
CONFIRMATORY COLUMN

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time: 19:52:16 Date: THU 09 OCT 86

Time: 16:58:06 Date: THU 09 OCT 86
Method: REST2

FILE: I:PEST2307 SCALE: 10 RANGE (MIN.): 0.03 TO 30.00



12

Channel # ....4 Time:17 28:43 Date:THU 09 OCT 86
Run #2 of 100

Sample name.....NJDEP
Data file.....DAT258:PEST2307
Method name.....PEST2

Author.....LAL
Instrument.....ECD
Column.....SE Y-2 @ 3% SP 2100 on 100/120 SUPELCOPORT
Notes.....~~Primary~~ Column Runs
CONFIRMATORY

Run time.....30.00 min. Delay time...0.00 min.
Acq. time.....16:58:06 Acq. date....THU 09 OCT 86
Start PW.....20.00 sec End PW.....150.00 sec.
Actual PW....140.0
Slope sens.....0.75 uv/sec

Area reject....500
peaks found..27
Vol Inj.....5.0 ul Sample amount..1.000
Conv. factor...1.000

METHOD NOT CALIBRATED!

AREA PERCENT REPORT

Peak	R.T.(min)	R/S	Peak name	Area %	Area	Peak Ht.	BL
1	1.135			35.447	11398500	864592	BB
2	1.423			0.660	212287	30703	BB
3	1.932			0.021	6764	1020	BB
4	2.259			0.058	18701	1323	BB
5	2.879			0.023	7405	851	BB
6	3.302		@ δ-BHC	0.512	164502	8547	BV
7	3.900			0.202	64860	5546	VV
8	4.229			2.127	683997	25962	VV
9	5.170			4.584	1474076	61903	VV
10	5.613			1.552	498973	30276	VV
11	5.900		Aldrin	2.024	650988	32150	VV
12	6.895			6.590	2119183	68308	VV
13	7.805			8.984	2888977	71488	VV
14	8.827			2.901	932919	32707	VV
15	9.349			5.618	1806695	54374	VV
16	10.799			7.708	2478678	57944	VV
17	12.348			5.501	1768995	40833	VV
18	13.267			1.032	331966	10052	VV

22	21.252	0.804	258685	4444	BB
23	24.485	5.333	1716455	20999	BE
24	27.124	0.137	44144	495	EB
25	29.570	0.107	34272	586	BB
TOTALS		100.000	32156526		

DBC

III. 2. Reporting Package
NJ DEP I.D. # SED-2

H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08518

Lab No. 660534
Type: Misc. - Tier I
Point: SED-2
Date Collected: 9/11/86
Date Received: 9/12/86
Collected By: CL 99

PRIORITY POLLUTANTS ANALYSIS - PURGEABLE ORGANICS

Scan No.	Cas Number	Compound	ug/kg
	74-87-3	Chloromethane	10U
	74-83-9	Bromomethane	10U
	75-01-4	Vinyl chloride	10U
	75-00-3	Chloroethane	10U
129	75-09-2	Methylene chloride	20
	75-69-4	Trichlorofluoromethane	10U
	75-35-4	1,1-dichloroethene	10U
	75-34-3	1,1-dichloroethane	10U
256	156-60-5	Cis/Trans-1,2-dichloroethene	3J
	67-66-3	Chloroform	10U
	107-06-2	1,2-dichloroethane	10U
325	71-55-6	1,1,1-Trichloroethane	32B
	56-23-5	Carbon tetrachloride	10U
	75-27-4	Bromodichloromethane	10U
	79-34-5	1,1,2,2-Tetrachloroethane	10U
	70-87-5	1,2-dichloropropane	10U
	10061-02-6	Trans-1,3-dichloropropene	10U
	79-01-6	Trichloroethene	10U
	124-48-1	Dibromochloromethane	10U
	79-00-5	1,1,2-trichloroethane	10U
	71-43-2	Benzene	10U
	10061-01-5	cis-1,3-Dichloropropene	10U
	110-75-8	2-chloroethylvinyl ether	10U
	75-25-2	Bromoform	10U
	127-10-4	Tetrachloroethene	10U
	106-88-3	Toluene	10U
	106-90-7	Chlorobenzene	10U
	100-41-4	Ethylbenzene	10U
	541-73-1	1,2-Dichlorobenzene	10U
	95-50-1	1,3-Dichlorobenzene	10U
	106-46-1	1,4-Dichlorobenzene	10U

Date Reported: 10/15/86

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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample #: SED-2

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob. FIT	% Prob. RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Unknown (Carbon Dioxide)	-		13	130B
2.	123-77-3	Diazenedicarboxamide	94	89	44	92
3.		Unknown	-		87	27
4.	67-64-1	2-Propanone	92	92	152	35
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H2M

HOLZMACHER, McLENDON and MURRELL, P.C. • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

Lab Name: H2M Labs
Sample Lab No. 660535 - SED-2
Concentration: Low

Date Extracted: 9/24/86
Date Analyzed: 10/6/86
Dil. Factor: 1:2

Semi-Volatile Compounds

C.A.S. Number		ug/kg	C.A.S. Number		ug/kg
65-75-9	N-Nitrosodimethylamine	20000U	83-32-9	Acenaphthene	20000U
108-95-2	Phenol	20000U	51-28-5	2,4-Dinitrophenol	20000U
62-53-3	Aniline	20000U	100-02-7	4-Nitrophenol	20000U
111-44-4	bis(2-Chloroethyl)Ether	20000U	121-14-2	2,4-Dinitrotoluene	20000U
95-57-8	2-Chlorophenol	20000U	606-20-2	2,6-Dinitrotoluene	20000U
541-73-1	1,3-Dichlorobenzene	20000U	84-66-2	Diethylphthalate	20000U
106-46-7	1,4-Dichlorobenzene	20000U	7005-72-3	4-Chlorophenyl-phenylether	20000U
95-50-1	1,2-Dichlorobenzene	20000U	86-73-7	Fluorene	20000U
39638329	bis(2-chloroisopropyl)ether	20000U	534-52-1	4,6-Dinitro-2-MethyIphenol	20000U
621-64-7	N-Nitroso-Di-n-Propylamine	20000U	86-30-6	N-Nitrososdiphenylamine (1)	20000U
67-72-1	Hexachloroethane	20000U	101-55-3	4-Bromophenyl-phenylether	20000U
98-95-3	Nitrobenzene	20000U	118-74-1	Hexachlorobenzene	20000U
78-59-1	Isophorone	20000U	87-86-5	Pentachlorophenol	20000U
88-75-5	2-Nitrophenol	20000U	85-01-8	Phenanthrene	20000U
105-67-9	2,4-Dimethylphenol	20000U	120-12-7	Anthracene	20000U
111-91-1	bis(2-Chloroethoxy)Methane	20000U	84-74-2	Di-n-Butylphthalate	20000U
120-83-2	2,4-Dichlorophenol	20000U	206-44-0	Fluoranthene	20000U
120-82-1	1,2,4-Trichlorobenzene*	3100J	92-87-5	Benzidine	60000U
91-20-3	Naphthalene	20000U	129-00-0	Pyrene	20000U
87-68-3	Hexachlorobutadiene	20000U	85-68-7	Butylbenzylphthalate	20000U
59-50-7	4-Chloro-3-Methylphenol	20000U	91-94-1	3,3'-Dichlorobenzidine	20000U
77-47-4	Hexachlorocyclopentadiene	20000U	56-55-3	Benzo(a)Anthracene	20000U
88-06-2	2,4,6-Trichlorophenol	20000U	117-81-7	bis(2-Ethylhexyl)Phthalate	18700
91-58-7	2-Chloronaphthalene	20000U	218-01-9	Chrysene	20000U
131-11-3	Dimethyl Phthalate	20000U	117-84-0	Di-n-Octyl Phthalate	20000U
208-96-8	Acenaphthylene	20000U	205-99-2	Benzo(b)Fluoranthene	20000U
			207-08-9	Benzo(k)Fluoranthene	20000U
			50-32-8	Benzo(a)Pyrene	20000U
			193-39-5	Indeno(1,2,3-cd)Pyrene	20000U
			53-70-3	Dibenzo(a,h)Anthracene	20000U
			191-24-2	Benzo(g,h,i)Perylene	20000U

* Scan No. 608

(1) Cannot be separated from diphenylamine

Date Reported: 10/16/86

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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample #: SED-2

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

C.A.S. Number	Compound Name	% Prob. FIT|RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No compounds found > 10%			
2.	internal standards			
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H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Sample Lab No. 660536
Date Extracted: 9/18/86
Date Analyzed: 10/7/86
Type: Mc. - Tier I
Point: SED-2
Collected By: CL 99

ANALYSIS POR PESTICIDES/PCB's

C.A.S. No.	Compound	ug/kg
319-84-6	Alpha-BHC	240
319-87-7	Beta-BHC	70
319-86-8	Delta-BHC	8U
58-89-9	Gamma-BHC (Lindane)	8U
76-44-8	Heptachlor	60U
309-00-2	Aldrin	300U
1024-57-3	Heptachlor Epoxide	7000U
959-98-8	Endosulfan I	1500U
68-57-1	Dieldrin	7000U
72-55-9	4,4'-DDE	1500U
72-20-8	Endrin	1500U
33213-65-9	Endosulfan II	1500U
72-54-8	4,4'-DDD	1500U
1031-07-8	Endosulfan Sulfate	1500U
50-29-3	4,4'-DDT	7000U
72-43-5	Methoxychlor	S0U
53494-70-5	Endrin Ketone	16U
57-74-9	Chlordane	1500U
8001-35-2	Toxaphene	1500U
12674-11-2	Aroclor 1016	200U
11104-28-2	Aroclor 1221	200U
11141-16-5	Aroclor 1232	200U
53469-21-9	Aroclor 1242	200U
12672-29-6	Aroclor 1248	200U
11097-69-1	Aroclor 1254	140000
11096-82-5	Aroclor 1260	7000U

Vi = Volume of extract injected (uL)
Ws = Weight of sanple extracted (g)
Vs = Ws = 7.77 g Vt = 10 mL
Date Reported: 10/17/86

Vs = Volume of water extracted (mL)
Vt = Volume of Total extract (mL)
Vi = 5 uL

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****
S.C. McLendon, P.E.
Laboratory Director

Lab Name : H2M LABS

ORGANICS ANALYSIS DATA SHEET

Sample Number
660536

NJDEP #CD910-SED2
Run 2265

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Confidence	RT or Scan Number	Dry Wt. Estimated Concentration (ug/L or ug/kg)
1.		Unknown		1.41	100
2.		Unknown		3.38	590
3.		Unknown		4.32	2900
4.		Unknown		16.45	580
5.		Unknown		17.81	390
6.		Unknown		19.38	3200
7.		Unknown		21.69	2700
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Date Reported: 10-16-86

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S.C. McLendon, P.E.
Laboratory Director

H2M
Environmental Engineers & Scientists
HOLZMACHER, McLENDON and MURRELL, P.C.
575 BROAD HOLLOW ROAD, MELVILLE, NEW YORK 11747 (516) 694-3040

WATER RESOURCES • WATER SUPPLY & TREATMENT • SEWERAGE & TREATMENT • ECOLOGICAL & IMPACT STUDIES
MODEL STUDIES • PILOT PLANT STUDIES • WATER/WASTE WATER LABORATORY AND ANALYTICAL SERVICES

LABORATORY REPORT

LAB NO. 660537
PROJECT NO. 2C

CLIENT'S NAME AND ADDRESS

NEW JERSEY U.E.P.
65 PROSPECT ST.
TRENTON, NEW JERSEY 08618

TYPE OF SAMPLE - MISCELLANEOUS
COLLECTED BY CL 99
DATE COLLECTED - 9/11/86
DATE RECEIVED - 9/12/86

NJDEP SAMPLE #CD 910-SED2
NJDEP SAMPLE POINT I.D. #SED2
SEDIMENT SAMPLE

PARAMETER	RESULT	PARAMETER	RESULT
ANTIMONY	<17.2 N	SELENIUM	<1.40 N
ARSENIC	13.2	SILVER	2.00 N
BERYLLIUM	2.30	THALLIUM	<2.90 N
CADMIUM	8.60	ZINC	195. N
CHROMIUM	25.2	PHENOLS	<0.07
COPPER	75.5	CYANIDE	<7.10
LEAD	257.	TOTAL SOLIDS	70.0 %
MERCURY	<0.10 N		
NICKEL	37.8		

ALL RESULTS REPORTED IN mg/kg DRY WEIGHT

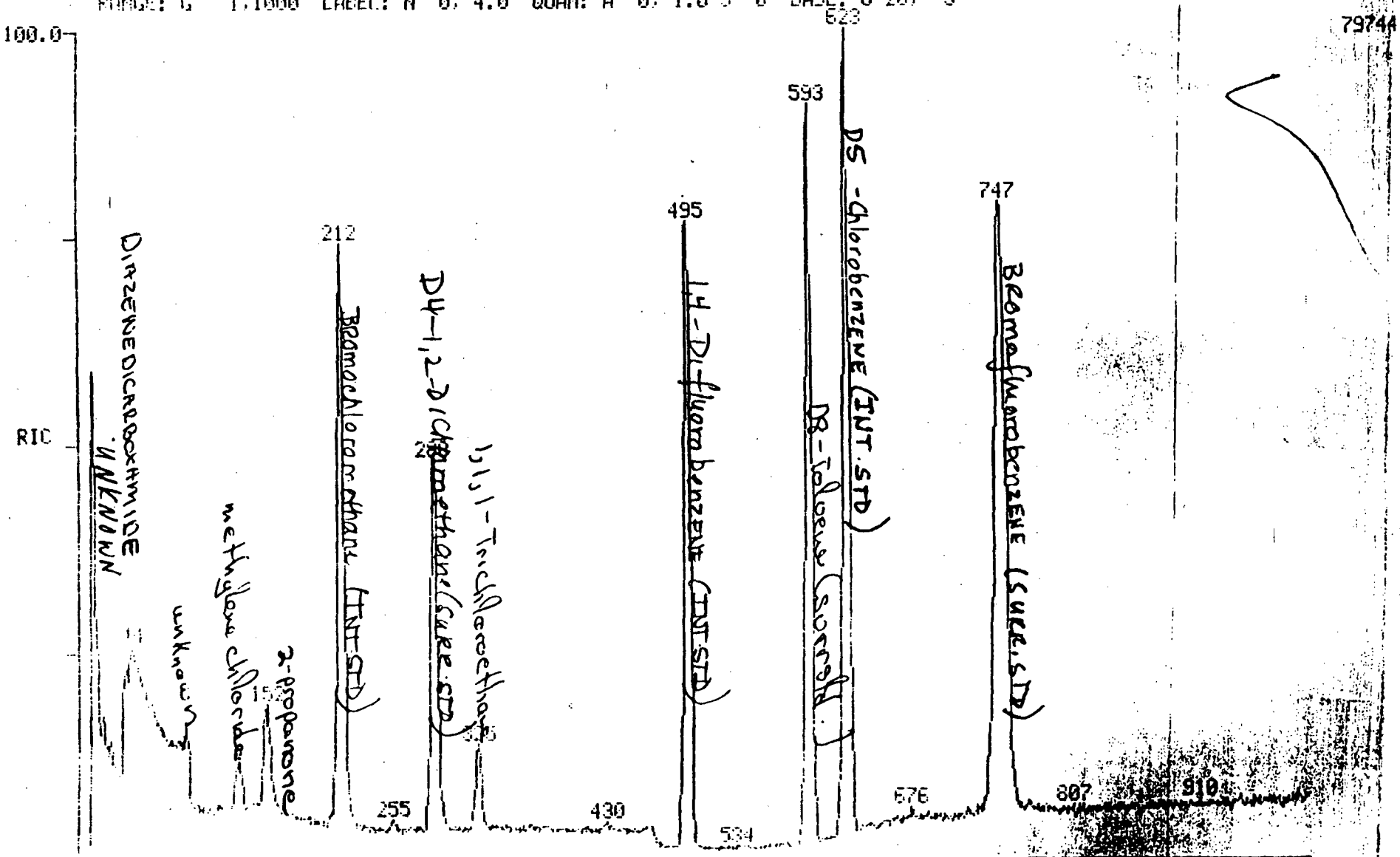
ALL RESULTS IN (MG/L) EXCEPT AS NOTED BY # (UG/L) OR % (PERCENT) AND
T.COLI BACT. & FECAL COLI (MPN/100ML)
COLOR, ODOR, TURBIDITY & PH (UNITS)
APC & FECAL STREP (COUNTS/ML)
SPEC.COND. (UMHOS) SETT.SOLIDS(ML/L)

DATE REPORTED 10/ 8/86

S.C. McLENDON, P.E., LABORATORY DIRECTOR

1376

DATA: FU6431 #1 SCANS 1 TO 1000
CALI: FU6431 #2
CONDS.:
RANGE: G 1.1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



FINISHED 8 FOUND ON/OF 8 08/27/8 AT 08:50 4

QUANTITATION REPORT FILE: PU6431

DATA: PU6431.TI
09/26/86 17:27:00
SAMPLE 1.33910 660534
CONDS.
SUBMITTED BY: NJDEP ANALYST: CC

AMOUNT=AREA * REF AMOUNT/(REF AREA * RESP FACT)
RESP. FAC. FROM LIBRARY ENTRY

No	NAME
1	BROMOCHRLOROMETHANE (INT. STD.)
2	1,2-DICHLOROETHANE D4 (SURR. STD)
3	CHLOROMETHANE
4	BROMOMETHANE
5	VINYL CHLORIDE
6	CHLOROETHANE
7	METHYLENE CHLORIDE (C)
8	ACETONE
9	CARBOM DISULPHIDE
10	1,1-DICHLOROETHENE (B)
11	1,1-DICHLOROETHANE(E)
12	TRANS -1,2-DICHLOROETHENE (D)
13	CHLOROFORM
14	1,2-DICHLOROETHANE(H)
15	TRICHLOROFLUOROMETHANE
16	DICHLOROFLUOROMETHANE
17	ACROLEIN
18	ACRYLONITRILE
19	1,2-DIFLUOROBENZENE(INT. STD)
20	2-BUTANONE (MEK)
21	1,1,1-TRICHLOROETHANE (I)
22	CARBON TETRA CHLORIDE
23	BROMODICHLOROMETHANE(L)
24	1,2-DICHLOROPROPANE(X)
25	TRANS-1,3-DICHLOROPROPENE (AA)
26	TRICHLOROETHENE(K)
27	DIBROMOCHLOROMETHANE(O)
28	1,1,2-TRICHLOROETANE(M)
29	BENZENE(BEN)
20	CIS-1,2-DICHLOROPROPENE(Z)
31	2-CHLOROETHYLVINYLETHER(NN)
32	BROMOFORM(R)
23	CHLOROBENZENE-D5 (INT. STD)
34	2-HEXANONE(MEK)
35	4-METHYL-2-PENTANONE(MIBK)
36	TETRACHLOROETHENE(N)
37	ETHANE, 1,1,2,2-TETRACHLORO-
38	TOLUENE(TOL)
39	CHLOROBENZENE(Q)
40	ETHYLBENZENE(EB)
41	STYRENE
42	META-XYLENE
43	ORTHO/PARA-XYLENE
44	META-DICHLOROBENZENE(MDCE)
45	ORTHO-DICHLOROBENZENE(ODCE)
46	PARA-DICHLOROBENZENE(PDCE)
47	D8-TOLUENE(SURR. STD)
48	BROMOFLUORBENZENE(SURR. STD)

13

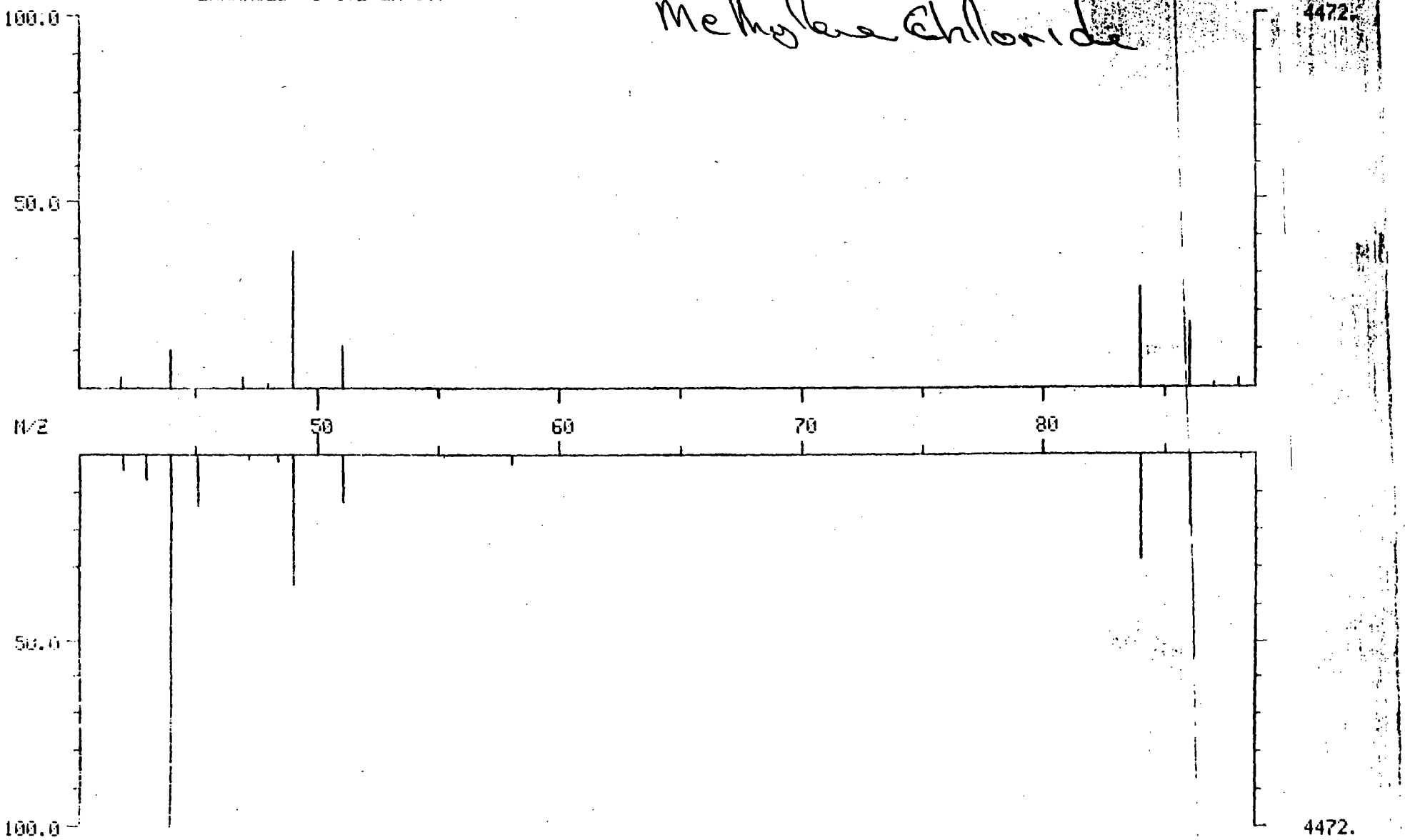
3	NOT	FOUND								
4	NOT	FOUND								
5	NOT	FOUND								
6	NOT	FOUND								
7	84	129	6:27	1	0.608	A BB	6990.	27.304	NG	[illegible]
8	43	152	7:36	1	0.717	A BB	52849.	551.313	NG	[illegible]
9	NOT	FOUND								
10	76	205	10:15	1	0.967	A BB	391.	2.302	NG	[illegible]
11	NOT	FOUND								
12	96	256	12:48	1	1.208	A BB	1053.	5.075	NG	[illegible]
13	NOT	FOUND								
14	NOT	FOUND								
15	NOT	FOUND								
16	NOT	FOUND								
17	NOT	FOUND								
18	NOT	FOUND								
19	114	495	24:45	19	1.000	A BB	169268.	250.000	NG	12.85
20	43	296	14:48	19	0.598	A BB	5257.	33.475	NG	1.72
21	97	325	16:15	19	0.657	A BB	12836.	43.382	NG	2.23
22	NOT	FOUND								
23	NOT	FOUND								
24	NOT	FOUND								
25	NOT	FOUND								
26	130	412	20:36	19	0.832	A BB	222.	0.721	NG	0.04
27	NOT	FOUND								
28	NOT	FOUND								
29	78	429	21:27	19	0.867	A BB	1752.	1.577	NG	0.08
30	NOT	FOUND								
31	NOT	FOUND								
32	NOT	FOUND								
33	117	623	31:09	33	1.000	A BB	144000.	250.000	NG	12.85
34	NOT	FOUND								
35	43	552	27:36	33	0.886	A*BB	417.	15.940	NG	0.82
36	NOT	FOUND								
37	NOT	FOUND								
38	93	596	29:48	33	0.957	A BB	399.	0.696	NG	0.04
39	NOT	FOUND								
40	NOT	FOUND								
41	NOT	FOUND								
42	NOT	FOUND								
43	NOT	FOUND								
44	NOT	FOUND								
45	NOT	FOUND								
46	NOT	FOUND								
47	109	593	29:39	33	0.952	A BB	102728.	276.328	NG	14.20
48	45	747	37:21	33	1.199	A BB	120290.	220.978	NG	11.36

DUAL MASS SPECTRUM
09/26/86 17:27:00 + 6:27
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (5 15B 2M 0T)

DATA: FU6431 #123
CAL I: FU6431 #2

BASE M/Z: 49/ 44
RIC: 4991./ 10063.

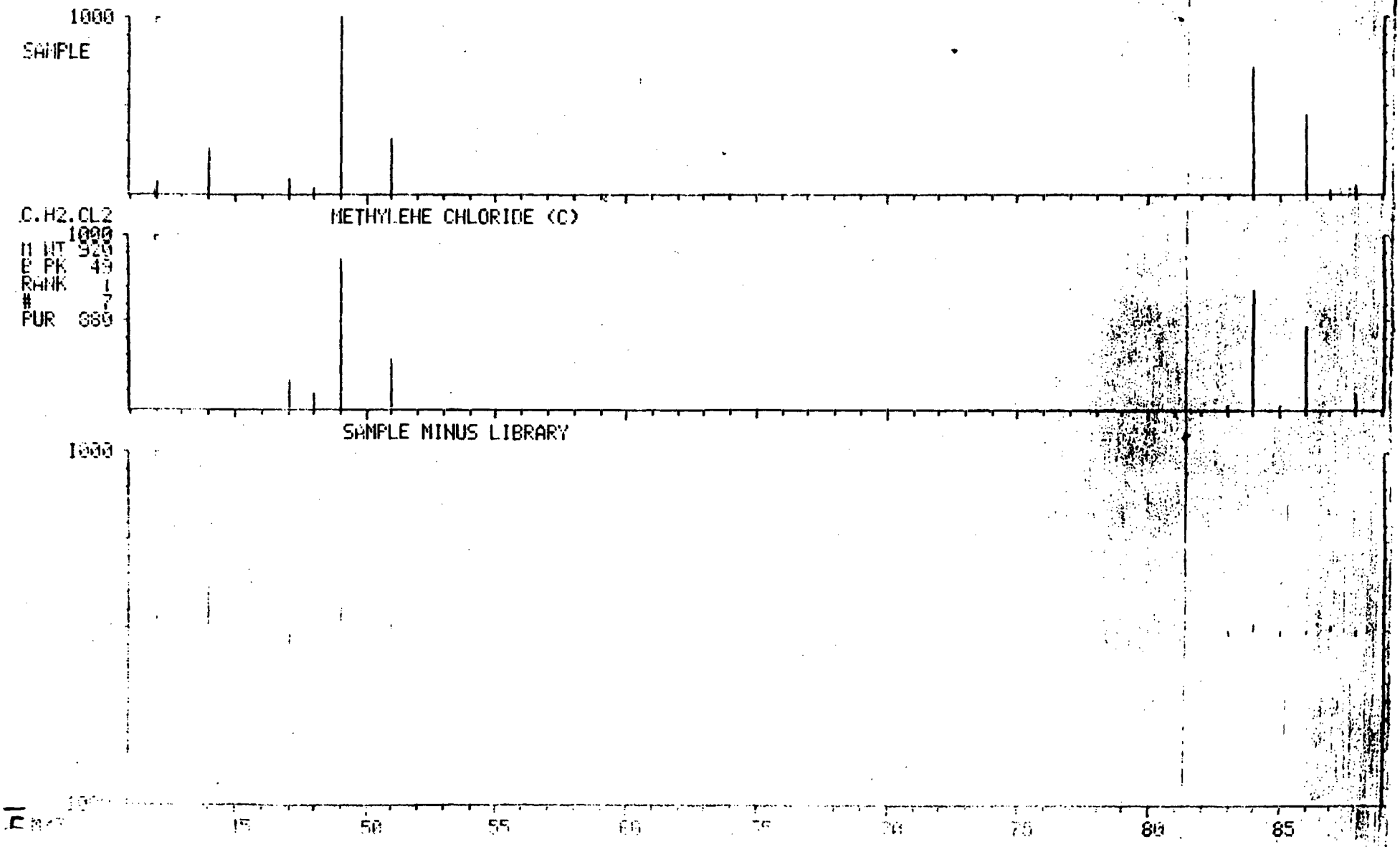
Methylene Chloride



LIBRARY SEARCH
09/20/85 17:27:00 + 6:27
SAMPLE: 1.33810 660534
COMDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 # 129
CAL: PU6431 # 2

BASE M/Z: 49
RIC: 4991.

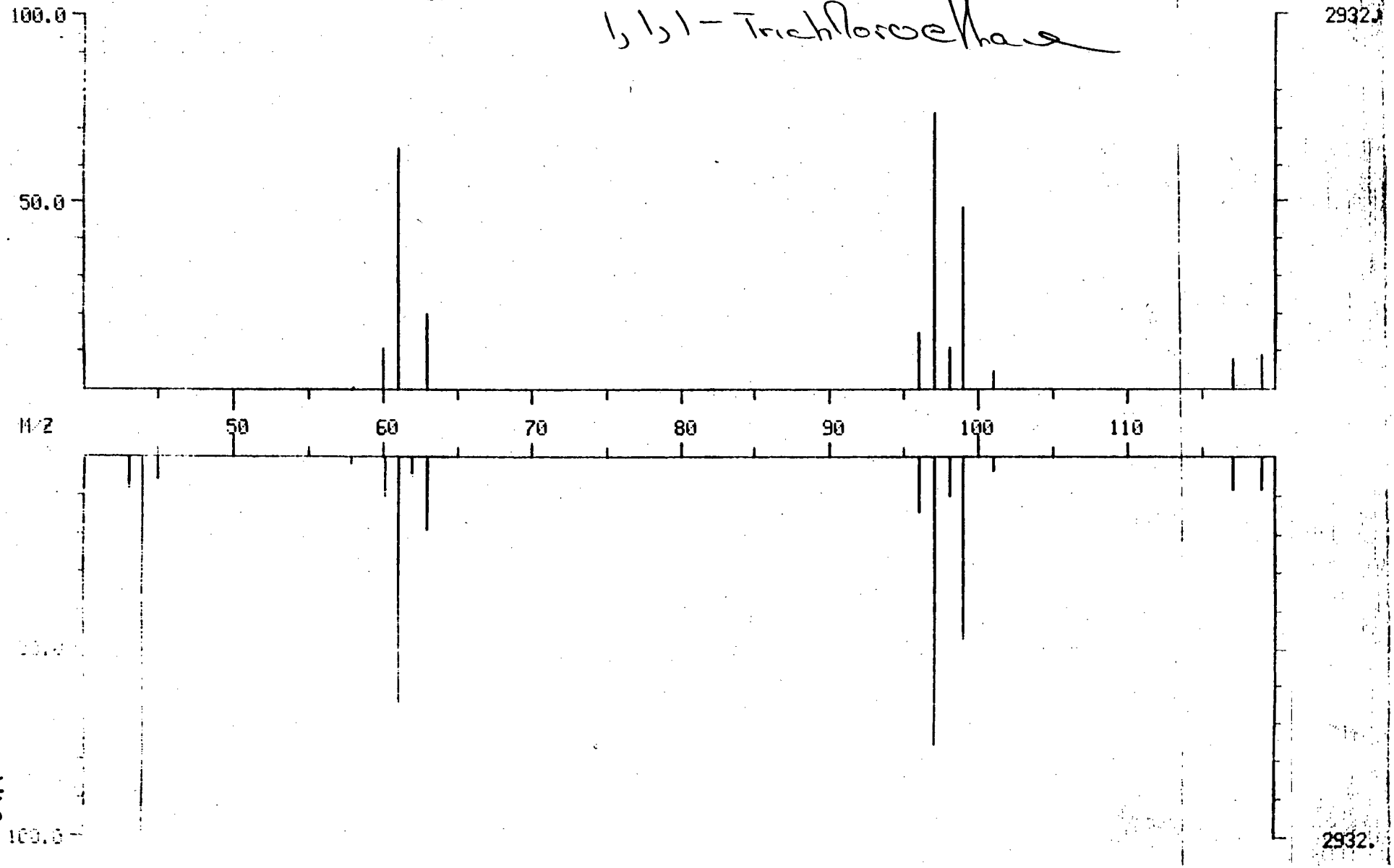


DUAL MASS SPECTRUM
03/26/86 17:27:00 + 16:15
SAMPLE: 1.3391G E60534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #325
CALI: PU6431 #2

BASE M/Z: 97/ 44
RIC: 7807./ 11183.

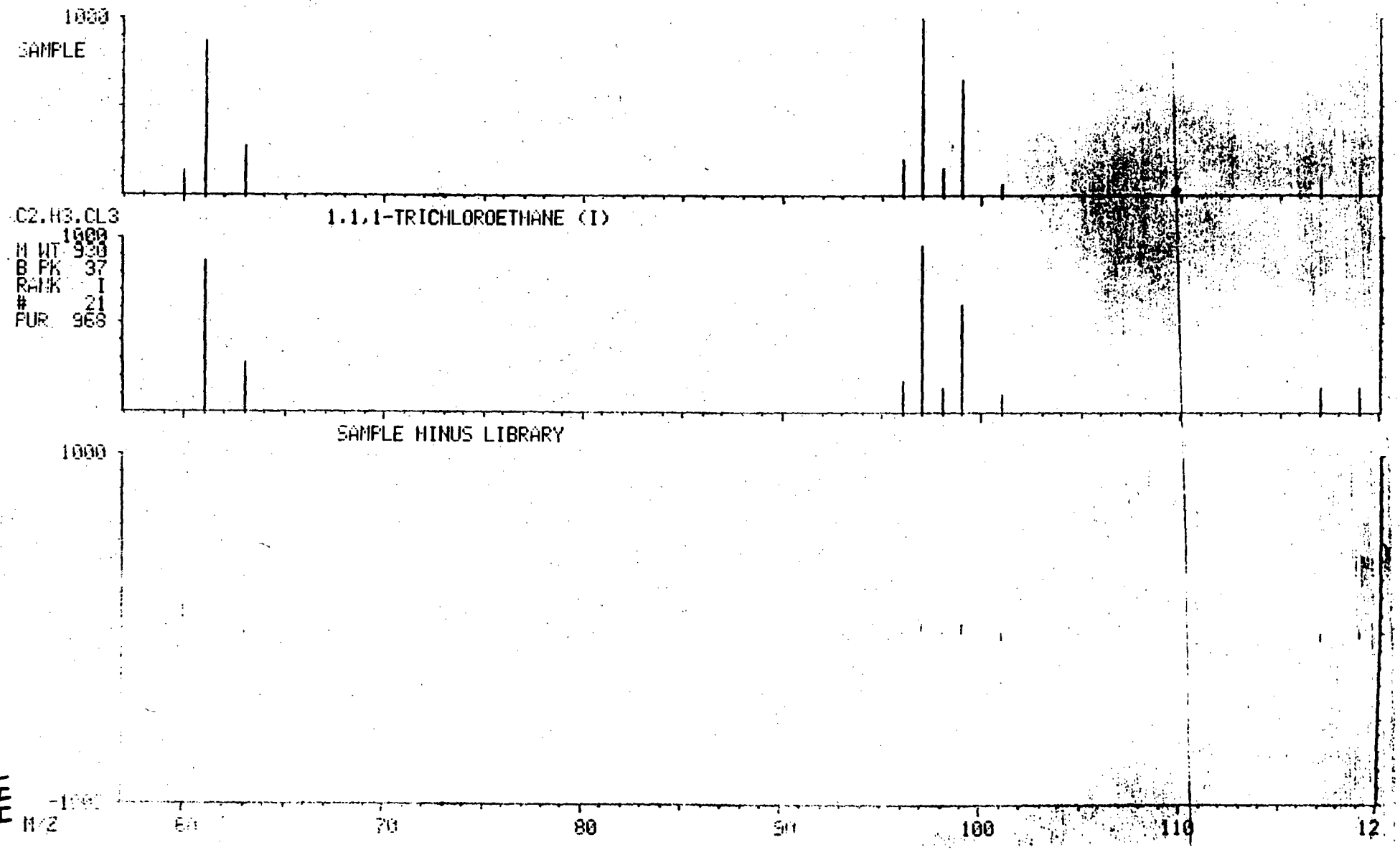
1,1,1-Trichloroethane



LIBRARY SEARCH
03/26/86 17:27:00 + 16:15
SAMPLE: 1.3391G 060534
COMDS.:
ENHANCED (S 15B 2H OT)

DATA: PU6431 # 325
CALI: PU6431 # 2

BASE M/Z: 97
RIC: 7807.



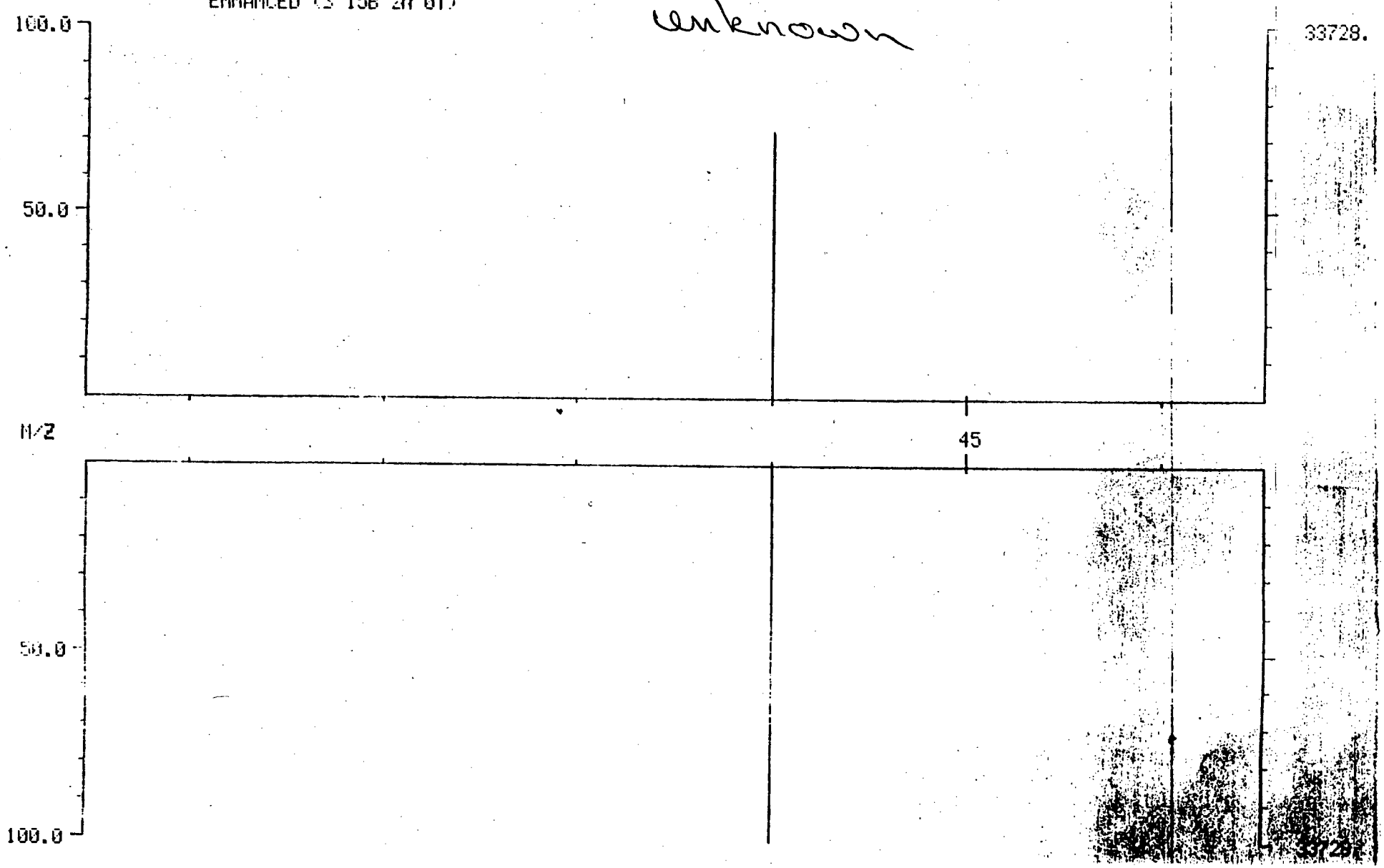
144

DUAL MASS SPECTRUM
09/26/86 17:27:00 + 0:36
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #12
CAL1: PU6431 #2

BASE M/Z: 44/ 44
PIC: 24703./ 34111.

unknown

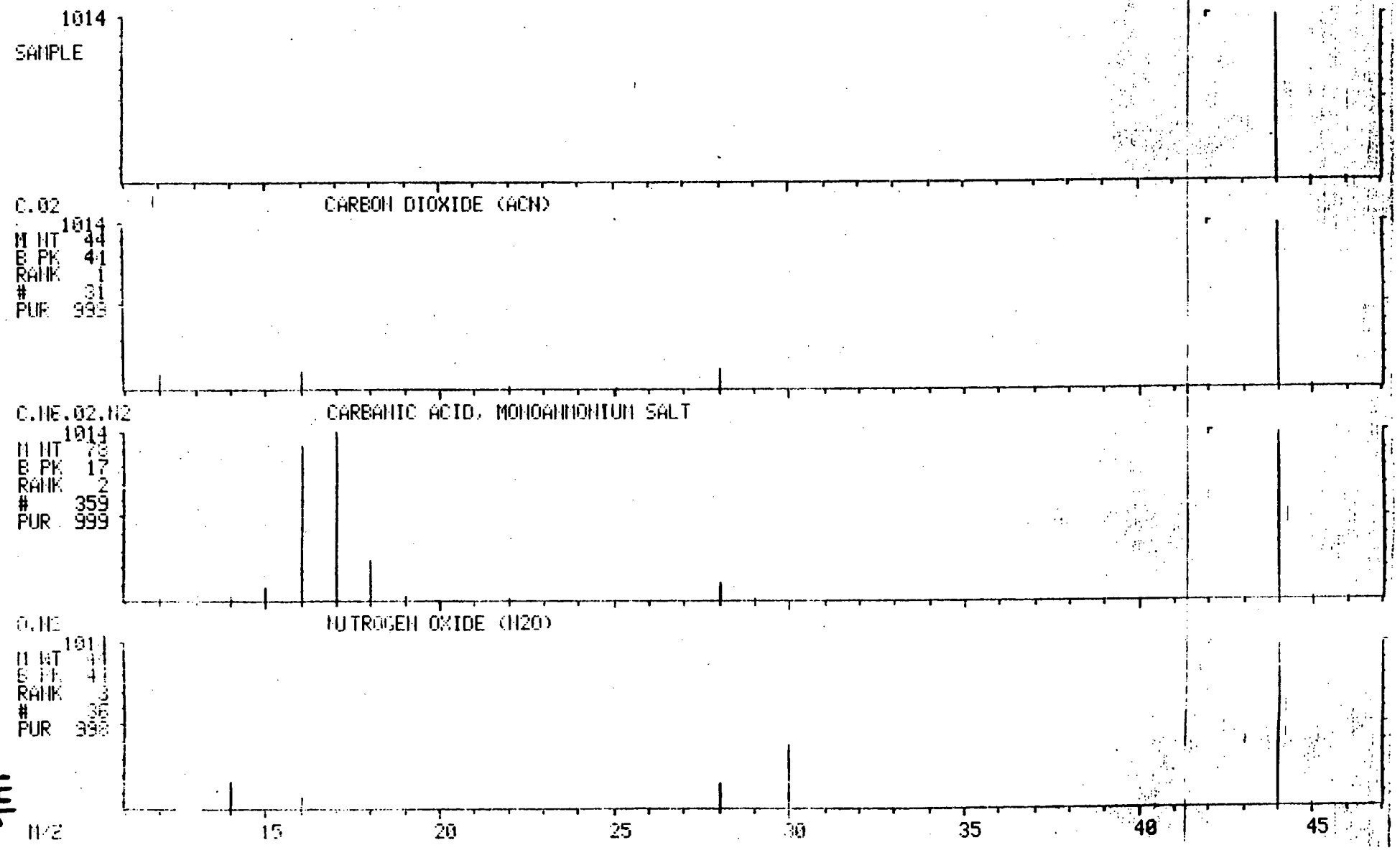


145 +

LIBRARY SEARCH
09/26/86 17:27:00 + 0:36
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6431 # 12
CALI: PU6431 # 2

BASE M/Z: 44
RIC: 24735.



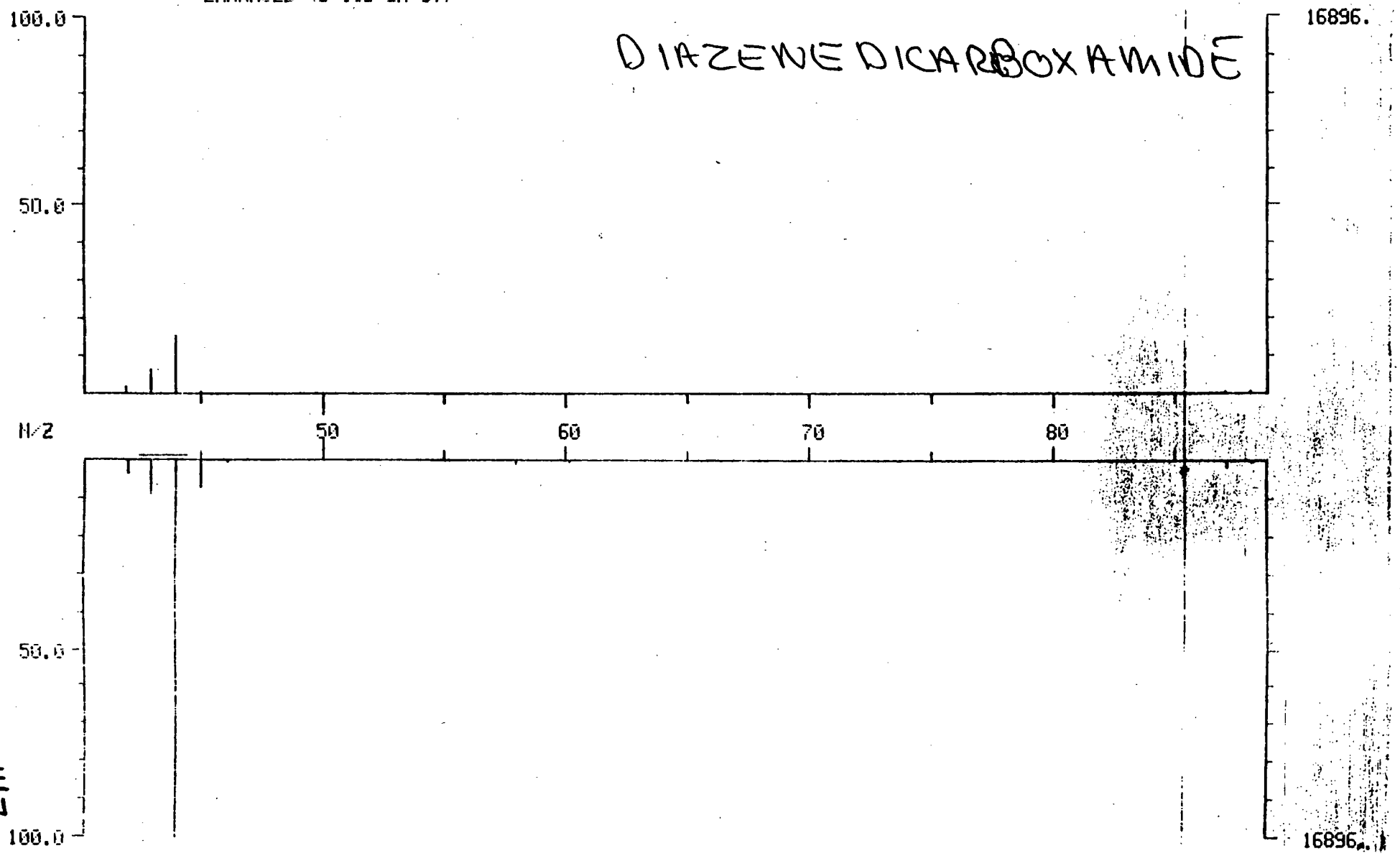
146

DUAL MASS SPECTRUM
09/26/86 17:27:00 + 2:12
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 156 2N 0T)

DATA: PU6431 #44
CALI: PU6431 #2

BASE M/Z: 44/ 44
RIC: 4303./ 20335.

DIAZENEDICARBOXAMIDE



147

LIBRARY SEARCH
03 [illegible] 1[illegible]:[illegible] + 2:1[illegible]
SAMPLE: 1.3301[illegible] 660534
CONDS.:
ENHANCED (S 158 2N 0T)

DATA: PU6431 # 44
CALI: PU6431 # 2

BASE M/Z: 44
RIC: 4303.

SAMPLE

C2.N4.O2.N4 DIAZENEDICARBOXAMIDE
M NT 116
B PK 44
RANK 1
2621
PUP 852

C3.N4.O4.N2 ACETIC ACID, [(AMINOCARBONYL)AMINO]OXO-
M NT 132
B PK 44
RANK 2
4555
PUP 721

C5.H13.N 1-BUTYLAMINE, N-METHYL-
M NT [illegible]
B PK 44
RANK [illegible]
[illegible]
PUP [illegible]

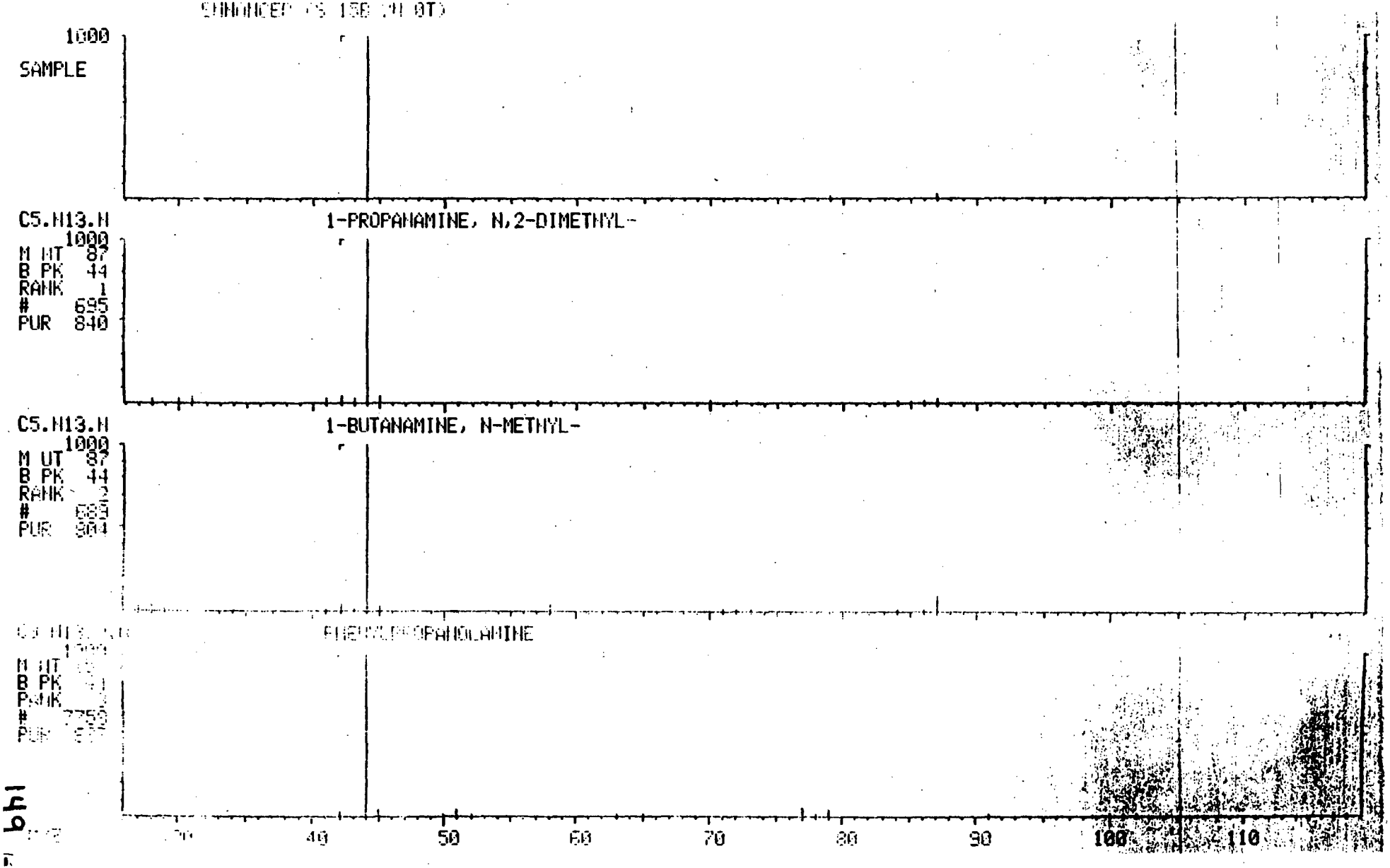
M/Z 20 30 40 50 60 70 80 90 100

(48)

LIBRARY SEARCH
[illegible] 17:17:08 [illegible] 4:21
SAMPLE: [illegible] 0M0534
COMM.:
SHIMADZU CS 158 [illegible] 0TD

DATA: PU6431 # 57
CALI: PU6431 # 2

BASE M/Z: 44
RIC: [illegible]

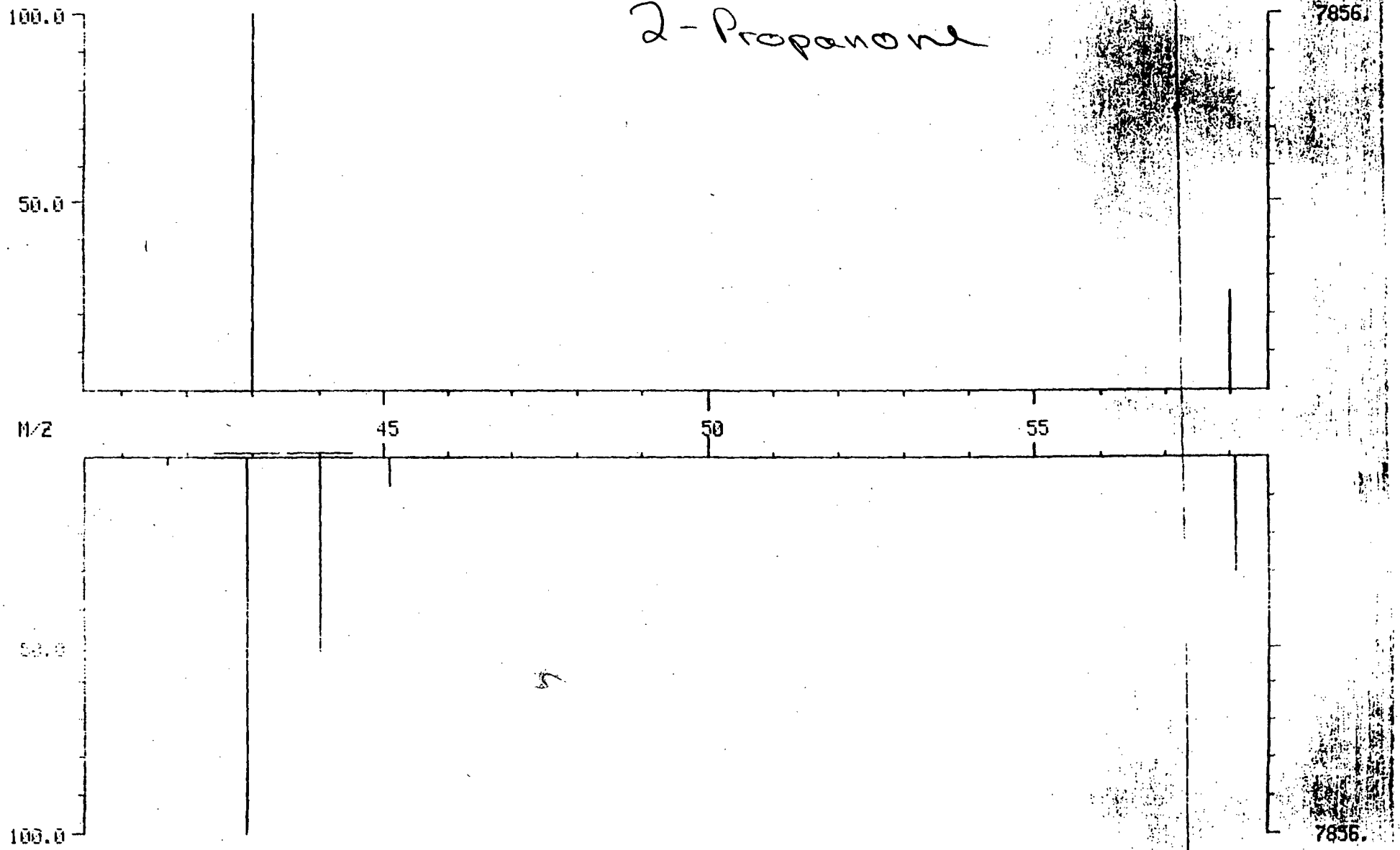


DUAL MASS SPECTRUM
03/26/95 17:27:00 + 7:06
SAMPLE: 1.3391G 560534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #152
C-LI: PU6431 #2

BASE M/Z: 43/ 43
RIC: 9919./ 15007.

2-Propanone

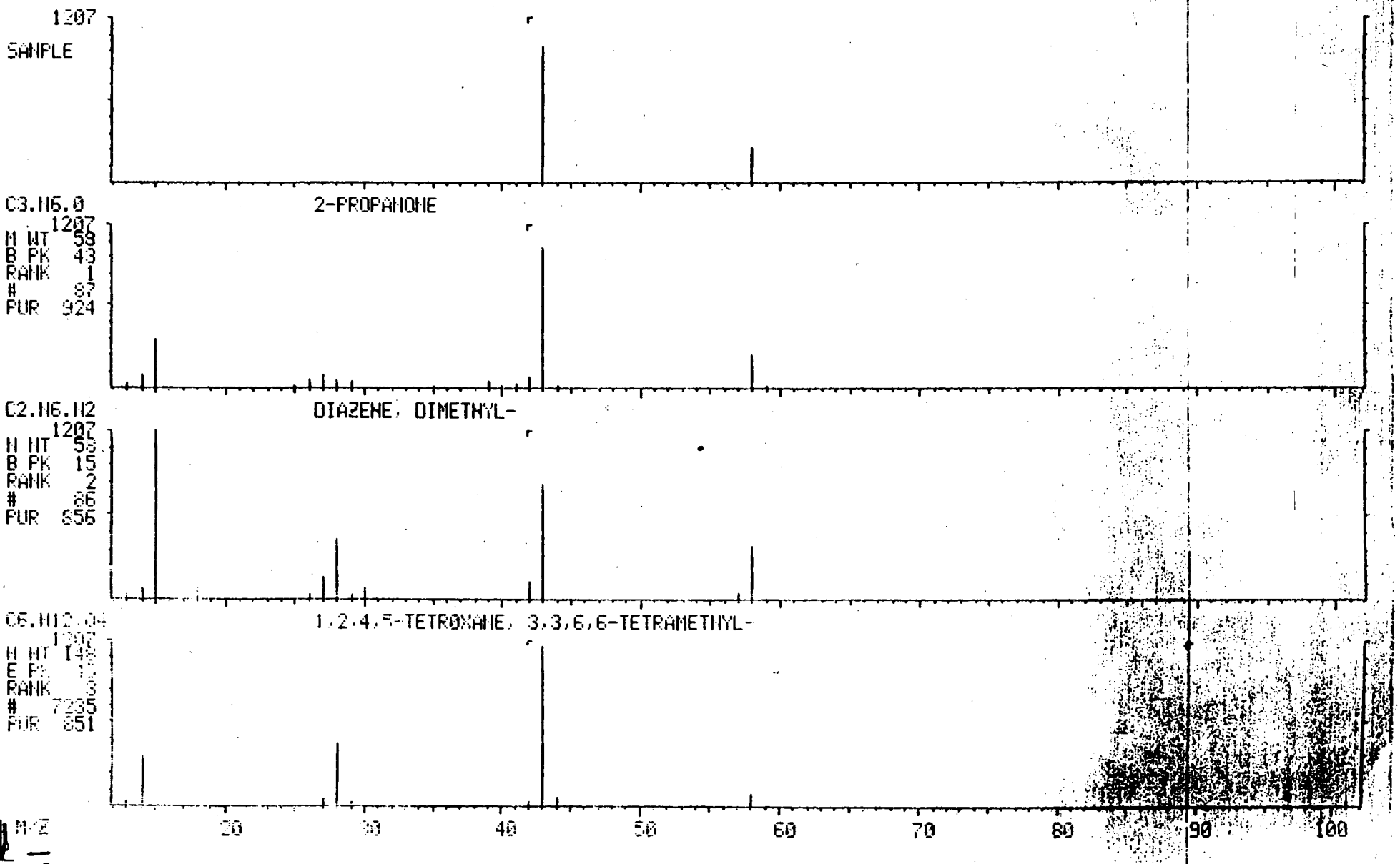


151

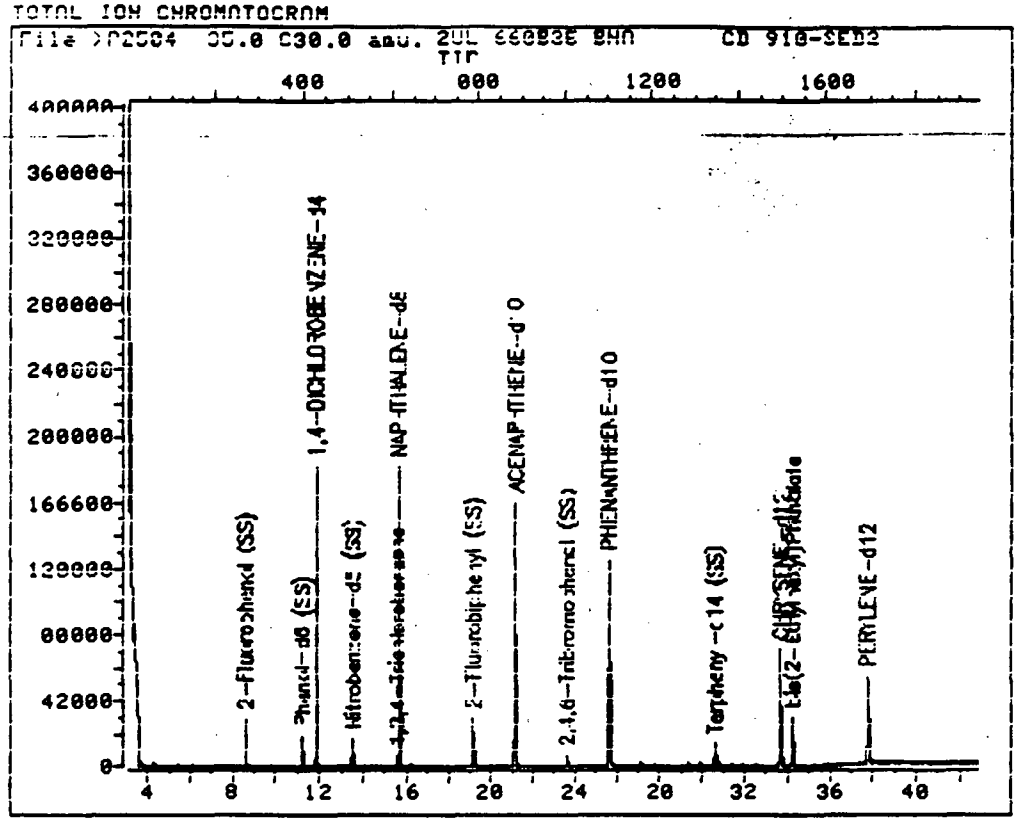
LIBRARY SEARCH
03/2E/86 17:27:00 + 7:36
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6431 # 152
CALI: PU6431 # 2

BASE M/Z: 43
RIC: 8919.



TOTAL ION CHROMATOGRAM



Data File: >P2504::D3
Name: 2UL 660535 BNA
Misc: CD 910-SED2

BTL#94

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861006 22:51
Injected at: 861006 22:06

QUANT REPORT

Operator ID: STEUE
Output File: ^P2504::OP
Data File: >P2504::D3
Name: 2UL 660535 BNA
Niac: CD 910-SED2

Quant Rev: 4 Quant Time: 861006 22:51
Injected at: 861006 22:06
Dilution Factor: 1.00

8TL#94

ID File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBEN2ENE-d4	11.82	427	62724	40.00	NG	89
3)	2-Fluorophenol (SS)	8.54	267	17176	9.79	NG	75
7)	Phenol-d6 (SS)	11.18	396	16888	8.69	NG	69
15)	*NAPHTHALENE-d8	15.60	612	204235	40.00	NG	47
16)	Nitrobenzene-d5 (SS)	13.49	509	10875	5.76	NG	81
23)	1,2,4-Trichlorobenzene	15.52	608	3197	1.44	NG	89
27)	*ACENAPHTHENE-d10	21.12	882	82605	40.00	NG	94
31)	2-Fluorobiphenyl (SS)	19.11	784	26677	8.05	NG	98
42)	2,4,6-Tribromophenol (SS)	23.57	1002	5012	6.78	NG	82
43)	*PHENANTHRENE-d10	25.59	1101	129965	40.00	NG	52
54)	*CHRYSENE-d12	33.65	1495	92163	40.00	NG	44
55)	Terphenyl-d14 (SS)	30.58	1345	14590	9.88	NG	37
61)	bis(2-Ethylhexyl)Phthalate	34.20	1522	21309	8.63	NG	86
63)	*PERYLENE-d12	37.72	1694	76665	40.00	NG	80

* Compound is ISTD

MS data file header from : >P2504

Sample: 2UL 660535 BNA Operator: STEVE MS 10/06/86 22:06
Misc : CD 910-SED2 8TL#94
Sys. #: 1 MS model: 96 SU/HU rev.: CA ALS # : 0
Method file: EXTRII Tuning file: MT9301 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 280

Chromatographic temperatures :	30.	300.	0.	0.	0.
Chromatographic times, min. :	4.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

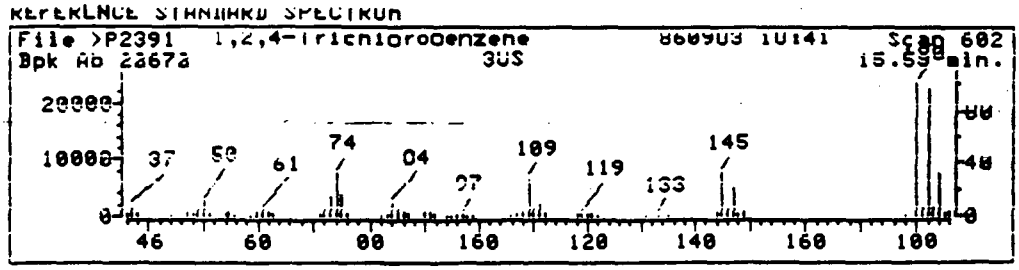
>P2504 2UL 660535 BNA CD 910-SED2
35.01 500.0 CLP AOC TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.597	605	612	615	180892	1052313	1052313	100.00	57.97
2	25.595	1097	1101	1104	124793	348715	348715	33.14	19.21
3	33.651	1491	1495	1505	70052	229251	221203	21.02	12.18
4	37.721	1690	1694	1701	51899	220245	193037	18.34	10.63

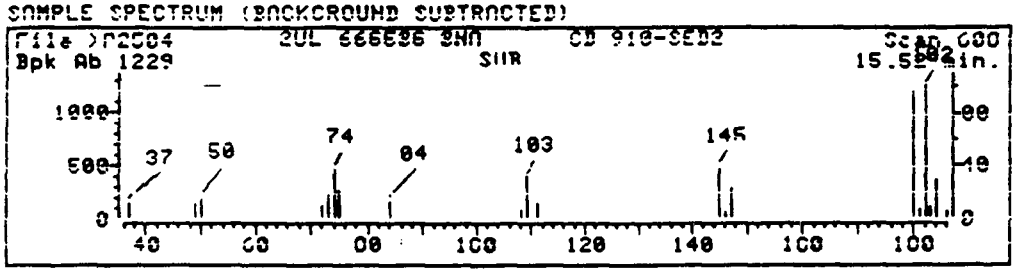
Sum of corrected areas: 1815268.

3:09 PM TUE., 7 OCT., 1986

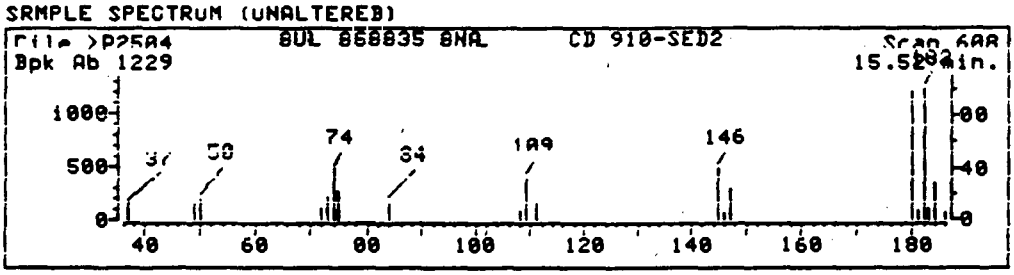
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

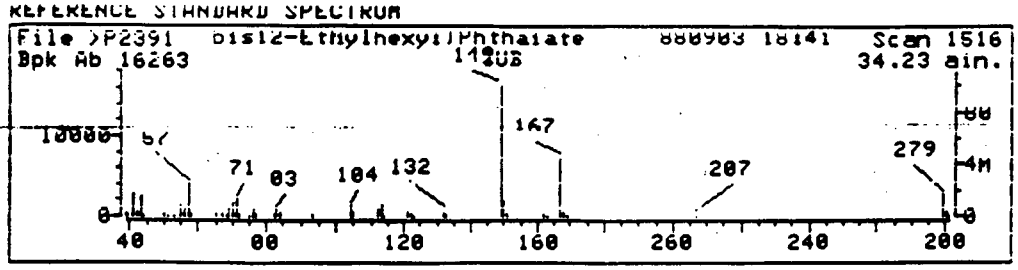


Data File: >P2504::D3
Name: 2UL 660535 BNA
Misc: CD 910-SED2
Quant Time: 861006 22:51
Injected at: 861006 22:06

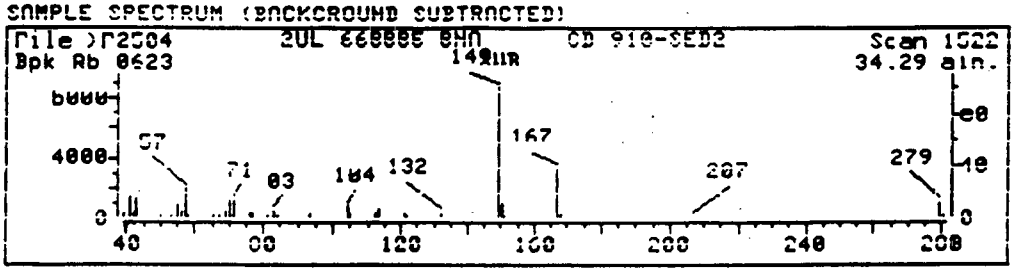
BTL#94

Compound No: 23
Compound Name: 1,2,4-Trichlorobenzene
Scan Number: 608
Retention Time: 15.52 min.
Area: 3197
Concentration: 1.44 NG
a-value: 89

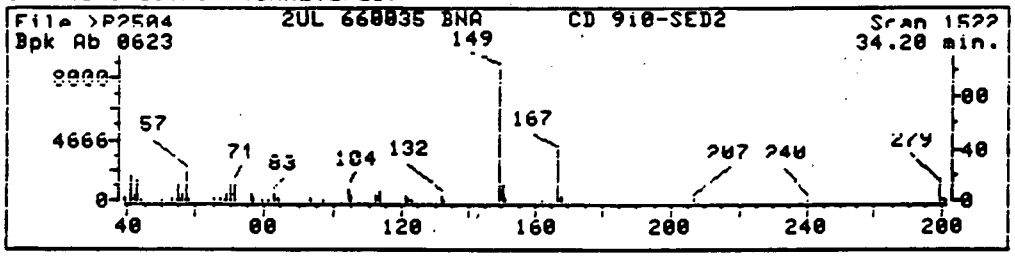
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >P2504::D3
Name: 2UL 660535 BNA
Misc: CD 910-SED2 BTL#94
Quant Time: 861006 22:51
Injected at: 861006 22:06

Compound No: 61
Compound Name: bis(2-Ethylhexyl)Phthalate
Scan Number: 1522
Retention Time: 34.20 min.
Area: 21309
Concentration: 8.63 NG
q-value: 86

660536

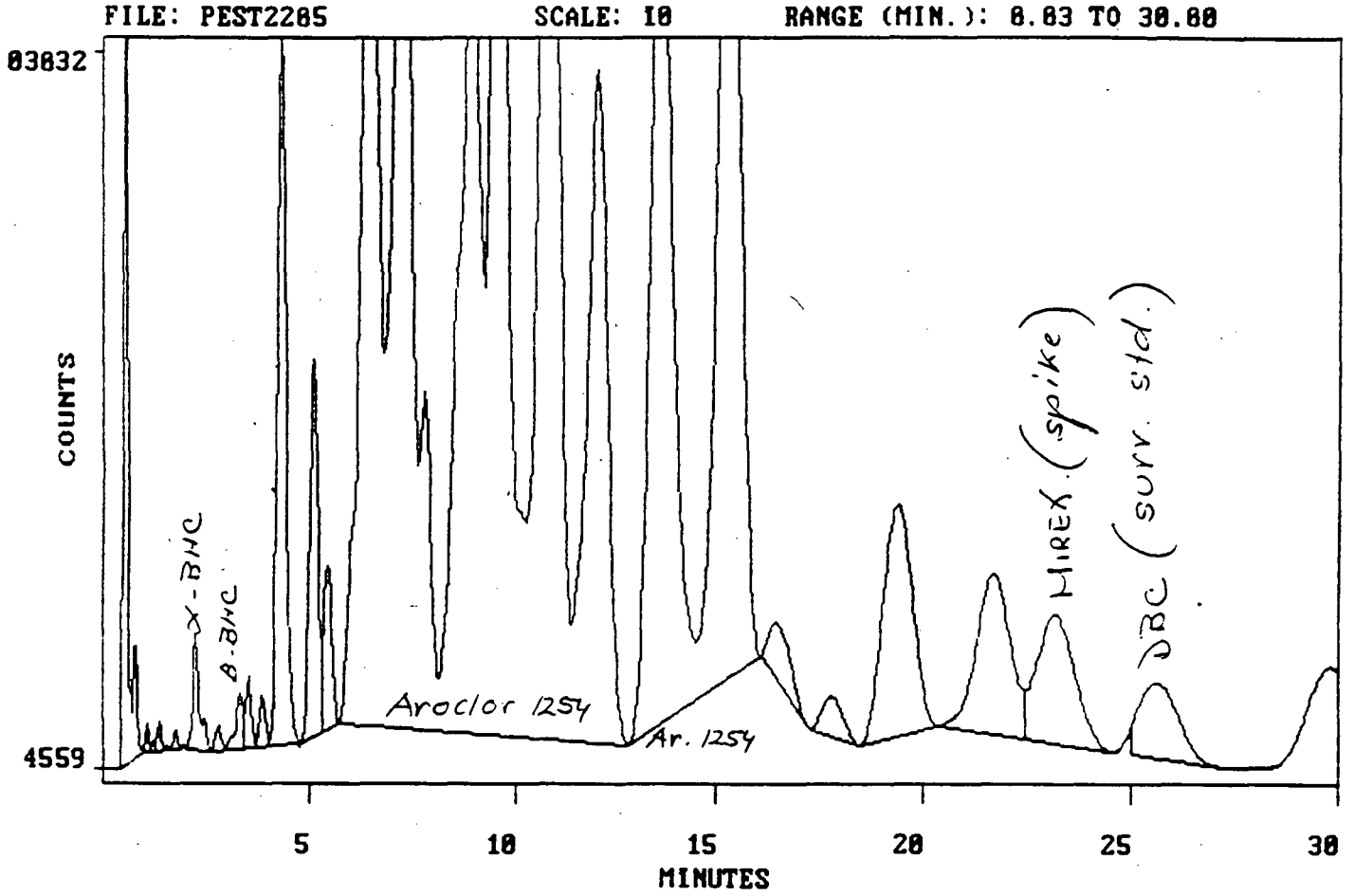
CD910-SED2

PRIMARY COLUMN

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time:13:55:46 Date MON 13 OCT 86

Time:15:47.56 Date TUE 07 OCT 86
Method:ARO1254C



Channel # REINT Time 13:54:33 Date MON 13 OCT 86

Sample name
Data file FEST2265
Method name AROI254C

Author LAL
Instrument Tracer 550 - ECD
Column 1 5% SP-2250/1.95% SP-2401 on 100/120 CHROMOSORB WHP
Notes Reintegration of Aroclors

Run time 30.00 min Delay time 0.00 min
Acq. time 15:47:56 Acq. data TUE 07 OCT 86
Start PW 20.00 sec End PW 150.00 sec
Actual PW 140.0
Slope sens 0.75 uv/sec

Area reject 500
peaks found 21
Vol Inj 5.0 ul Sample amount 1.000
Conv factor 1.000

METHOD NOT CALIBRATED!

AREA PERCENT REPORT

RF 100 ↓ est. conc µg/kg

Peak	R.T. (min)	R/S	Peak name	Area %	Area	Peak Ht	SL	
1	0.568			8.659	3721267	790636	EE	
2	1.105			0.038	16285	2985	BV	
3	1.279			0.016	6804	1172	VV	
4	1.407			0.092	39628	3292	VB	
5	2.267	α-BHC		0.323	141021	12632	EB	
6	2.794			0.063	27191	2780	BV	
7	3.335	β-BHC		0.176	75454	6079	VV	
8	3.538			0.154	66027	7766	VE	
9	3.867			0.128	54860	5510	EV	
10	4.320	Unknown		2.672	1148092	85609	VB	2900
11	5.090			1.367	587445	41768	BV	
12	5.438	AROCLOR 1254		0.553	237561	18198	VE	
13	9.586			57.202	24581546	171793	EE	
14	15.316			18.992	8161334	109933	BB	
15	16.448			0.528	226999	6119	ES	
16	17.309			0.350	150458	4347	EE	
17	19.338			2.921	1255373	25675	EE	
18	21.697			2.400	1031168	17343	BV	
19	23.130			2.093	899612	14311	VB	
20	25.717			1.269	545224	8178	SB	
TOTALS				100.000	42973339			

15

CONFIRMATORY COLUMN

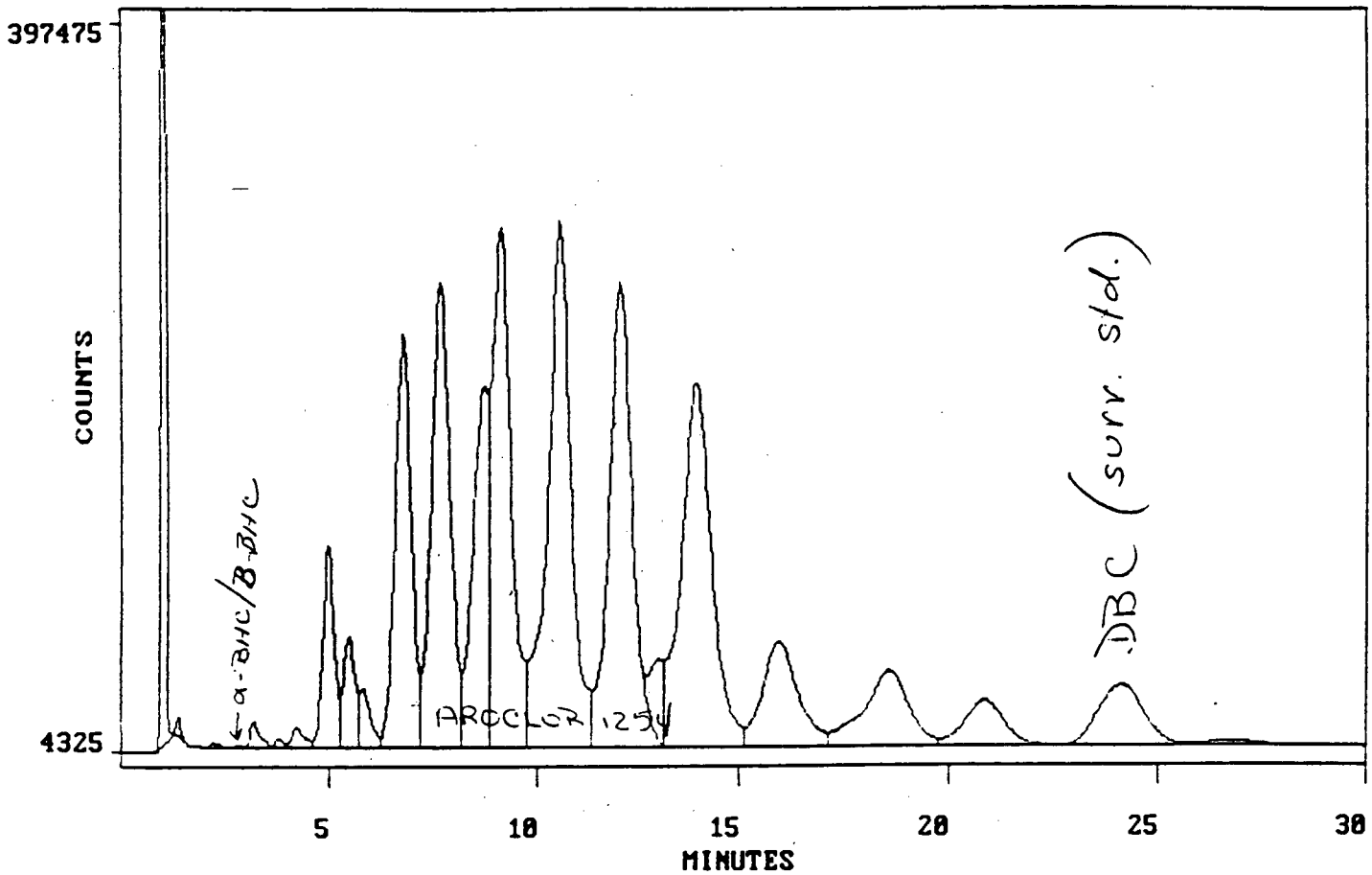
660536
CD91C - SED2

Time 19:49:00 Date THU 09 OCT 86

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time 18:22:31 Date THU 09 OCT 86
Method PEST2

FILE: 1:PEST2300 SCALE: 2 RANGE (MIN.): 0.03 TO 36.00



15

Channel #.....4 Time:18:53:16 Date:THU 09 OCT 86
Run #3 of 100

Sample name.....NJDEP
Data file.....DAT258:PEST2308
Method name.....PEST2

Author.....LAL
Instrument.....ECD
Column.....~~SY~~-2 3% SP-2100 on 100/120 SUPELCOPORT
Notes.....~~Primary~~ Column Runs
CONFIRMATORY

Run time.....30.00 min. Delay time...0.00 min.
Acq. time.....18:22:31 Acq. date....THU 09 OCT 86
Start PW.....20.00 sec. End PW.....150.00 sec.
Actual PW....140.0
Slope sens.....0.75 uv/sec

Area reject....500
peaks found. 27
Vol. Inj.....5.0 ul Sample amount..1.000
Conv. factor. 1.000

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METHOD NOT CALIBRATED!

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AREA PERCENT REPORT

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Peak	R.T.(min)	R/S	Peak name	Area %	Area	Peak Ht.	BL
1	0.277			0.001	908	44	BB
2	1.046			8.247	6899428	793436	BB
3	1.411			0.098	81889	11232	BB
4	2.214			0.035	29547	3145	BV
5	2.353			0.022	18508	2516	VV
6	2.619			0.005	4217	540	VV
7	2.832		β-BHC / α-BHC	0.020	16723	1900	VB
8	3.214			0.296	247821	14837	BV
9	3.815			0.093	77669	5531	VV
10	4.238			0.296	247745	11425	VV
11	4.978			2.471	2067540	110251	VV
12	5.463			1.379	1153639	60608	VV
13	5.778			0.677	565996	32097	VV
14	6.739			7.231	6049624	223154	VV
15	7.675			9.985	8354293	251603	VV
16	8.744			6.143	5139720	195539	VV
17	9.164			10.661	8919334	280796	VV
18	10.604			13.480	11278190	284634	VV
19	12.101			12.060	10090147	252185	VE

16c

22	15.954		4.127	3453168	57314	VV
23	18.595		3.748	3135765	41235	VV
24	20.850		1.988	1663090	24855	VV
25	24.134		3.109	2600719	33189	VE
26	26.361	DBC	0.236	197432	2405	EB
27	29.215		0.040	33420	627	BB
TOTALS			100.000	33664520		

III. 2. Reporting Package
NJ DEP I.D. # S-1

H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Lab No. 660538
Type: Misc. - Tier I
Point: Soil #1
Date Collected: 9/11/86
Date Received: 9/12/86
Collected By: CL 99

PRIORITY POLLUTANTS ANALYSIS - PURGEABLE ORGANICS

Scan No.	Cas Number	Compound	ug/kg
41	74-87-3	Chloromethane	6J
	74-83-9	Bromomethane	10U
	75-01-4	Vinyl chloride	10U
	75-00-3	Chloroethane	10U
122	75-09-2	Methylene chloride	110
	75-69-4	Trichlorofluoromethane	10U
197	75-35-4	1,1-dichloroethene	88
	75-34-3	1,1-dichloroethane	10U
	156-60-5	Cis/Trans-1,2-dichloroethene	10U
	67-66-3	Chloroform	10U
	107-06-2	1,2-dichloroethane	10U
321	71-55-6	1,1,1-Trichloroethane	110B
	56-23-5	Carbon tetrachloride	10U
	75-27-4	Bromodichloromethane	10U
	79-34-5	1,1,2,2-Tetrachloroethane	10U
	70-87-5	1,2-dichloropropane	10U
	10061-02-6	Trans-1,3-dichloropropene	10U
409	79-01-6	Trichloroethene	35
	124-48-1	Dibromochloromethane	10U
	79-00-5	1,1,2-trichloroethane	10U
426	71-43-2	Benzene	2J
	10061-01-5	cis-1,3-Dichloropropene	10U
	110-75-8	2-chloroethylvinyl ether	10U
	75-25-2	Bromoform	10U
	127-10-4	Tetrachloroethene	10U
	106-88-3	Toluene	10U
	106-90-7	Chlorobenzene	10U
	100-41-4	Ethylbenzene	10U
	541-73-1	1,2-Dichlorobenzene	10U
	95-50-1	1,3-Dichlorobenzene	10U
	106-46-1	1,4-Dichlorobenzene	10U

Date Reported: 10/15/86

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* *
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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample # Soil #1

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

C.A.S. Number	Compound Name	% Prob. FIT	% Prob. RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown (Carbon Dioxide)	-	-	12	830B
2.	Unknown	-	-	143	33
3.	Unknown	-	-	153	77
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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20.					
21.					
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23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JMcL

H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

Lab Name: H2M Labs — Sample Lab No. 660539 - S-1

Concentration: Low

Date Extracted: 9/24/86

Date Analyzed: 10/6/86 — Dil. Factor: 1:2

Semi-Volatile Compounds

C.A.S. Number		ug/kg	C.A.S. Number		ug/kg	Sea No.
65-75-9	N-Nitrosodimethylamine	20000U	83-32-9	Acenaphthene	300J	887
108-95-2	Phenol	20000U	51-28-5	2,4-Dinitrophenol	20000U	
62-53-3	Aniline	20000U	100-02-7	4-Nitrophenol	20000U	
111-44-4	bis(2-Chloroethyl)Ether	20000U	121-14-2	2,4-Dinitrotoluene	20000U	
95-57-8	2-Chlorophenol	20000U	606-20-2	2,6-Dinitrotoluene	20000U	
541-73-1	1,3-Dichlorobenzene	20000U	84-66-2	Diethylphthalate	900000	971
106-46-7	1,4-Dichlorobenzene	20000U	7005-72-3	4-Chlorophenyl-phenylether	20000U	
95-50-1	1,2-Dichlorobenzene	20000U	86-73-7	Fluorene	20000U	
39638329	bis(2-chloroisopropyl)ether	20000U	534-52-1	4,6-Dinitro-2-MethyIphenol	20000U	
621-64-7	N-Nitroso-Di-n-Propylamine	20000U	86-30-6	N-Nitrososdiphenylamine (1)	20000U	
67-72-1	Hexachloroethane	20000U	101-55-3	4-Bromophenyl-phenylether	20000U	
98-95-3	Nitrobenzene	20000U	118-74-1	Hexachlorobenzene	20000U	
78-59-1	Isophorone	20000U	87-86-5	Pentachlorophenol	20000U	
88-75-5	2-Nitrophenol	20000U	85-01-8	Phenanthrene	2800J	1103
105-67-9	2,4-Dimethylphenol	20000U	120-12-7	Anthracene	700J	1109
111-91-1	bis(2-Chloroethoxy)Methane	20000U	84-74-2	Di-n-Butylphthalate	20000U	
120-83-2	2,4-Dichlorophenol	20000U	206-44-0	Fluoranthene	4600J	1281
120-82-1	1,2,4-Trichlorobenzene	20000U	92-87-5	Benzidine	60000U	
91-20-3	Naphthalene	20000U	129-00-0	Pyrene	3400J	1313
87-68-3	Hexachlorobutadiene	20000U	85-68-7	Butylbenzylphthalate	20000U	
59-50-7	4-Chloro-3-Methylphenol	20000U	91-94-1	3,3'-Dichlorobenzidine	20000U	
77-47-4	Hexachlorocyclopentadiene	20000U	56-55-3	Benzo(a)Anthracene	1800J	1495
88-06-2	2,4,6-Trichlorophenol	20000U	117-81-7	bis(2-Ethylhexyl)Phthalate	5100J	1525
91-58-7	2-Chloronaphthalene	20000U	218-01-9	Chrysene	1800J	1500
131-11-3	Dimethyl Phthalate	20000U	117-84-0	Di-n-Octyl Phthalate	20000U	
208-96-8	Acenaphthylene	20000U	205-99-2	Benzo(b)Fluoranthene	20000U	
			207-08-9	Benzo(k)Fluoranthene	20000U	
			50-32-8	Benzo(a)Pyrene	20000U	
			193-39-5	Indeno(1,2,3-cd)Pyrene	20000U	
			53-70-3	Dibenzo(a,h)Anthracene	20000U	
			191-24-2	Benzo(g,h,i)Perylene	20000U	

(1) Cannot be separated from diphenylamine

Date Reported: 10/16/86

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* *
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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample #: S-1

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob FIT	% Prob RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Polychlorinated Biphenyl	88		1342	60000J
2.		Polychlorinated Biphenyl	96		1355	66000J
3.		Polychlorinated Biphenyl	99		1385	83000J
4.		Polychlorinated Biphenyl	99		1443	61000J
5.						
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H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Sample Lab No. 660540
Date Extracted: 9/18/86
Date Analyzed: 10/7/86
Type: Misc. - Tier I
Point: S-1
Collected By: CL 99

ANALYSIS FOR PESTICIDES/PCB's

C.A.S. No.	Compound	ug/kg
319-84-6	Alpha-BHC	8U
319-87-7	Beta-BHC	50
319-86-8	Delta-BHC	8U
58-89-9	Gamma-BHC (Lindane)	39
76-44-8	Heptachlor	8U
309-00-2	Aldrin	100U
1024-57-3	Heptachlor Epoxide	3000U
959-98-8	Endosulfan I	700U
68-57-1	Dieldrin	3000U
72-55-9	4,4'-DDE	700U
72-20-8	Endrin	700U
33213-65-9	Endosulfan II	700U
72-54-8	4,4'-DDD	700U
1031-07-8	Endosulfan Sulfate	700U
50-29-3	4,4'-DDT	3000U
72-43-5	Methoxychlor	80U
53494-70-5	Endrin Ketone	16U
57-74-9	Chlordane	700U
8001-35-2	Toxaphene	700U
12674-11-2	Aroclor 1016	80U
11104-28-2	Aroclor 1221	80U
11141-16-5	Aroclor 1232	80U
53469-21-9	Aroclor 1242	80U
12672-29-6	Aroclor 1248	S0U
11097-69-1	Aroclor 1254	680000
11096-82-5	Aroclor 1260	3000U

Vi = Volume of extract injected (uL)
Ws = Weight of sample extracted (g)
Vs = Ws = 6.01 g Vt = 10 mL
Date Reported: 10/17/86

Vs = Volume of water extracted (mL)
Vt = Volume of Total extract (mL)
Vi = 5 uL

****
* *
* *
****
S.C. McLendon, P.E.
Laboratory Director

Lab Name : H2M LABS

ORGANICS ANALYSIS DATA SHEET

Sample Number
660540

NJDEP #CD910-S1
Run 2266

Tentatively Identified Compounds

C.A.S. Number	Compound Name	% Probability Fit	% Probability Rfit	RT or Scan Number	Dry Wt. Estimated Concentration (ug/L or ug/kg)
1.	Unknown			1.39	52
2.	Unknown			2.24	240
3.	Unknown			3.49	39
4.	Unknown			4.25	1000
5.	Unknown			17.51	170
6.	Unknown			19.06	1700
7.	Unknown			21.36	850
8.	Unknown			29.55	360
9.					
10.					
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29.					
30.					

Date Reported: 10-16-86

S.C. McLendon, P.E.
Laboratory Director

169

H2M
Environmental Engineers & Scientists
HOLZMACHER, McLENDON and MURRELL, P.C.
575 BROAD HOLLOW ROAD, MELVILLE, NEW YORK 11747 (516) 694-3040

WATER RESOURCES • WATER SUPPLY & TREATMENT • SEWERAGE & TREATMENT • ECOLOGICAL & IMPACT STUDIES
MODEL STUDIES • PILOT PLANT STUDIES • WATER/WASTE WATER LABORATORY AND ANALYTICAL SERVICES

LABORATORY REPORT

LAB NO. 660541
PROJECT NO. 2C

CLIENT'S NAME AND ADDRESS

NEW JERSEY D.E.P.

65 PROSPECT ST.

TRENTON, NEW JERSEY 08618

TYPE OF SAMPLE - MISCELLANEOUS COLLECTED BY CL 99
DATE COLLECTED - 9/11/86 DATE RECEIVED - 9/12/86

NJDEP SAMPLE ICD 910-S1
NJDEP SAMPLE POINT I.D. ISOIL 1
SOIL SAMPLE

PARAMETER	RESULT	PARAMETER	RESULT
ANTIMONY	30.5 N	SELENIUM	4.10 S N
ARSENIC	30.8	SILVER	12.4 N
BERYLLIUM	1.10	THALLIUM	<3.10 N
CADMIUM	20.3	ZINC	150. N
CHROMIUM	81.0 E	PHENOLS	<0.09
COPPER	235.	CYANIDE	<7.40
LEAD	111.	TOTAL SOLIDS	59.0 %
MERCURY	1.50 *N		
NICKEL	59.7		

ALL RESULTS REPORTED IN mg/kg DRY WEIGHT

ALL RESULTS IN (MG/L) EXCEPT AS NOTED BY 1 (UD/L) OR % (PERCENT) AND
T.COLI BACT. & FECAL COLI (MPN/100ML)
COLOR, ODOR, TURBIDITY & PH (UNITS)
APC & FECAL STREP (COUNTS/ML)
SPEC.COND. (UMHOS) SETT.SOLIDS(ML/L)

DATE REPORTED 10/ 8/86

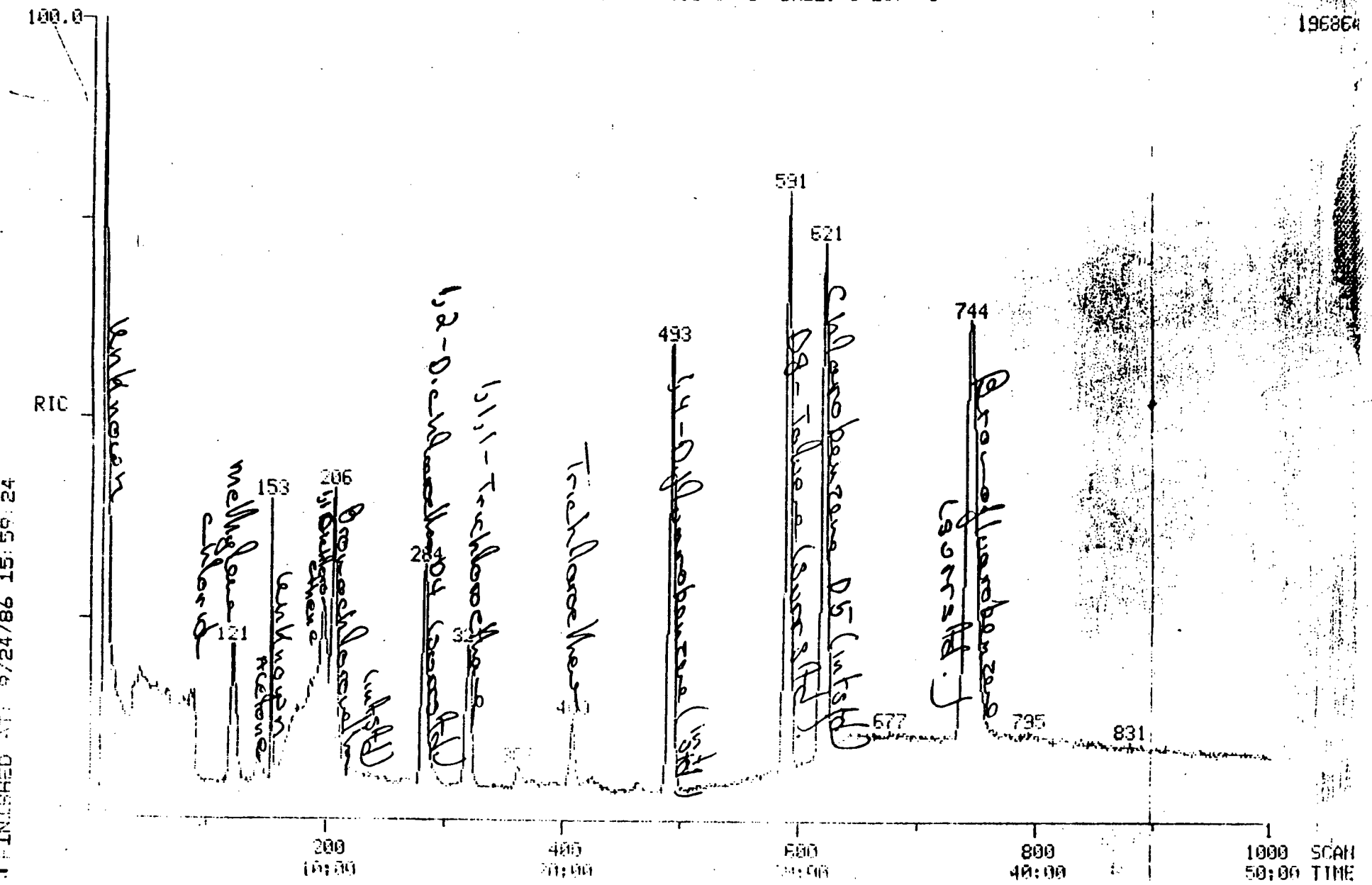
S.C. McLENDON, P.E., LABORATORY DIRECTOR

THE LIABILITY OF H2M CORP. SHALL BE LIMITED TO THE PRICE OF THE SERVICE RENDERED AND PAID.

RIC
09/25/86 13:21:00
SAMPLE: 660533
COND.:
RANGE: G I,1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: PU6432 #1
CALI: PU6432 #2

SCANS 1 TO 1000



TCA FINISHED, 11 FOUND
FINISHED AT: 9/24/86 15:59:24

QUANTITATION REPORT FILE: PU6432

DATA: PU6432.TI
09/26/86 18:21:00
SAMPLE: 660538
CONDS.:
SUBMITTED BY: NJDEF ANALYST: CC

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
RESP. FAC. FROM LIBRARY ENTRY

No	NAME
1	BROMOCHRLOROMETHANE (INT. STD.)
2	1,2-DICHLOROETHANE D4 (SURR. STD)
3	CHLOROMETHANE
4	BROMOMETHANE
5	VINYL CHLORIDE
6	CHLOROETHANE
7	METHYLENE CHLORIDE (C)
8	ACETONE
9	CARBON DISULPHIDE
10	1,1-DICHLOROETHENE (B)
11	1,1-DICHLOROETHANE(E)
12	TRANS -1,8-DICHLOROETHENE (D)
13	CHLOROFORM
14	1,2-DICHLOROETHANE(H)
15	TRICHLOROFLUOROMETHANE
16	DICHLOROFLUOROMETHANE
17	ACROLEIN
18	ACRYLONITRILE
19	1,4-DIFLUOROBENZENE(INT. STD)
20	2-BUTANONE (MEK)
21	1,1,1-TRICHLOROETHANE (I)
22	CARBON TETRA CHLORIDE
23	BROMODICHLOROMETHANE(L)
24	1,2-DICHLOROPROPANE(X)
25	TRANS-1,3-DICHLOROPROPENE (AA)
26	TRICHLOROETHENE(K)
27	DIBROMOCHLOROMETHANE(O)
28	1,1,2-TRICHLOROETANE(M)
29	BENZENE(BEN)
30	CIS-1,3-DICHLOROPROPENE(Z)
31	2-CHLOROETHYLVINYLETHER(NN)
32	BROMOFORM(P)
33	CHLOROBENZENE-D5 (INT. STD)
34	2-HEXANONE(MBK)
35	4-METHYL-2-PENTANONE(MIBK)
36	TETRACHLOROETHENE(N)
37	ETHANE, 1,1,2,2-TETRACHLORO-
38	TOLUENE(TOL)
39	CHLOROBENZENE(G)
40	ETHYLBENZENE(EB)
41	STYRENE
42	META-XYLENE
43	ORTHO/PARA-XYLENE
44	META-DICHLOROBENZENE(MDCB)
45	ORTHO-DICHLOROBENZENE(ODCB)
46	PARA-DICHLOROBENZENE(PDCB)
47	D8-TOLUENE(SURR. STD)
48	BROMOFLUOROBENZENE(SURR. STD)

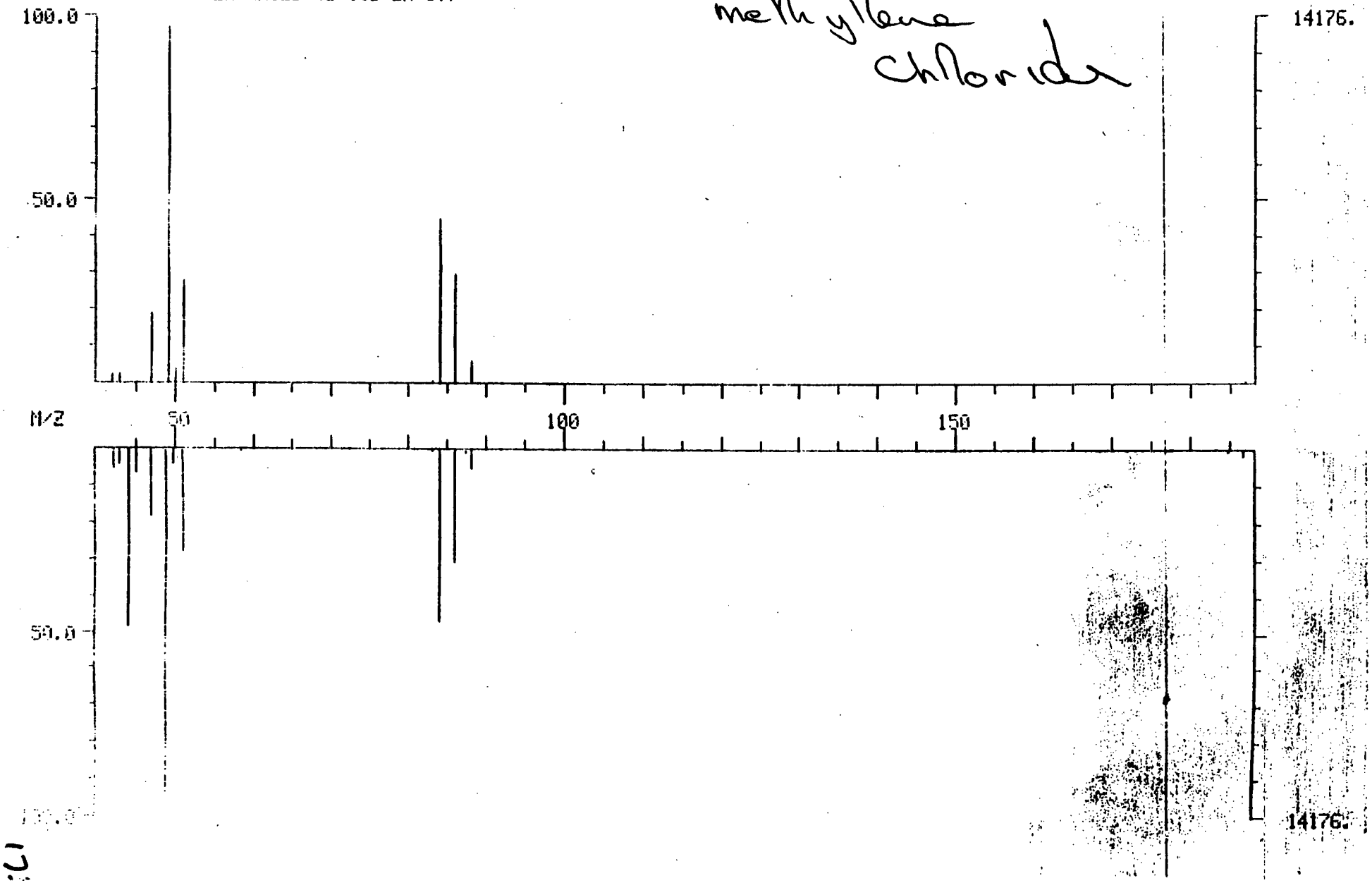
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	A*BV	[illegible]	6.073	NG	0.32
4	NOT FOUND									
5	NOT FOUND									
6	NOT FOUND									
7	04	122	6:06	1	0.595	A BB	38370.	107.667	NG	5.64
8	43	143	7:09	1	0.698	A BB	25965.	194.577	NG	10.19
9	NOT FOUND									
10	96	197	9:51	1	0.961	A BB	19847.	83.938	NG	4.39
11	NOT FOUND									
12	96	249	12:27	1	1.215	A BB	761.	2.635	NG	0.14
13	83	264	13:12	1	1.288	A BB	284.	0.439	NG	0.02
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	114	492	24:36	19	1.000	A BB	236154.	250.000	NG	13.09
20	43	292	14:36	19	0.593	A VB	14579.	66.541	NG	3.48
21	97	321	16:03	19	0.652	A BB	44741.	108.385	NG	5.67
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	130	409	20:27	19	0.831	A BB	14451.	33.623	NG	1.76
27	NOT FOUND									
28	NOT FOUND									
29	78	426	21:18	19	0.866	A BB	3504.	2.261	NG	0.12
30	NOT FOUND									
21	NOT FOUND									
32	NOT FOUND									
33	117	621	31:03	33	1.000	A BB	197550.	250.000	NG	12.09
34	NOT FOUND									
35	43	554	27:42	33	0.892	A VV	1841.	51.306	NG	2.69
36	164	559	27:57	33	0.900	A BB	210.	0.311	NG	0.02
37	NOT FOUND									
38	92	596	29:48	33	0.960	A BB	1173.	1.497	NG	0.08
39	112	625	31:15	33	1.006	A BB	371.	0.316	NG	0.02
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	100	591	29:33	33	0.952	A BB	124624.	244.357	NG	12.79
48	95	744	37:12	33	1.198	A BB	173538.	232.382	NG	12.17

DUAL MASS SPECTRUM
09/26/95 18:21:00 + 6:06
SAMPLE: 060538
COMM.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 #122
CALI: PU6432 #2

BASE M/Z: 49/ 49
RIC: 33151./ 42751.

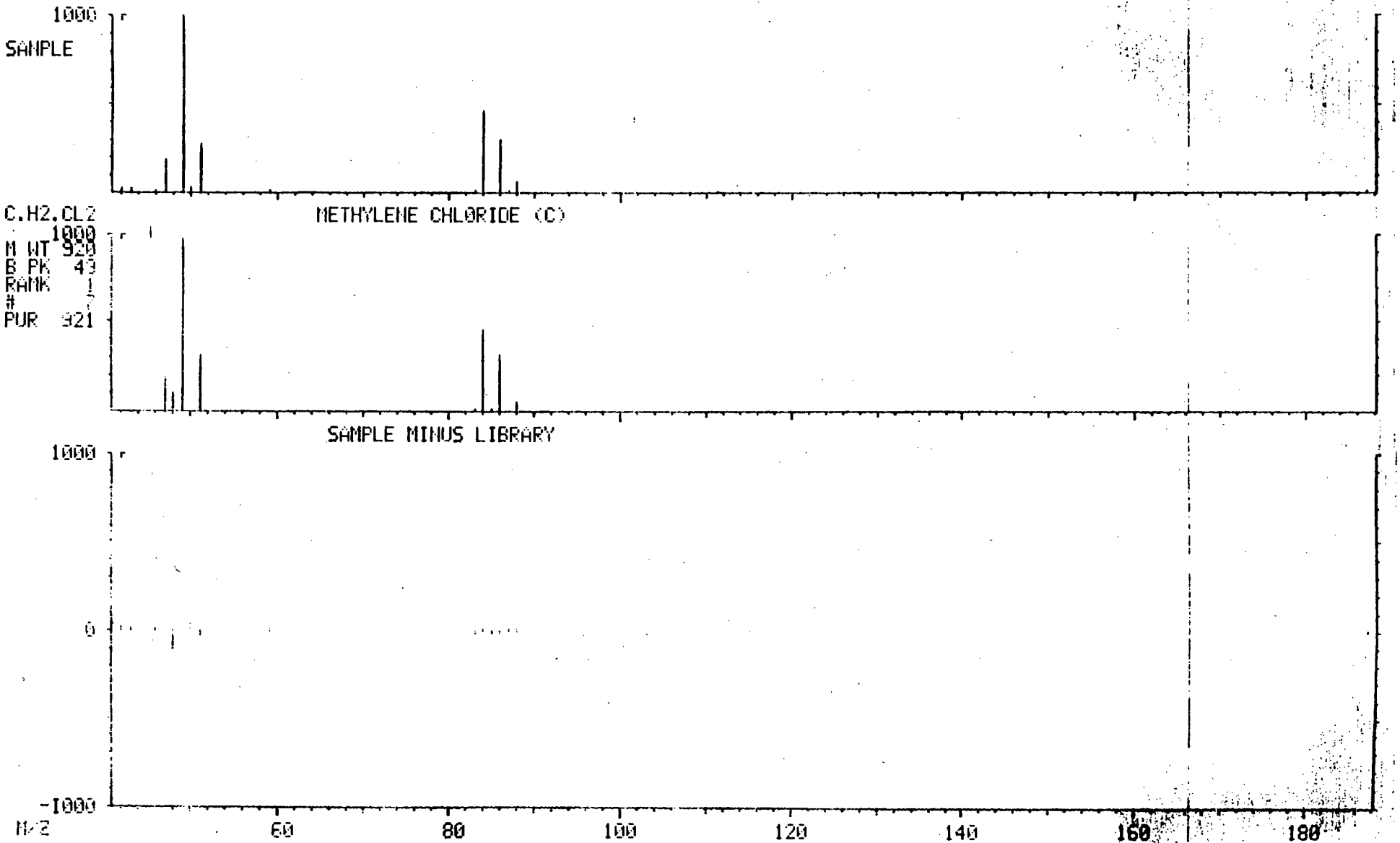
methylene chloride



LIBRARY SEARCH
03/25/86 18:21:04 + 6:05
SAMPLE: FR9513
COMDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 # 122
CAL: PU6432 # 2

BASE M/Z: 49
RIC: 23151.

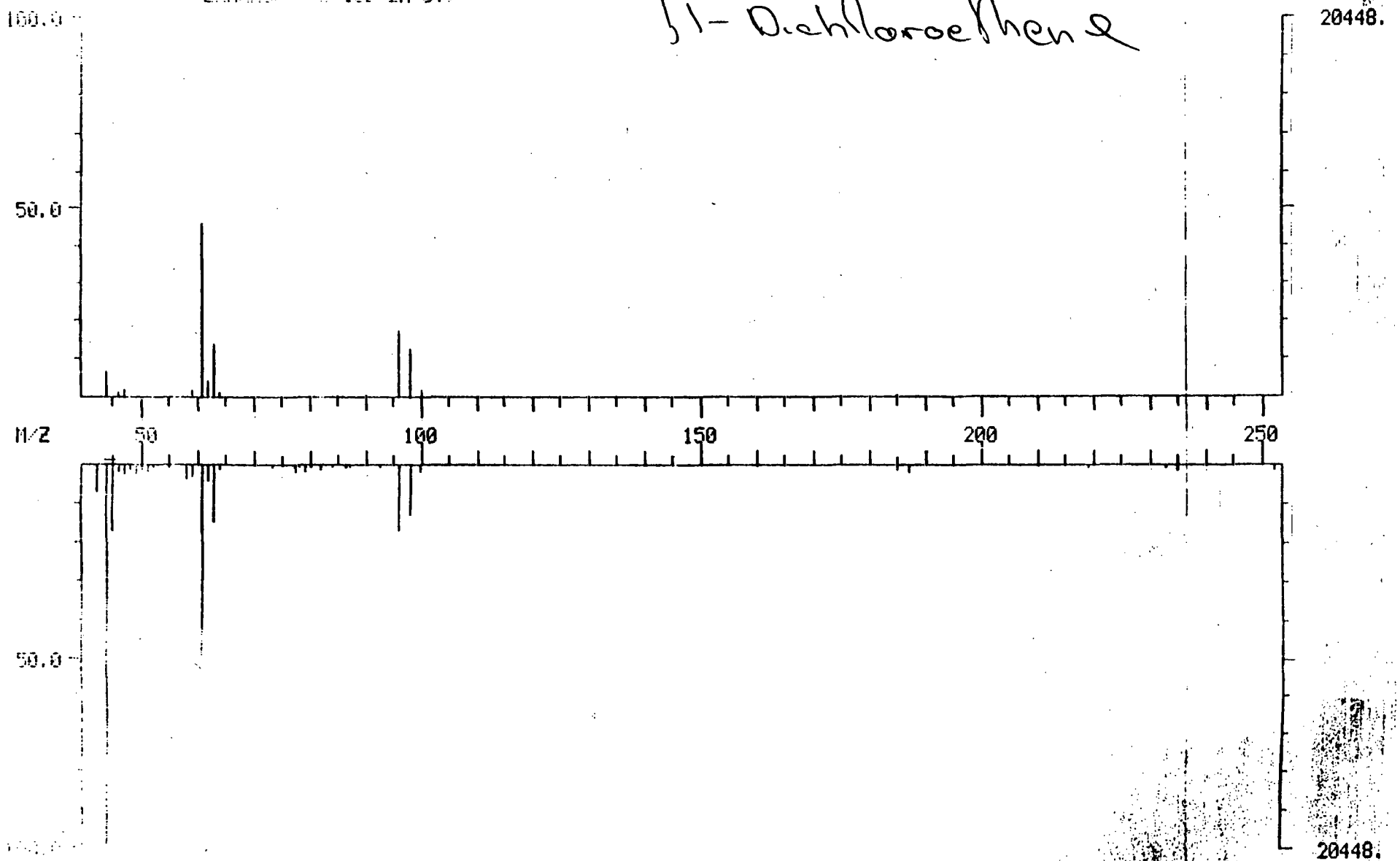


DUAL MASS SPECTRUM
09/26/86 18:21:00 + 9:51
SAMPLE: 660538
CONDS.:
ENHANCED (S 158 2M 0T)

DATA: PU6432 #197
CALI: PU6432 #2

BASE M/Z: 61/ 44
RIC: 22463./ 53439.

1,1-Dichloroethene



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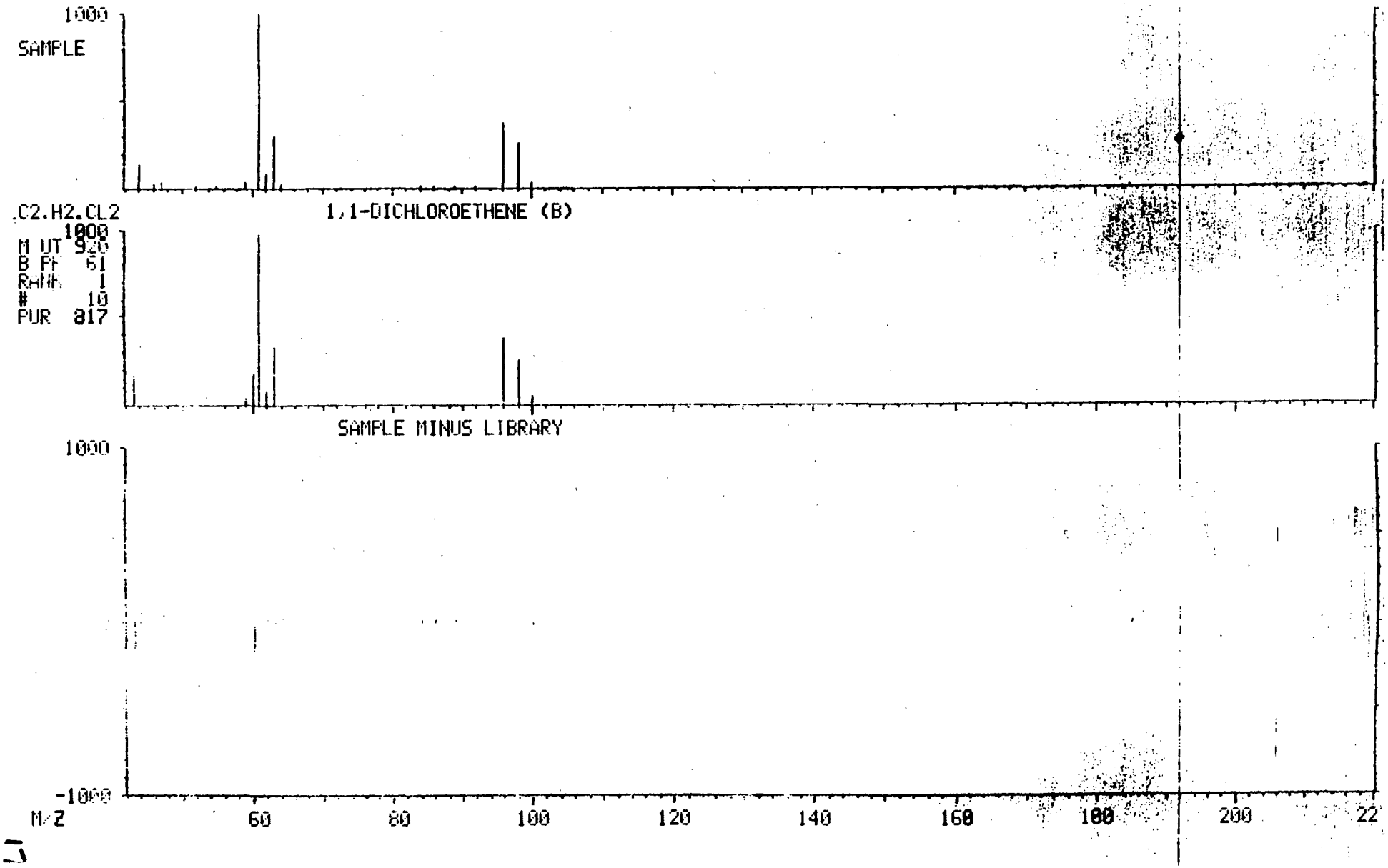
03/16/86 13:21:00 + 8:51
SAMPLE: 020539
CONDS.:
ENHANCED (S 150 20 0T)

DATA: PU6432 # 197
CALI: PU6432 # 2

BASE M/Z: 61
RIC: 22463.

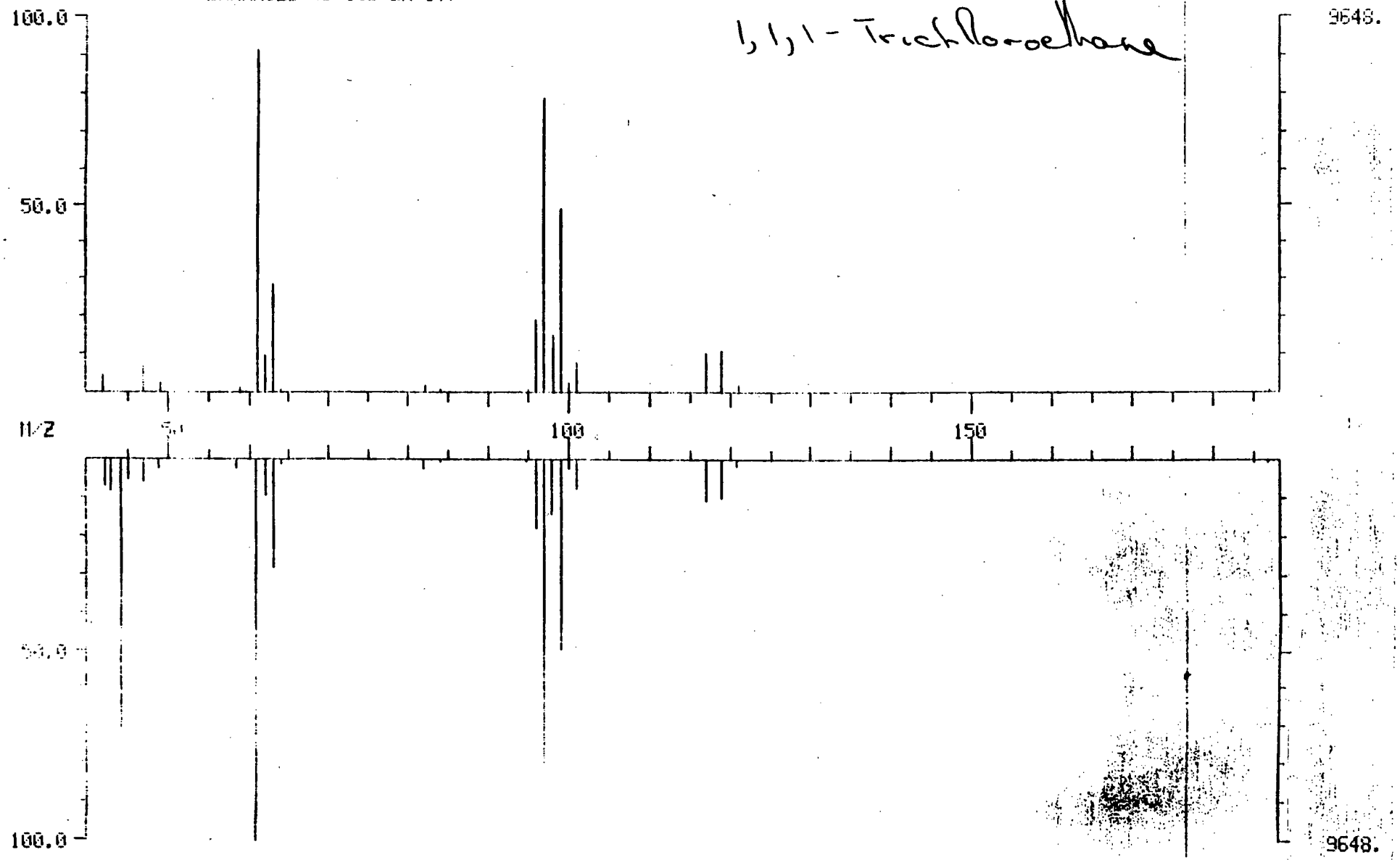


DUAL MASS SPECTRUM
09/26/86 18:21:00 + 16:03
SAMPLE: 8E0538
CONDC.:
ENHANCED (S 155 2M 0T)

DATA: PU6432 #321
CALI: PU6432 #2

BASE M/Z: 61/ 61
RIC: 32959./ 43007.

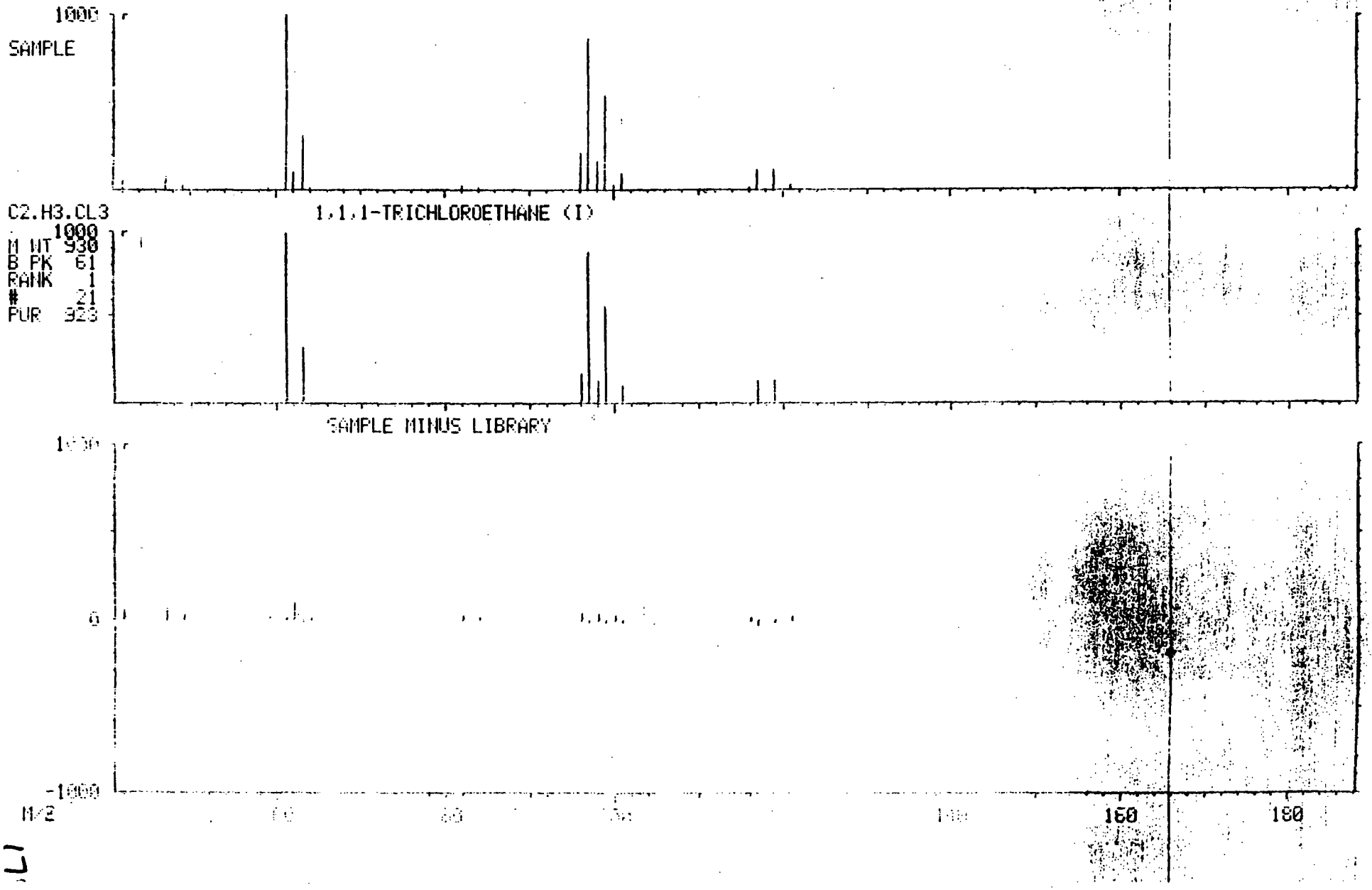
1,1,1-Trichloroethane



LIBRARY SEARCH
09/26/86 18:21:00 + 16:03
SAMPLE: E60538
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 # 321
CALI: PU6432 # 2

BASE M/Z: 61
RIC: 32959.

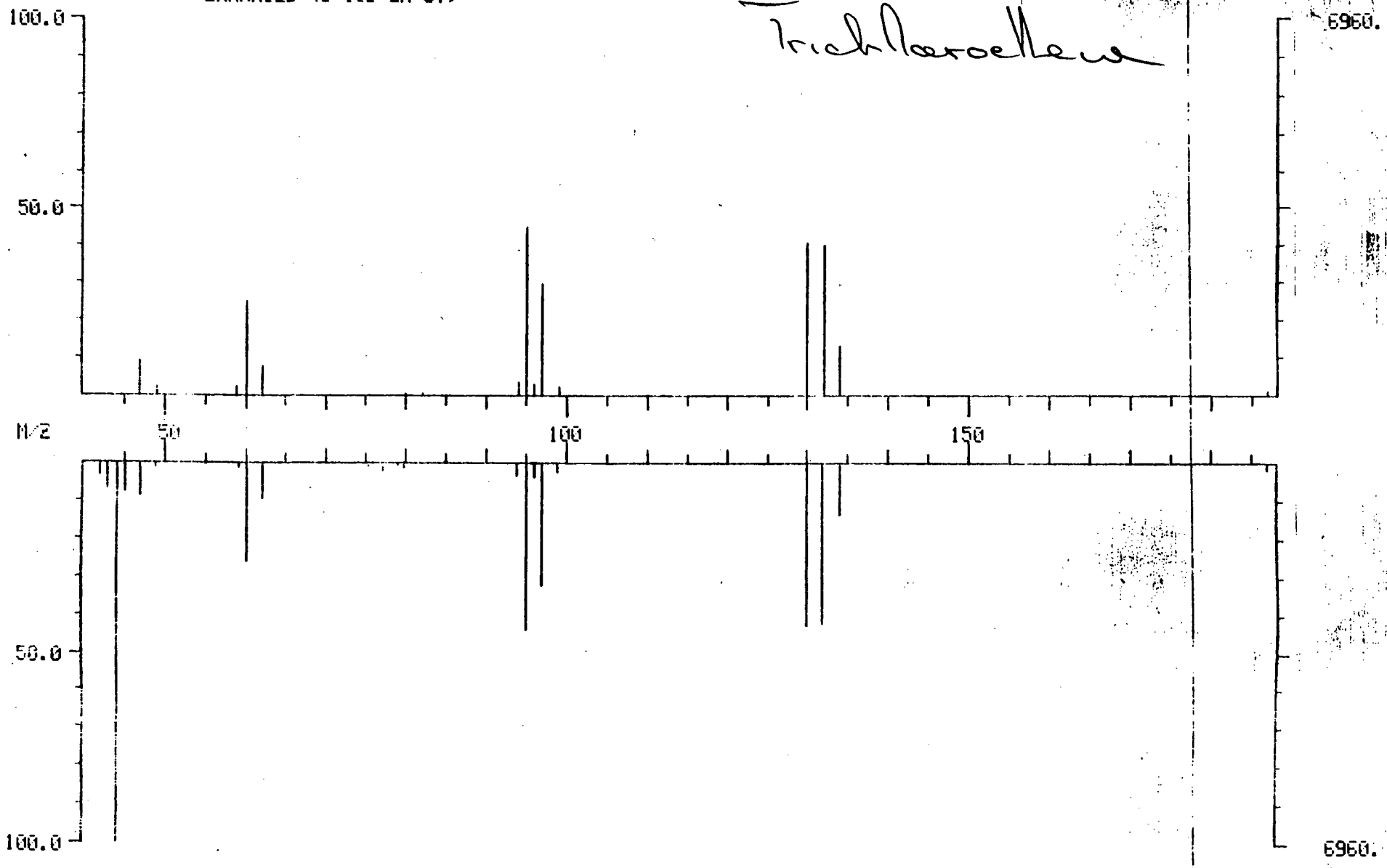


DUAL MASS SPECTRUM
09/26/86 18:21:08 + 20:27
SAMPLE: 660538
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 #409
CALI: PU6432 #2

BASE M/Z: 95/ 44
RIC: 15685./ 24767.

Trichloroethene

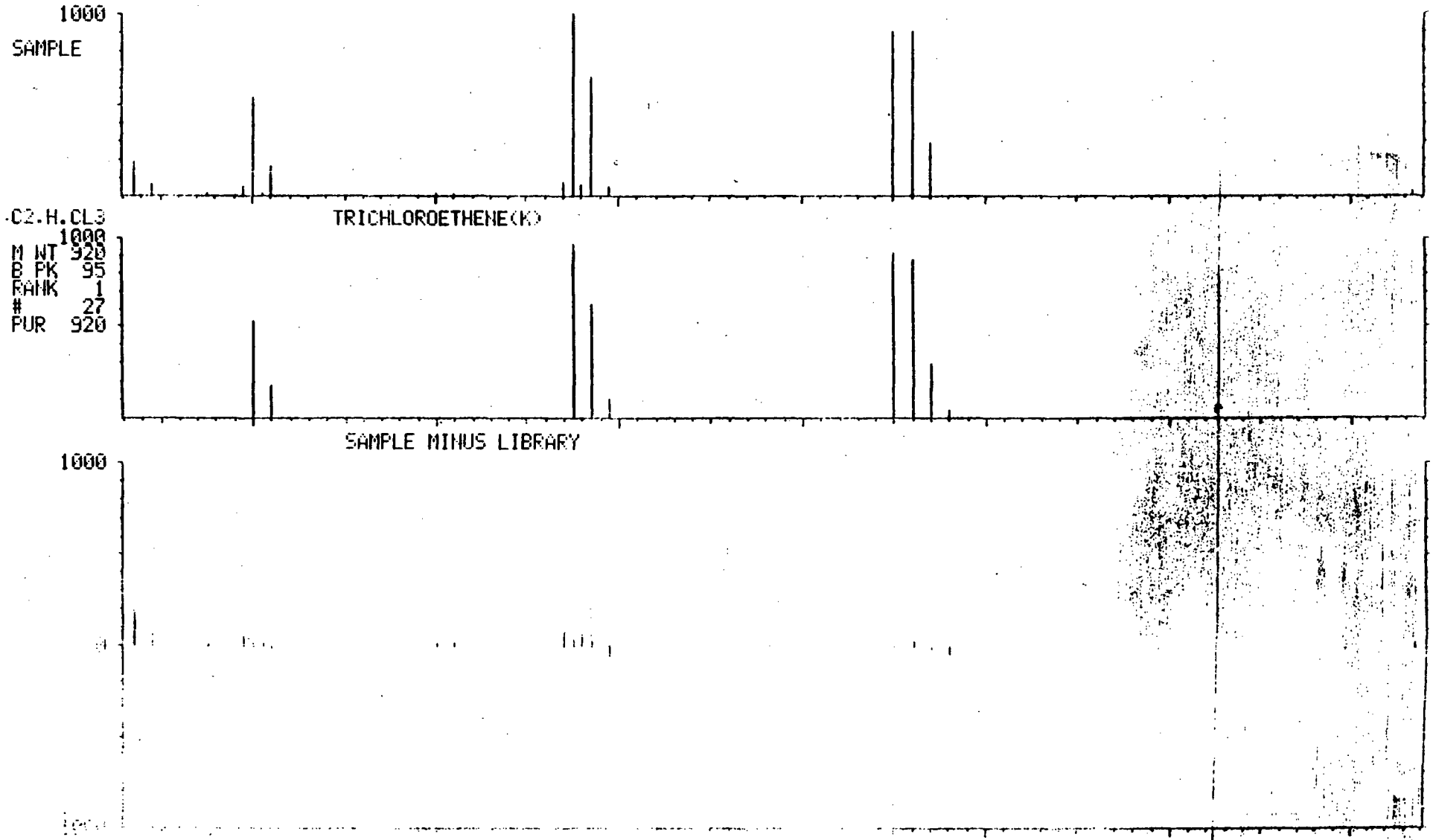


5J

LIBRARY SEARCH
09/26/86 18:21:00 + 20:27
SAMPLE: 660525
CONDS.:
ENHANCED (S 1SB 2N 0T)

DATA: PU6432 # 409
CW 1: PU6432 # 2

BASE M/Z: 95
RIC: 15595.

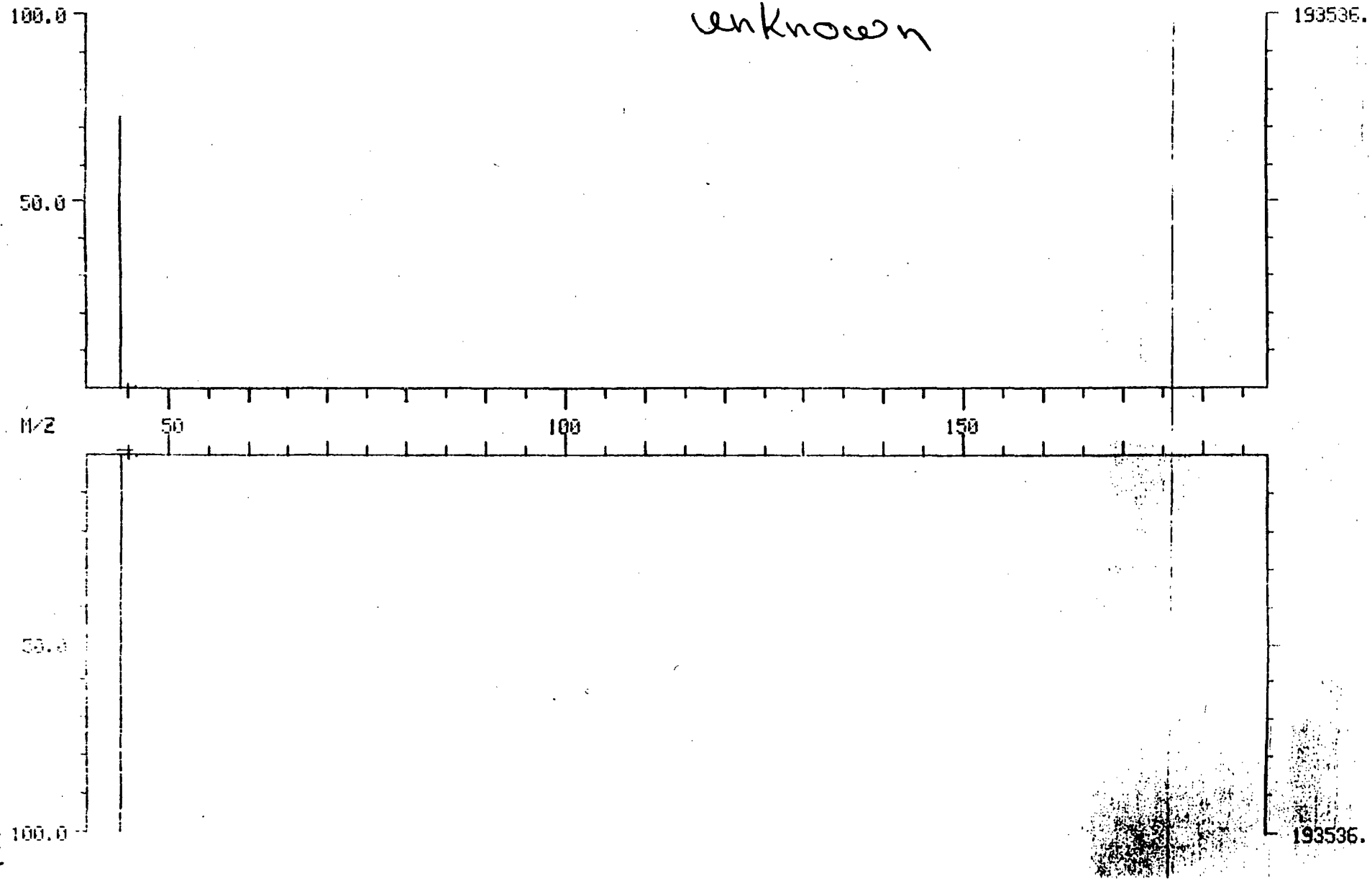


DUAL MASS SPECTRUM
03/25/86 12:21:03 + 0:36
SAMPLE: 860536
CONDS.:
ENHANCED (S 15P 3N 0T)

DATA: PU6432 #12
BLK: PU6432 #2

BASE M/Z: 44/ 44
PIC: 143615./ 196507.

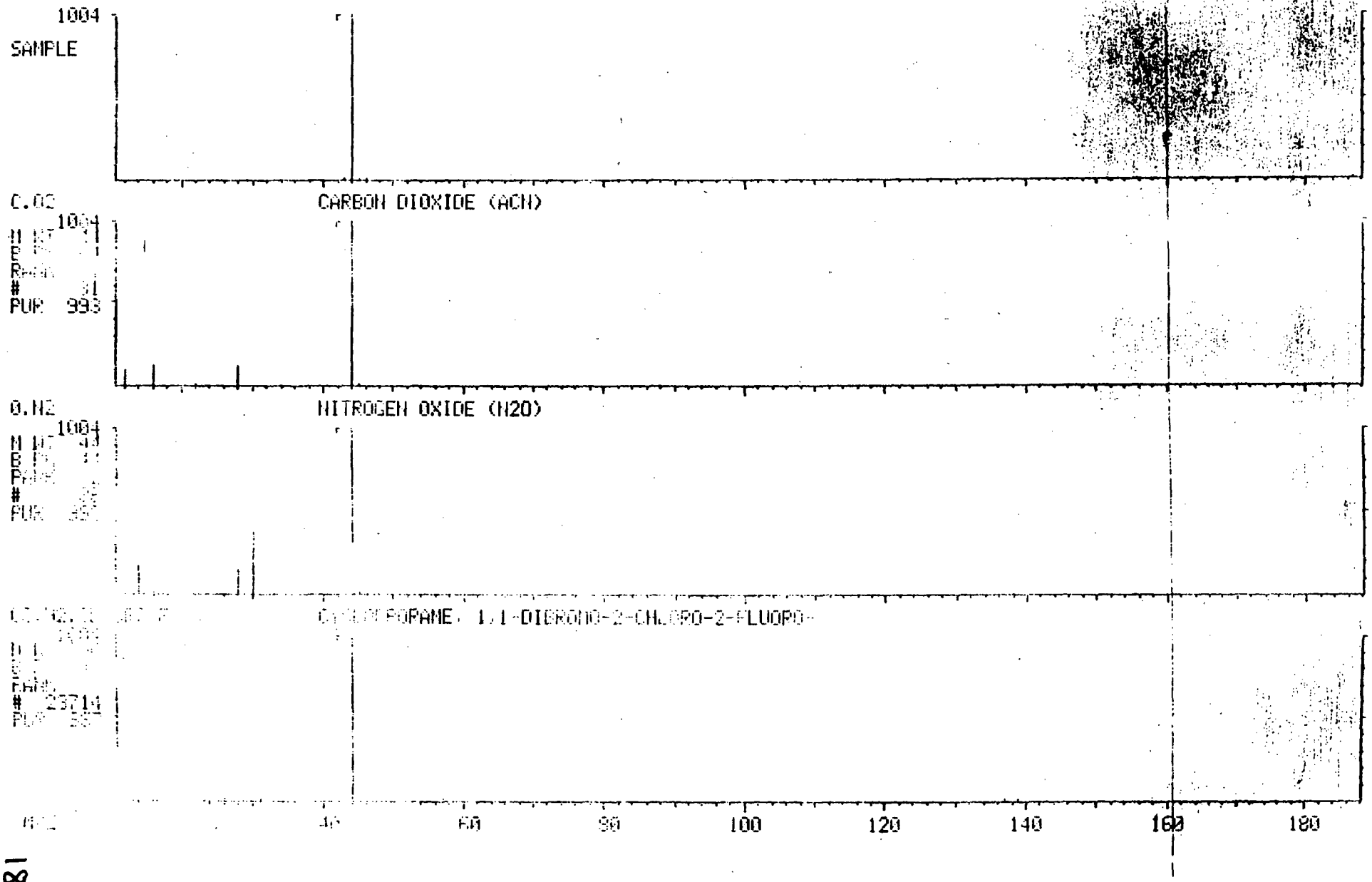
unknown



181

BASE M/Z: 44
RIC: 143615

CONDS.:
ENHANCED (S 15B 21 OT)

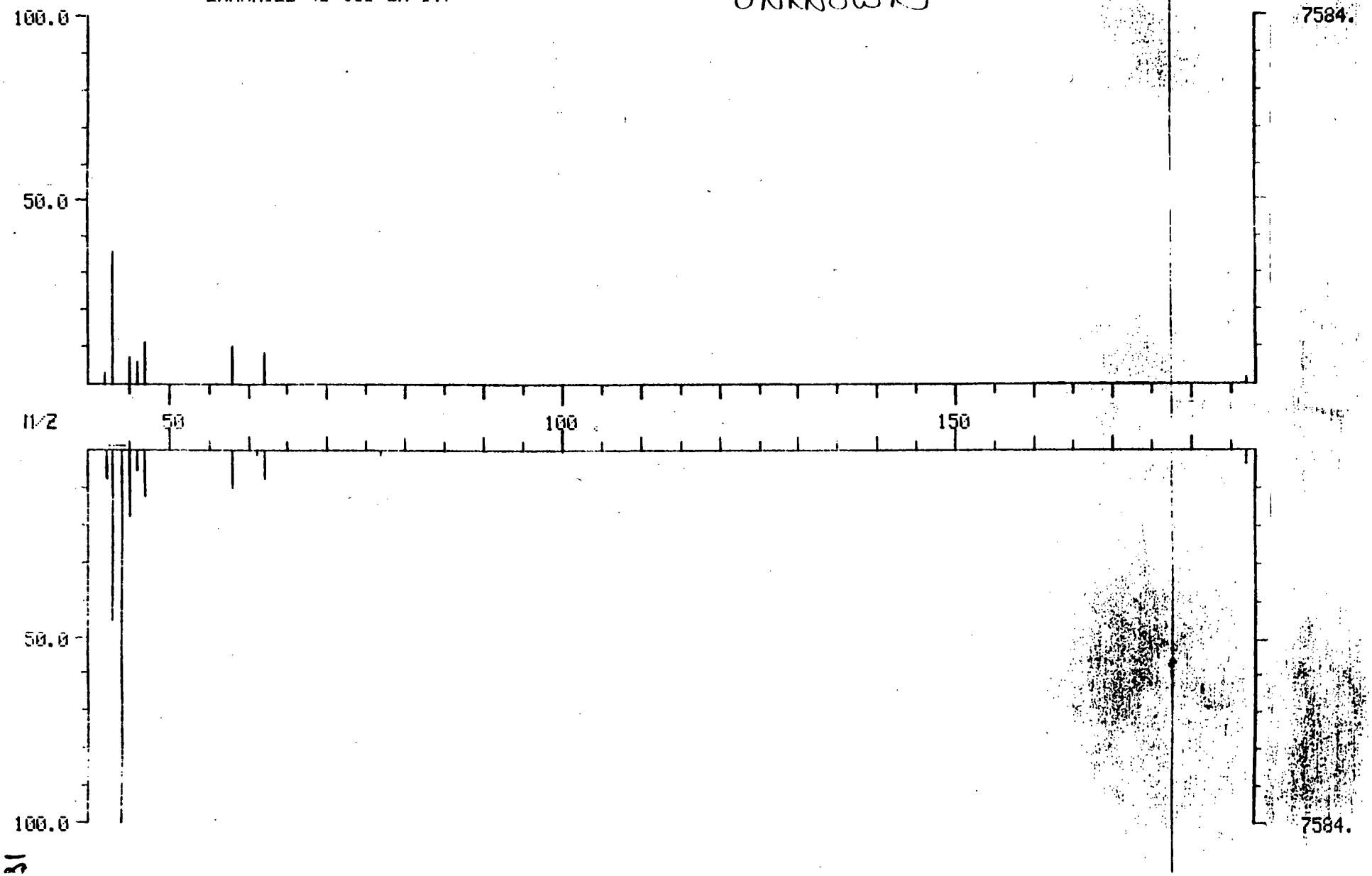


DUAL MASS SPECTRUM
09/06/88 18:11:00 + 7:03
SWMFLL: 660532
CONDS.:
ENHANCED (S 158 2N 0T)

DATA: PU6432 #143
CALI: PU6432 #2

BASE M/Z: 43/ 44
RIC: 6431./ 16063.

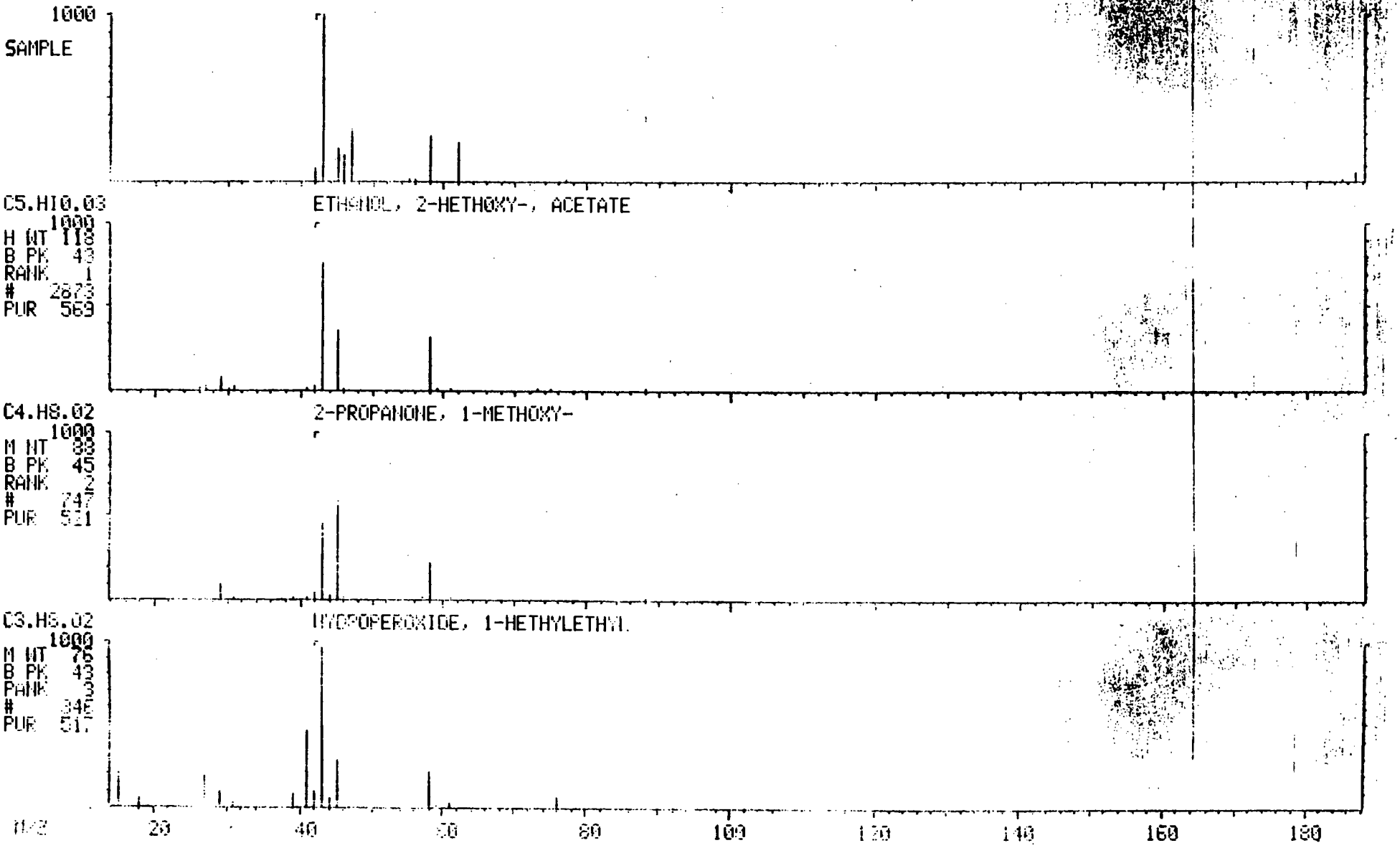
UNKNOWN



LIBRARY SEARCH
[illegible]26/85 18:21:00 + 7:03
SAMPLE: 680538
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6432 # 143
CALI: PU6432 # 2

BASE M/Z: 43
RIC: [illegible]6431

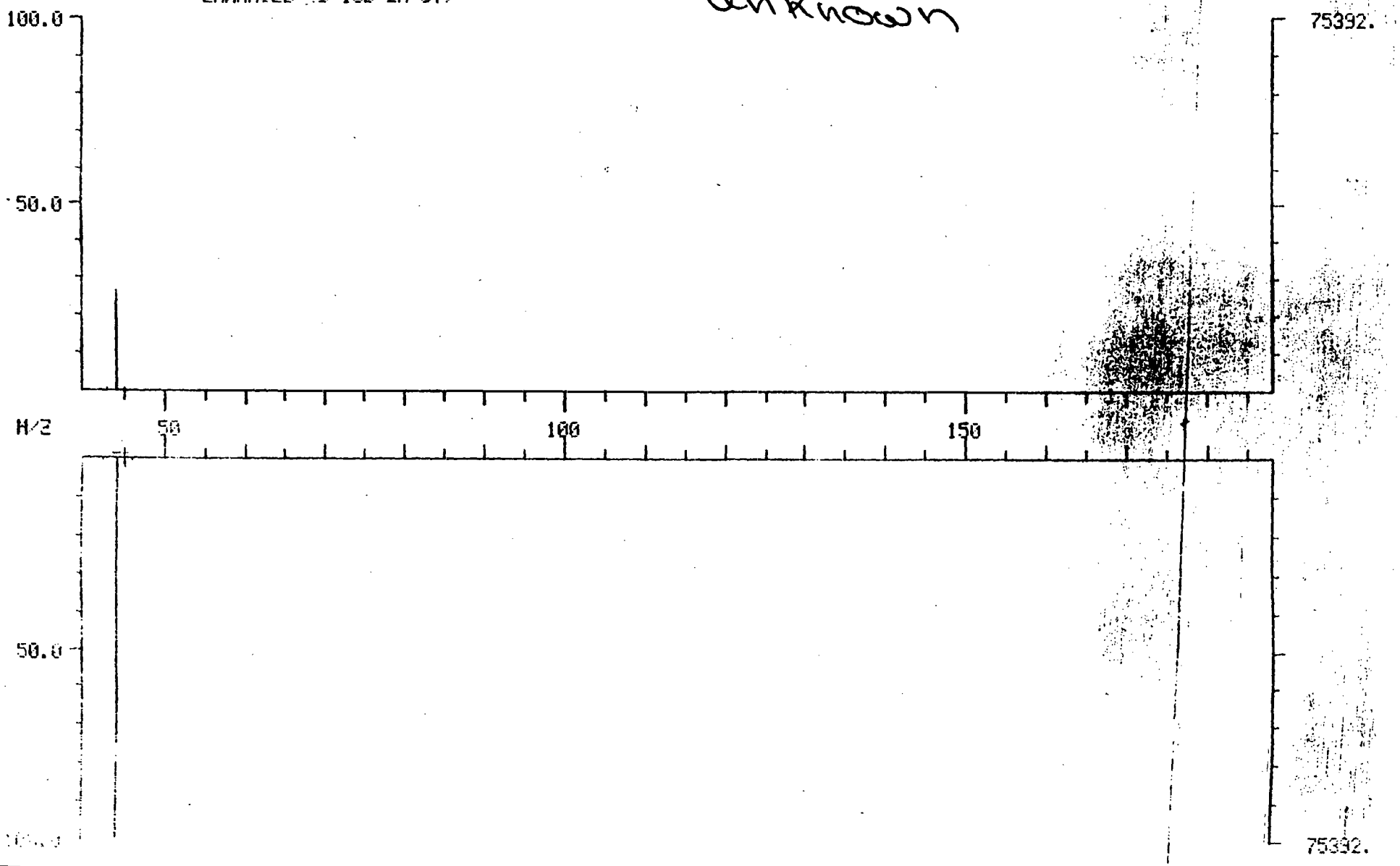


DUAL MASS SPECTRUM
09/26/86 18:21:00 + 7:39
SAMPLE: 660538
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 #153
CALI: PU6432 #2

BASE M/Z: 14/ 44
RIC: 21471./ 78207.

unknown



LIBRARY SEARCH
09/26/86 18:21:09 + 7:39
SAMPLE: 660588
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6432 # 153
CH 1: PU6432 # 2

BASE M/Z: 44
RIC: 21471.

SAMPLE

C3.H2.CL.BR2.F CYCLOPROPANE, 1,1-DIBROMO-2-CHLORO-2-FLUORO-

M WT 250
B PK 44
RANK 1
23714
PUR 955

C.O2 CARBON DIOXIDE (ACN)

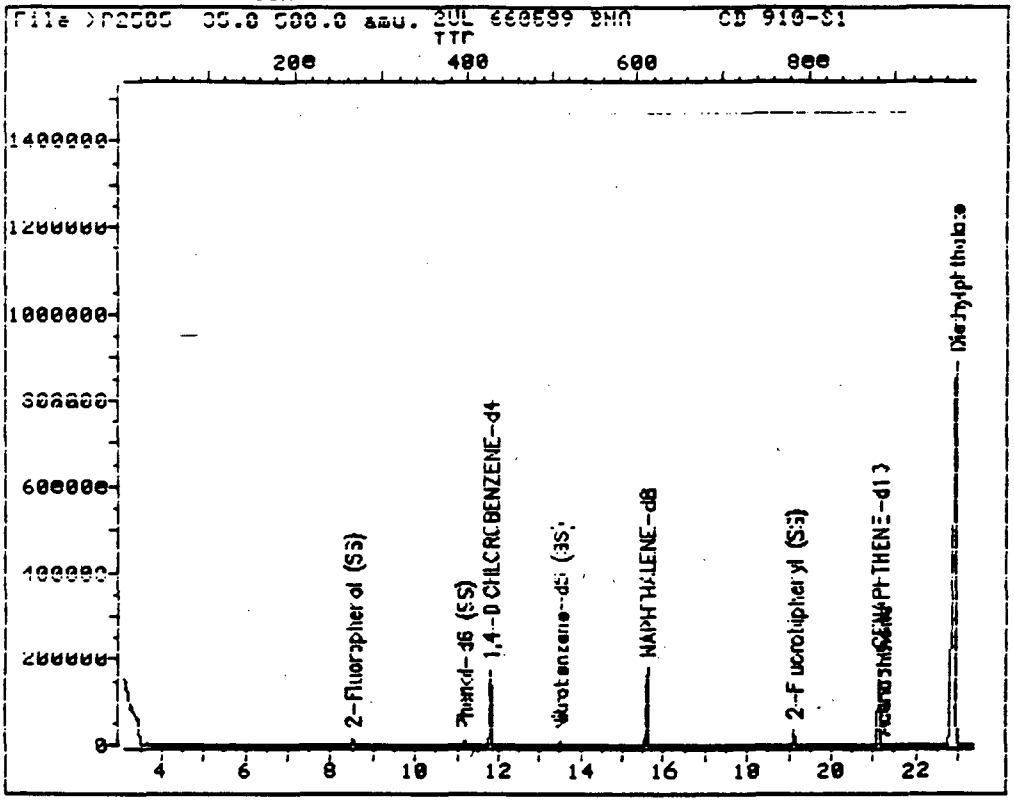
M WT 44
B PK 44
RANK 2
21
PUR 953

C.N2 NITROGEN OXIDE (N2O)

M WT 44
B PK 44
RANK 3
#
PUR 93

M/Z 20 40 60 80 100 120 140 160 180

TOTAL ION CHROMATOGRAM



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1

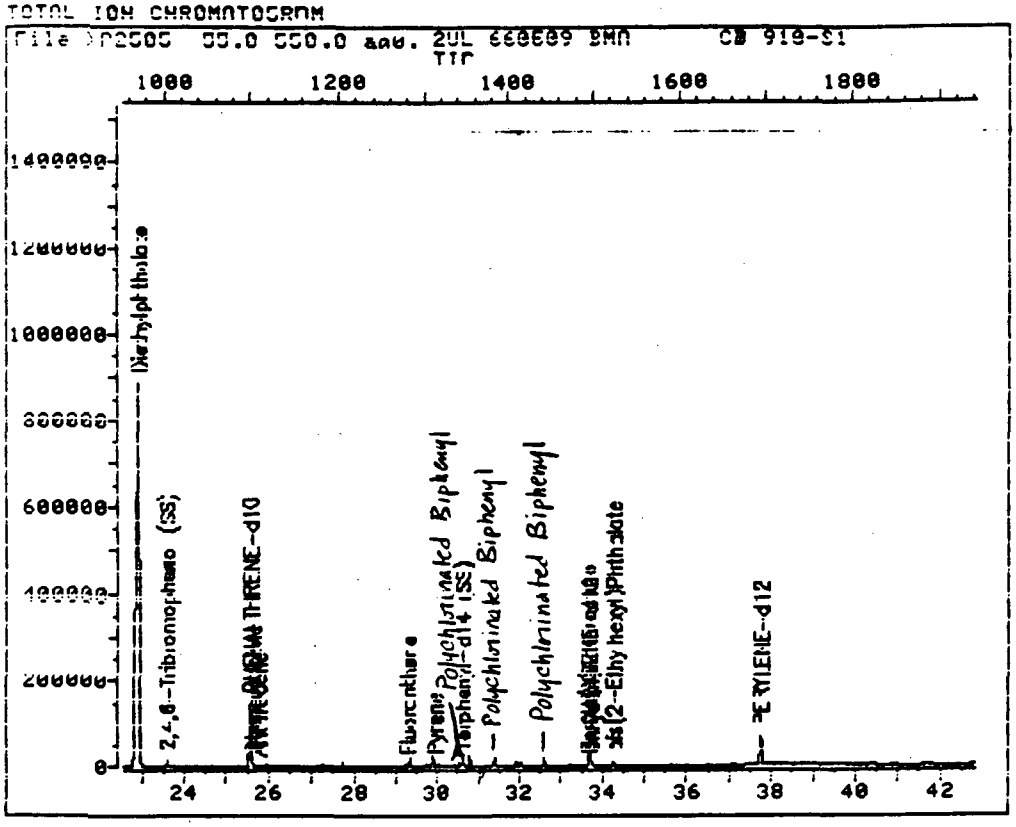
8TL#95

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861006 23:43
Injected at: 861006 22:58

TIC page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1

BTL#95

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861006 23:43
Injected at: 861006 22:58

TIC page 2 of 2

QUANT REPORT

Operator ID: STEVE Quant Rev: 4 Quant Time: 861006 23:43
Output File: ^P2505::OP Injected at: 861006 22:58
Data File: >P2505::D3 Dilution Factor: 1.00
Name: 2UL 660539 BNA
Misc: CD 910-S1 BTL#95

ID File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	11.82	427	62463	40.00	NG	89
3)	2-Fluorophenol (SS)	8.52	266	10223	5.85	NG	87
7)	Phenol-d6 (SS)	11.18	396	9994	5.16	NG	87
15)	*NAPHTHALENE-d8	15.62	613	208976	40.00	NG	50
16)	Nitrobenzene-d5 (SS)	13.51	510	6296	3.26	NG	85
27)	*ACENAPHTHENE-d10	21.14	883	95294	40.00	NG	92
31)	2-Fluorobiphenyl (SS)	19.14	785	28958	7.57	NG	97
34)	Acenaphthene	21.22	887	503	.13	NG	95
39)	Diethylphthalate	22.94	971	1986695	380.81	NG	97
42)	2,4,6-Tribromophenol (SS)	23.59	1003	4395	5.16	NG	83
43)	*PHENANTHRENE-d10	25.58	1100	142929	40.00	NG	50
50)	Phenanthrene	25.64	1103	5107	1.17	NG	51
51)	Anthracene	25.76	1109	1321	.30	NG	60
53)	Fluoranthene	29.28	1281	4683	1.94	NG	60
54)	*CHRYSENE-d12	33.70	1497	99213	40.00	NG	44
55)	Terphenyl-d14 (SS)	30.61	1346	14795	9.31	NG	38
57)	Pyrene	29.93	1313	4849	1.44	NG	46
60)	Benzo(a)Anthracene	33.66	1495	2315	.75	NG	84
61)	bis(2-Ethylhexyl)Phthalate	34.27	1525	5805	2.18	NG	86
62)	Chrysene	33.76	1500	2389	.76	NG	92
63)	*PERYLENE-d12	37.75	1695	94243	40.00	NG	77

* Compound is ISTD

18c

MS data file header from : >P2505

Sample: 2UL 660539 BNA Operator: STEVE MS 10/06/86 22:58
Misc. : CD 910-S1 BTL#95
Sys. #: 1 MS model: 96 SW/HU rev.: CA ALS # : 0
Method file: EXTRII Tuning file: MT9301 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 280

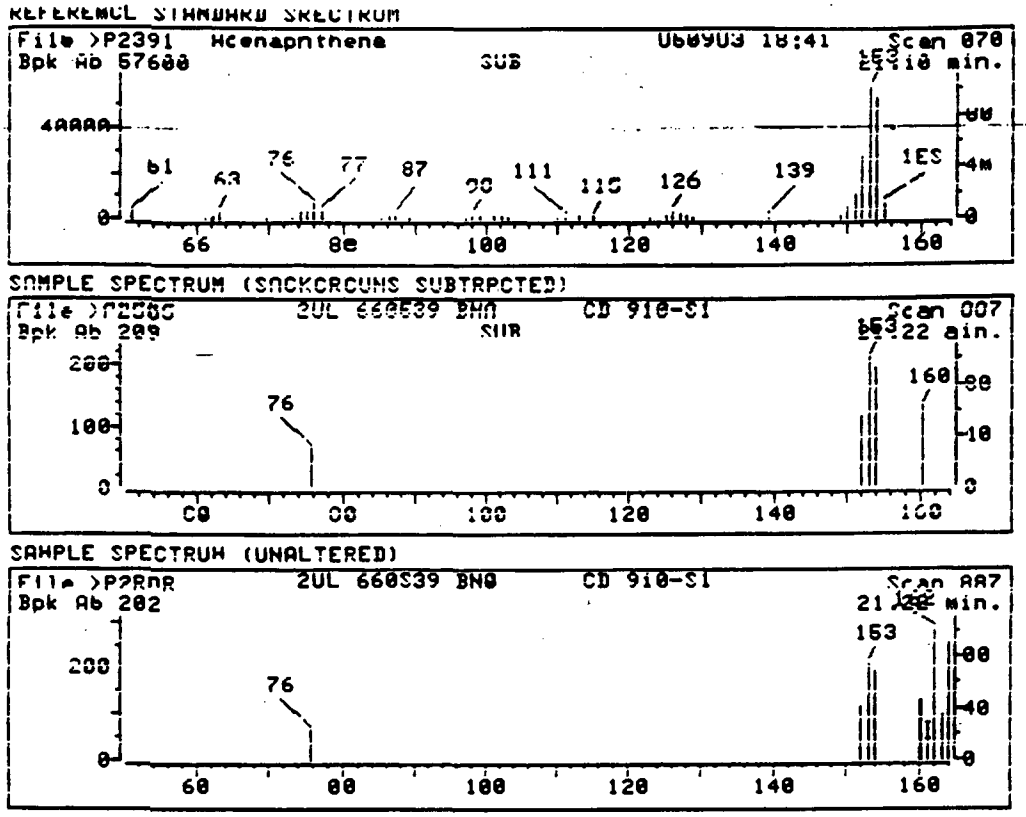
Chromatographic temperatures :	30.	300.	0.	0.	0.
Chromatographic times, min. :	4.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

>P2505 2UL 660539 BNA CD 910-S1
35.01 500.0 CLP ADC TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.619	609	613	615	183423	472487	472487	49.08	21.77
2	21.201	877	886	889	18017	123427	123427	12.82	5.68
3	23.001	960	974	983	4877	54565	54565	5.67	2.51
4	25.577	1097	1100	1113	145881	965824	962719	100.00	44.35
5	30.527	1340	1342	1353	5050	57439	53399	5.55	2.46
6	30.794	1353	1355	1358	24064	61171	58780	6.11	2.70
7	31.408	1380	1385	1388	19344	76361	73874	7.67	3.40
8	32.594	1440	1443	1447	19043	56738	54492	5.66	2.51
9	33.699	1490	1497	1508	9002	98035	84169	8.74	3.87
10	37.751	1691	1695	1706	66732	301130	232366	24.14	10.70

Sum of corrected areas: 2170278.

3:30 PM TUE., 7 OCT., 1986

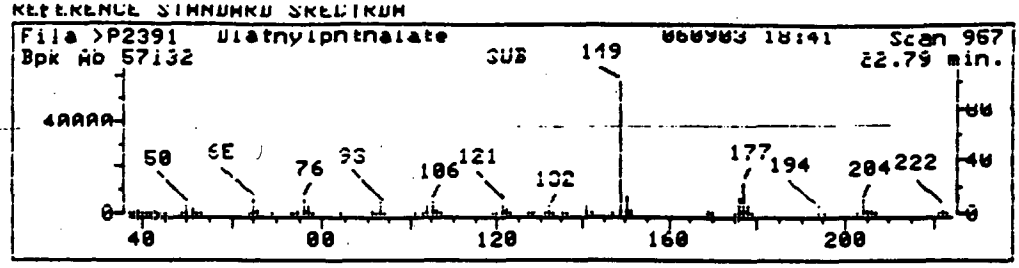


Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

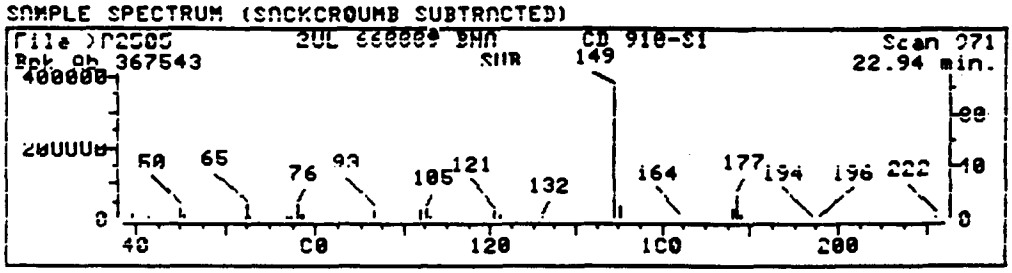
BTL#95

Compound No: 34
Compound Name: Acenaphthene
Scan Number: 887
Retention Time: 21.22 min.
Area: 503
Concentration: .13 NG
q-value: 95

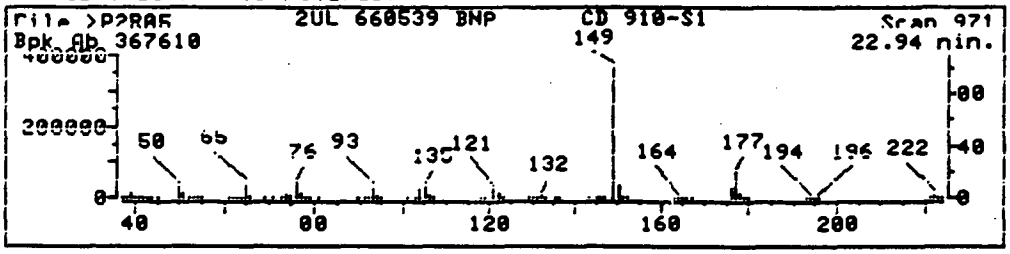
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



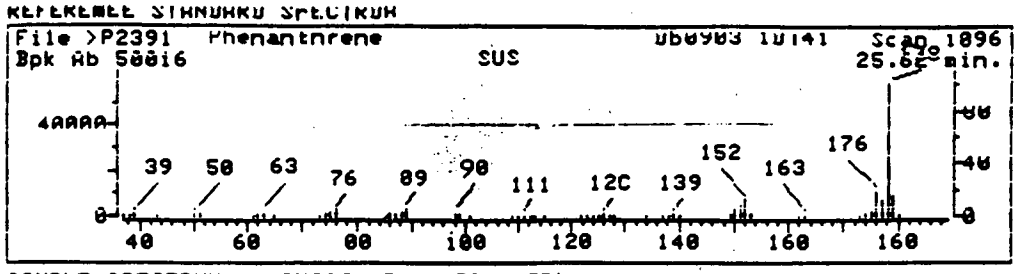
SAMPLE SPECTRUM (UNFILTERED)



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1 BTL#95
Quant Time: 861006 23:43
Injected at: 861006 22:58

Compound No: 39
Compound Name: Diethylphthalate
Scan Number: 971
Retention Time: 22.94 min.
Area: 1986695
Concentration: 380.81 NG
q-value: 97

REFERENCE STANDARD SPECTRUM



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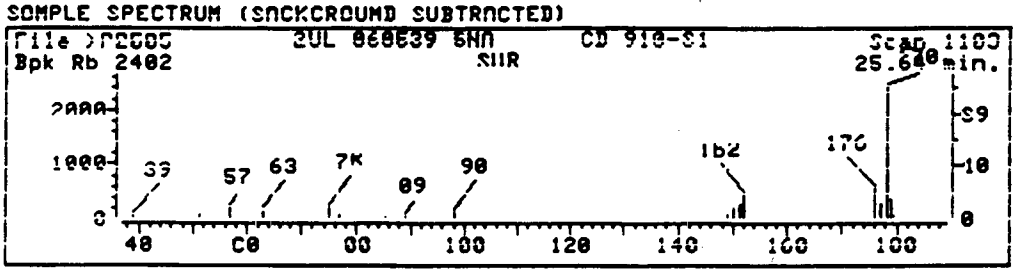
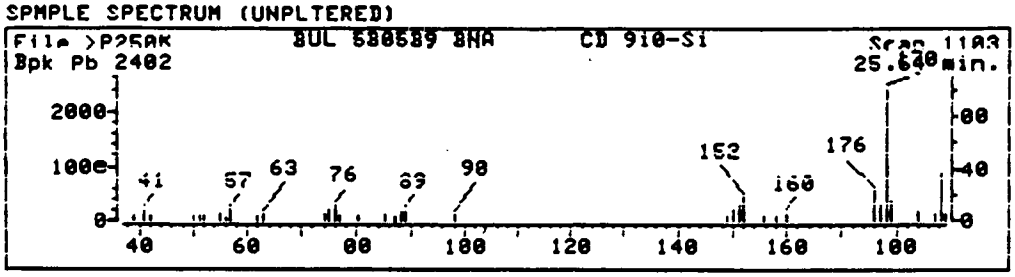


SAMPLE SPECTRUM (UNFILTERED)

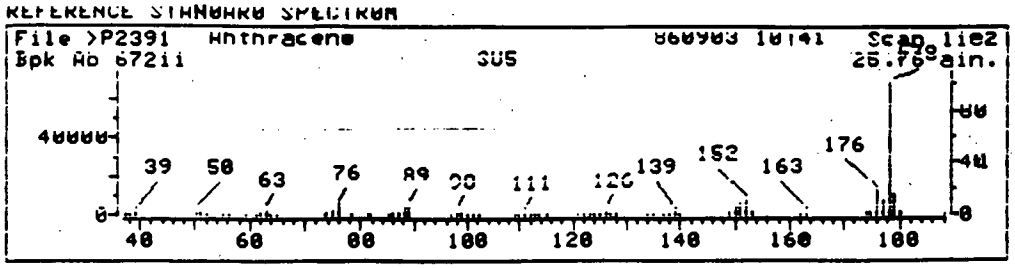


Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

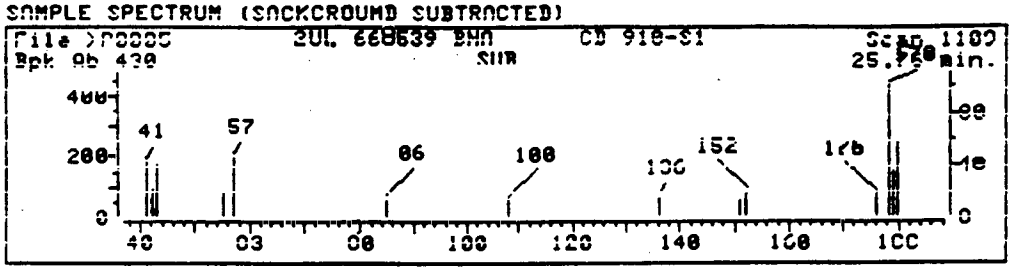
BTL#95

Compound No: 50
Compound Name: Phenanthrene
Scan Number: 1103
Retention Time: 25.64 min.
Area: 5107
Concentration: 1.17 NG
q-value: 51

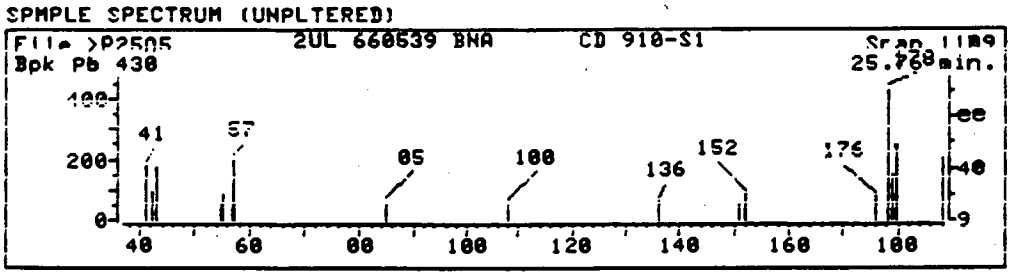
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

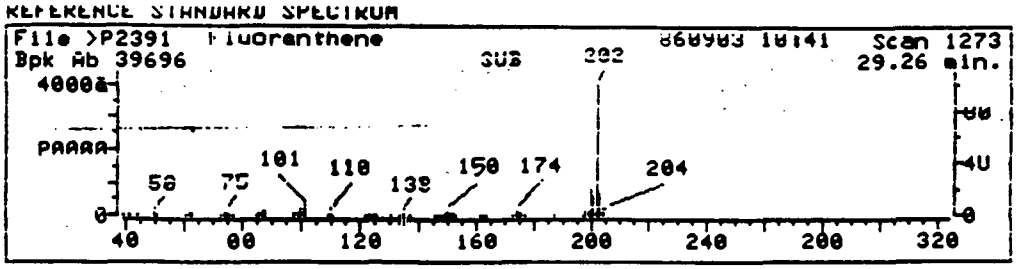


Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

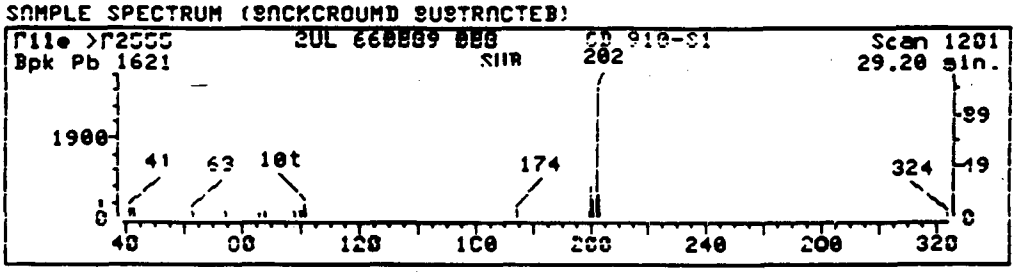
BTL#95

Compound No: 51
Compound Name: Anthracene
Scan Number: 1109
Retention Time: 25.76 min.
Area: 1321
Concentration: .30 NG
q-value: 60

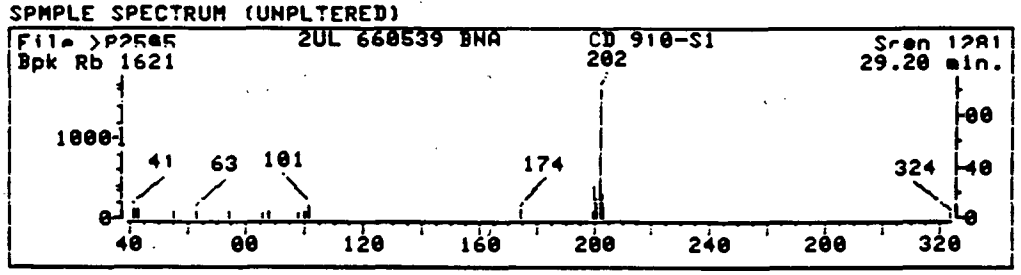
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

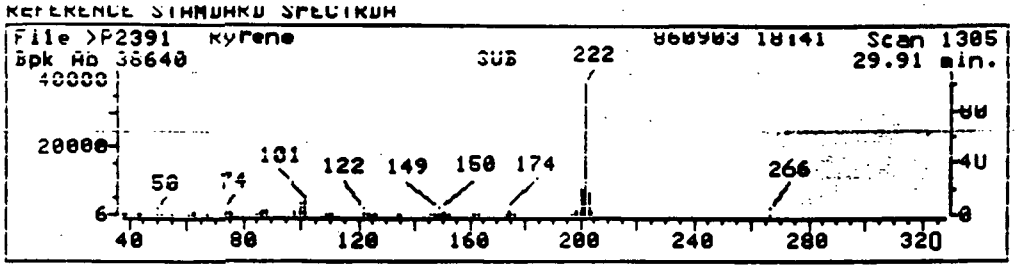


Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

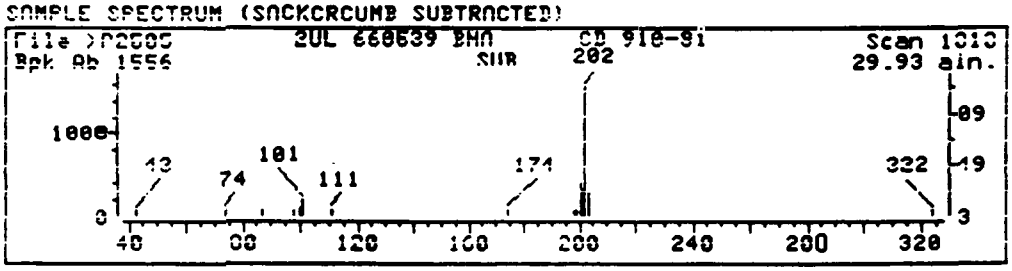
BTL#95

Compound No: 53
Compound Name: Fluoranthene
Scan Number: 1281
Retention Time: 29.28 min.
Area: 4683
Concentration: 1.94 NG
q-value: 60

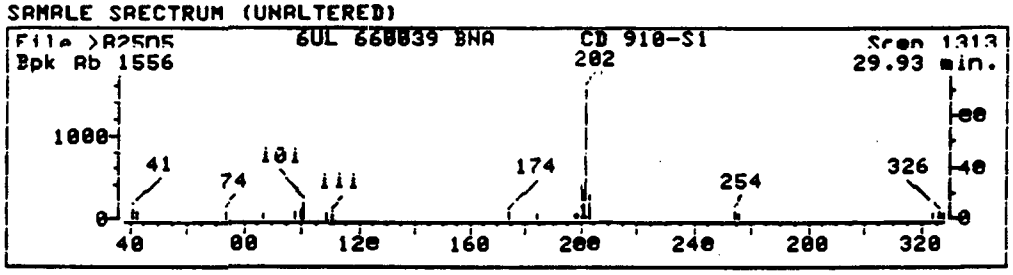
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (SACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

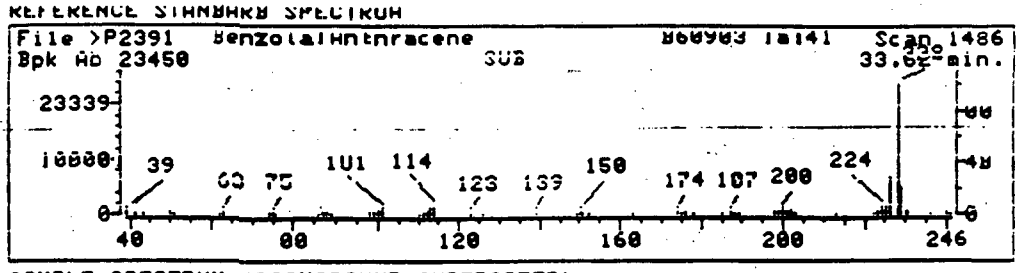


Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

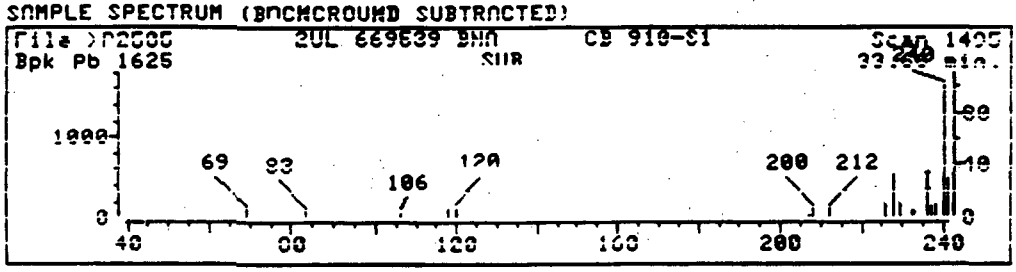
BTL#95

Compound No: 57
Compound Name: Pyrene
Scan Number: 1313
Retention Time: 29.93 min.
Area: 4849
Concentration: 1.44 NG
q-value: 46

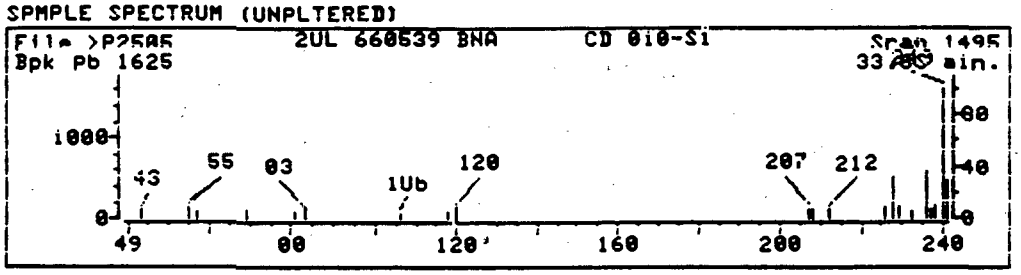
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

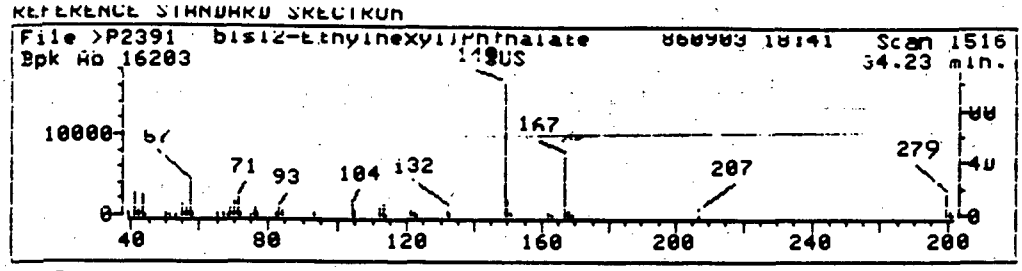


Data File: >P2505::D3
Name: 2UL 660539 SNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

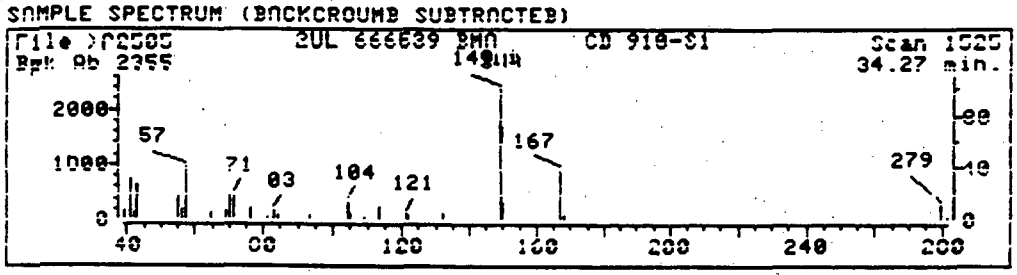
BTL#95

Compound No: 60
Compound Name: Benzo(a)Anthracene
Scan Number: 1495
Retention Time: 33.66 min.
Area: 2315
Concentration: .75 NG
q-value: 84

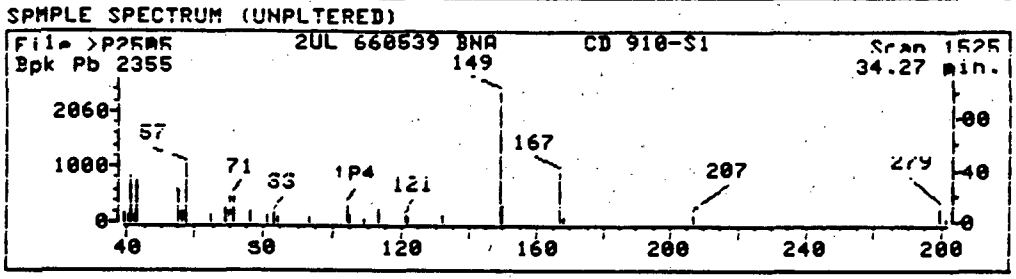
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

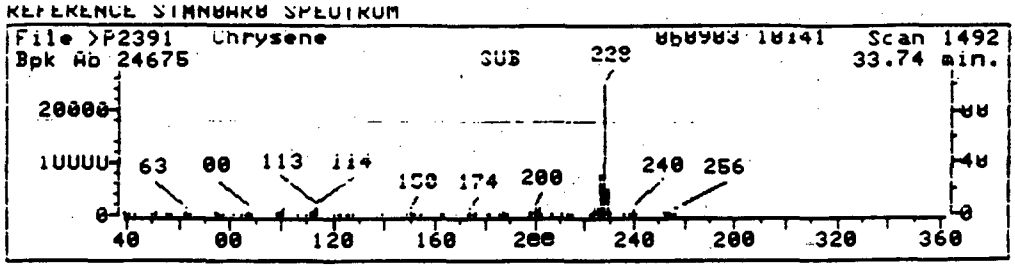


Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

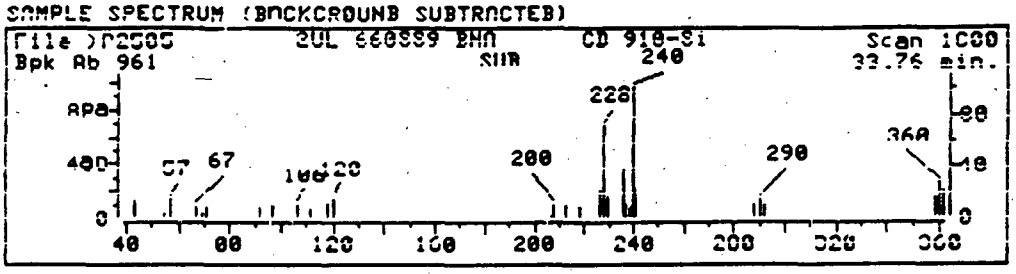
BTL#95

Compound No: 61
Compound Name: bis(2-Ethylhexyl)Phthalate
Scan Number: 1525
Retention Time: 34.27 min.
Area: 5805
Concentration: 2.18 NG
q-value: 86

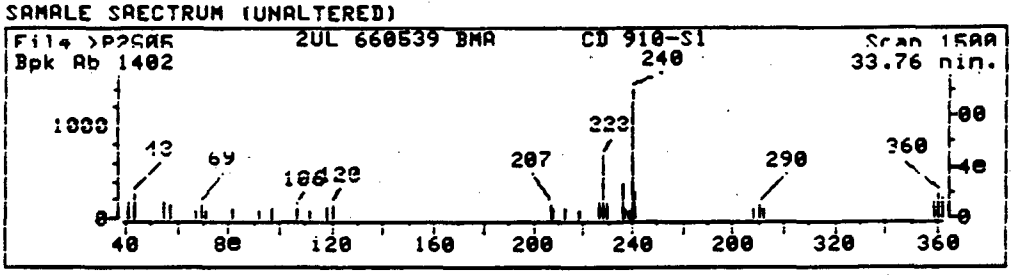
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



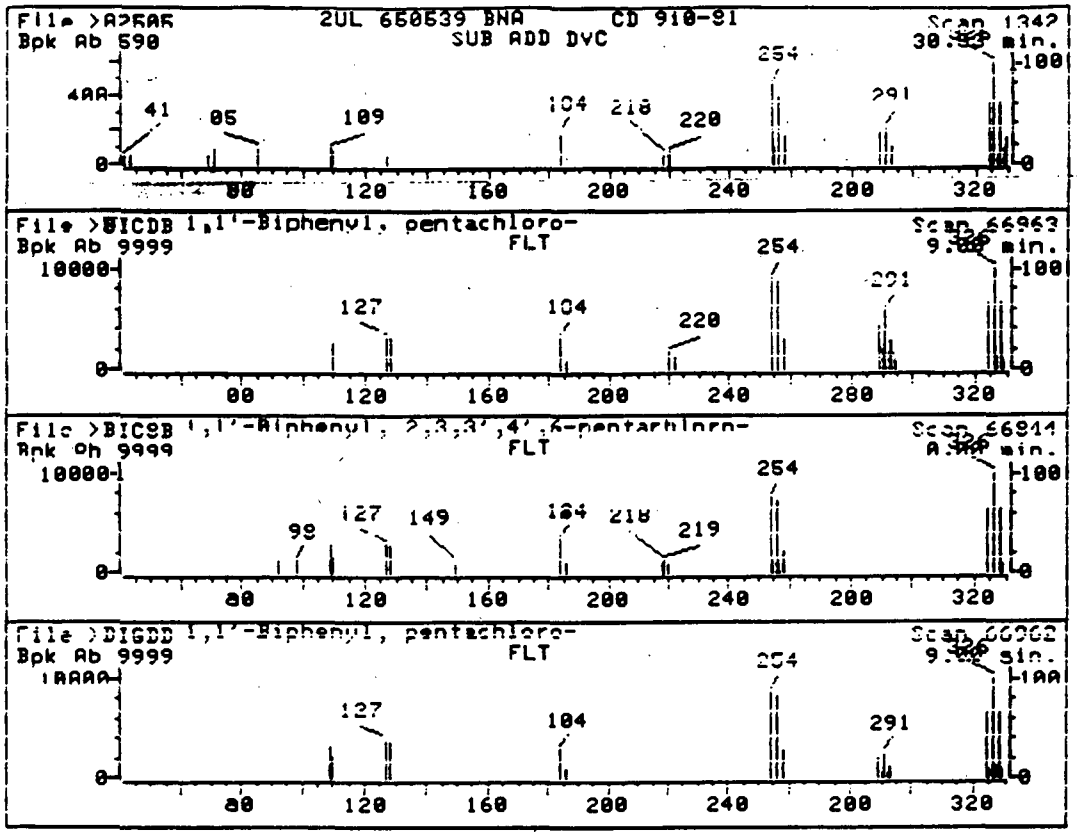
SAMPLE SPECTRUM (UNALTERED)



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

BTL#95

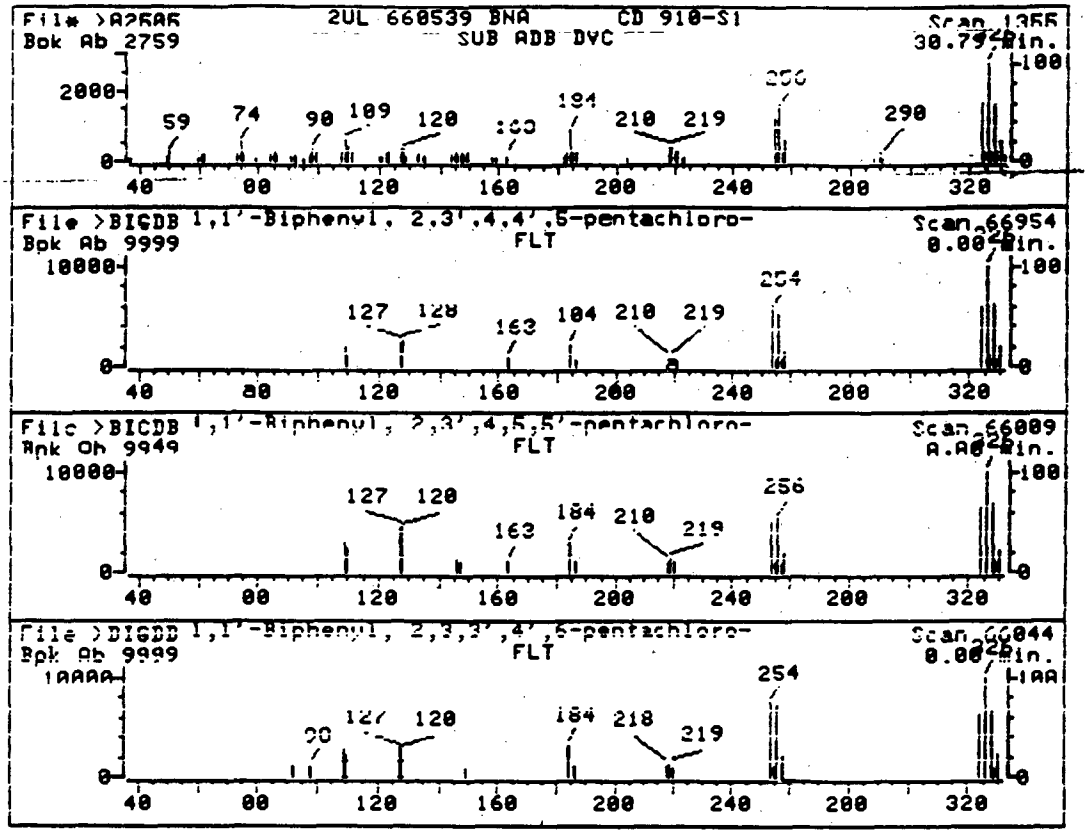
Compound No: 62
Compound Name: Chrysene
Scan Number: 1500
Retention Time: 33.76 min.
Area: 2389
Concentration: .76 NG
q-value: 92



1. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
2. 1,1'-Biphenyl, 2,3,3',4',6-pentachloro- 324 C12H5Cl5
3. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
4. 1,1'-Biphenyl, 2,2',4,4',5-pentachloro- 324 C12H5Cl5
5. 1,1'-Biphenyl, 2,3,3',4,4'-pentachloro- 324 C12H5Cl5

Sample file: >P2505 Spectrum #: 1342
Search speed: 1 Tilting option: N No. of ion ranges searched: 45

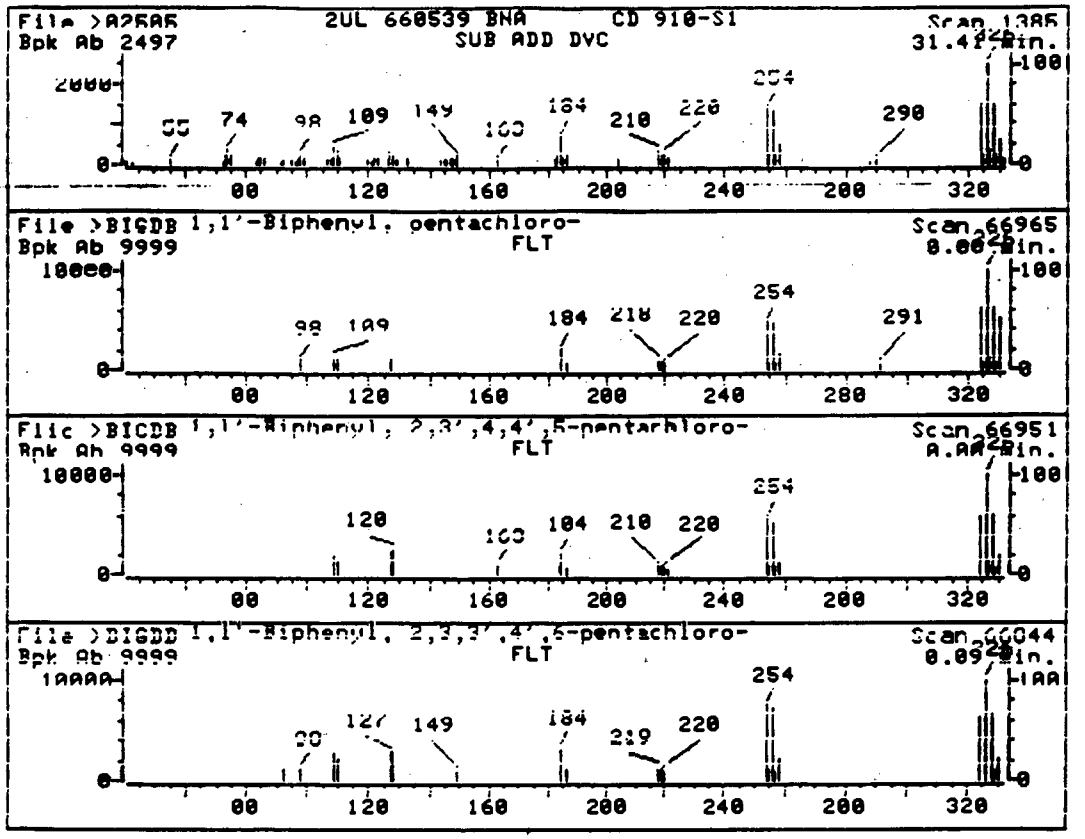
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	88*	25429292	66963	"BIGDB	85	130	3	0	75	2	65		50	
2.	86*	38380039	66844	"BIGDB	107	95	3	0	89	10	59		71	
3.	83*	25429292	66962	"BIGDB	89	115	3	0	78	7	54		55	
4.	83*	38380017	66843	"BIGDB	87	114	3	0	88	7	54		53	
5.	79*	32598144	66842	"BIGDB	94	102	3	0	98	13	43		60	



1. 1,1'-Biphenyl, 2,3',4,4',5-pentachloro- 324 C12H5Cl5
2. 1,1'-Biphenyl, 2,3',4,5,5'-pentachloro- 324 C12H5Cl5
3. 1,1'-Biphenyl, 2,3,3',4',6-pentachloro- 324 C12H5Cl5
4. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
5. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5

Sample file: >P2505 Spectrum #: 1355
Search speed: 1 Tilting option: N No. of ion ranges searched: 41

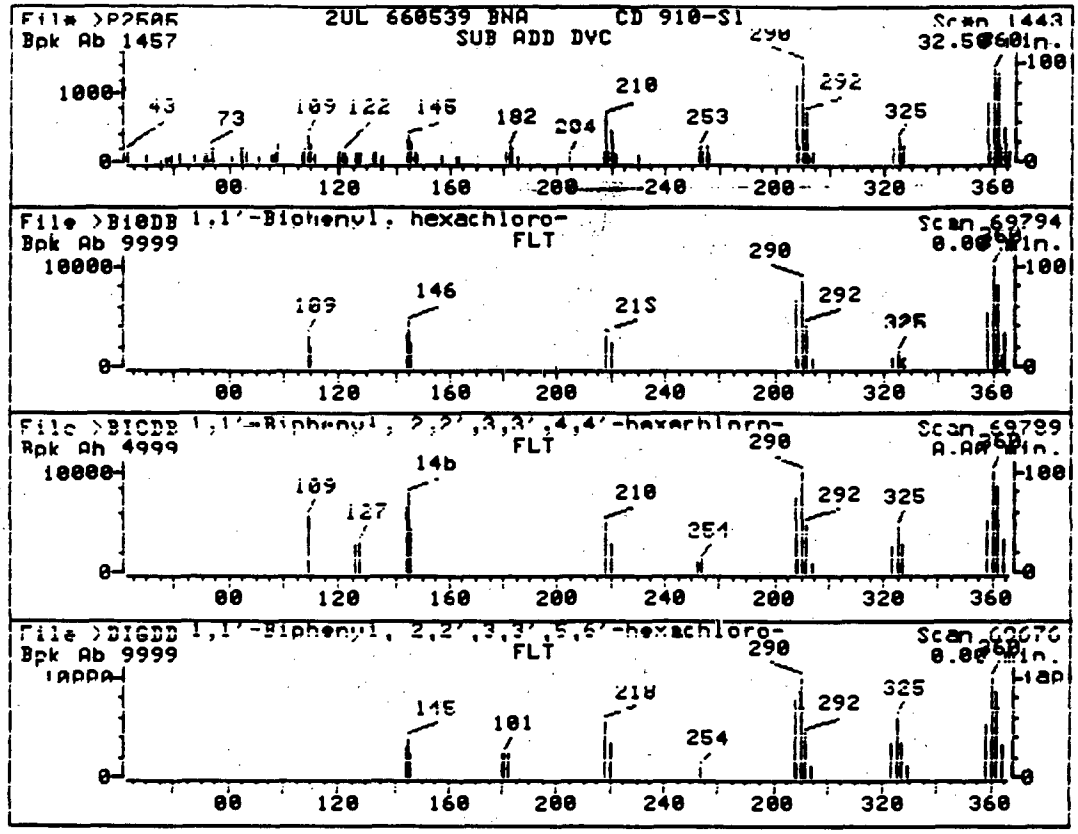
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	96*	31508006	66954	"BIGDB	131	51	2	0	79	6	68		96	
2.	96*	68194127	66850	"BIGDB	134	68	3	0	85	3	72		94	
3.	95*	38380039	66844	"BIGDB	148	54	3	0	75	15	64		96	
4.	95*	25429292	66965	"BIGDB	135	49	2	0	81	12	64		96	
5.	93*	25429292	66841	"BIGDB	124	67	3	0	79	3	68		89	



1. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
2. 1,1'-Biphenyl, 2,3',4,4',5-pentachloro- 324 C12H5Cl5
3. 1,1'-Biphenyl, 2,3,3',4',6-pentachloro- 324 C12H5Cl5
4. 1,1'-Biphenyl, 2,2',4,4',5-pentachloro- 324 C12H5Cl5
5. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5

Sample file: >P2505 Spectrum #: 1385
Search speed: 1 Tilting option: N No. of ion ranges searched: 45

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	99*	25429292	66965	"BIGDB	165	19	2	0	94	6	68	99
2.	96*	31508006	66954	"BIGDB	149	33	3	0	94	3	72	96
3.	96*	38380039	66844	"BIGDB	150	52	3	0	73	6	68	96
4.	95*	38380017	66843	"BIGDB	134	67	3	0	69	9	68	94
5.	89*	25429292	66841	"BIGDB	116	75	3	0	88	3	66	78



1. 1,1'-Biphenyl, hexachloro- 358 C12H4Cl6
2. 1,1'-Biphenyl, 2,2',3,3',4,4'-hexachloro- 358 C12H4Cl6
3. 1,1'-Biphenyl, 2,2',3,3',5,6'-hexachloro- 358 C12H4Cl6
4. 1,1'-Biphenyl, 2,2',3,4',5',6-hexachloro- 358 C12H4Cl6
5. 1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro- 358 C12H4Cl6

Sample file: >P2505 Spectrum #: 1443
Search speed: 1 Tilting option: N No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	99*	26601649	69794	"BIGDB	154	65	2	0	82	6	68		99	
2.	96*	38380073	69789	"BIGDB	141	90	3	0	92	0	72		96	
3.	96*	52744135	69676	"BIGDB	132	96	3	0	82	4	72		94	
4.	96*	38380040	69670	"BIGDB	130	97	3	0	92	0	72		94	
5.	96*	35065282	69786	"BIGDB	130	101	3	0	88	4	72		94	

660540

CD910-S1

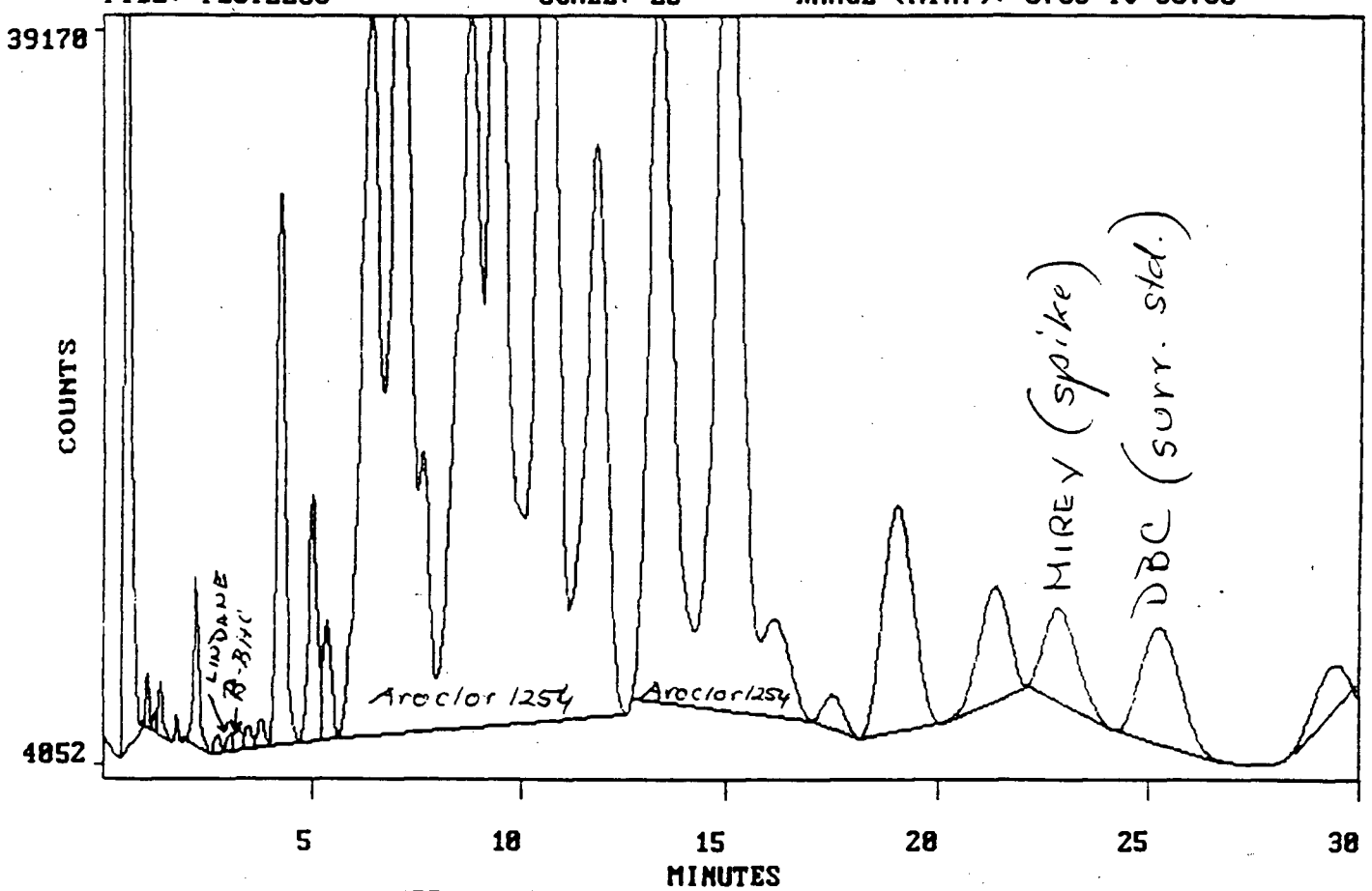
PRIMARY COLUMN

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time:14:57:44 Date:MON 13 OCT 86

Time:16:19:02 Date:TUE 07 OCT 86
Method:ARO1254C

FILE: PEST2200 SCALE: 25 RANGE (MIN.): 0.03 TO 30.00



ERROR: RECON:Unknown command

20

Channel # REINT Time 14 56 05 Date MON 13 OCT 86

Sample name
Data file FEET2266
Method name ARO1254C

Author LAL
Instrument Tracor 550 - ECD
Column 1.5% SP-2250/1.95% SP-2401 on 100/120
Notes Reintegration of Aroclors

Run time 30.00 min. Delay time 0.00 min.
Acq. time 16 19 02 Acq date TUE 07 OCT 86
Start PW 20.00 sec. End PW 150 00 sec.
Actual PW 140.0
Slope sens 0 75 uv/sec.

Area reject 500
peaks found 21
Vol Inj 5.0 ul Sample amount 1.000
Conv factor 1.000

METHOD NOT CALIBRATED!

AREA PERCENT REPORT

Peak	R.T. (min)	R/S	Peak name	Area %	Area	Peak Ht.	BL
1	0.578			25.133	4838238	977070	BE
2	1.090			0.068	13165	2493	EV
3	1.264			0.020	3802	828	VV
4	1.397			0.082	15741	2433	VB
5	2.237			0.369	70966	7875	ES
6	2.742			0 041	7907	920	SV
7	3.080		LINDANE	0 040	7748	782	VV
8	3.273		A-BHC	0.064	12210	967	VV
9	3.489			0 061	11796	1031	VV
10	3.787			0.082	15796	1324	VV
11	4.250		Aldrin ? → unknown	1.871	~300 000/100 (subtracted Ar1254) ~~360185/100~~	26095	VV
12	5 007		AROCLOR1254	0.365	166431	11616	VV
13	5 350			0.381	73348	5602	VE
14	9 413			45 317	8723570	60026	EE
15	15 042			17.657	3398959	41827	ES
16	17.513			0 260	50086	1526	EE
17	19.064			2 696	519051	10487	EB
18	21.355			1.330	1255936	5270	EB
19	22.860			1.254	241370	4372	BB
20	25 245			1.840	354128	5375	BB
21	29 545			0 571	109828	1790	BB

20

CD910-S1

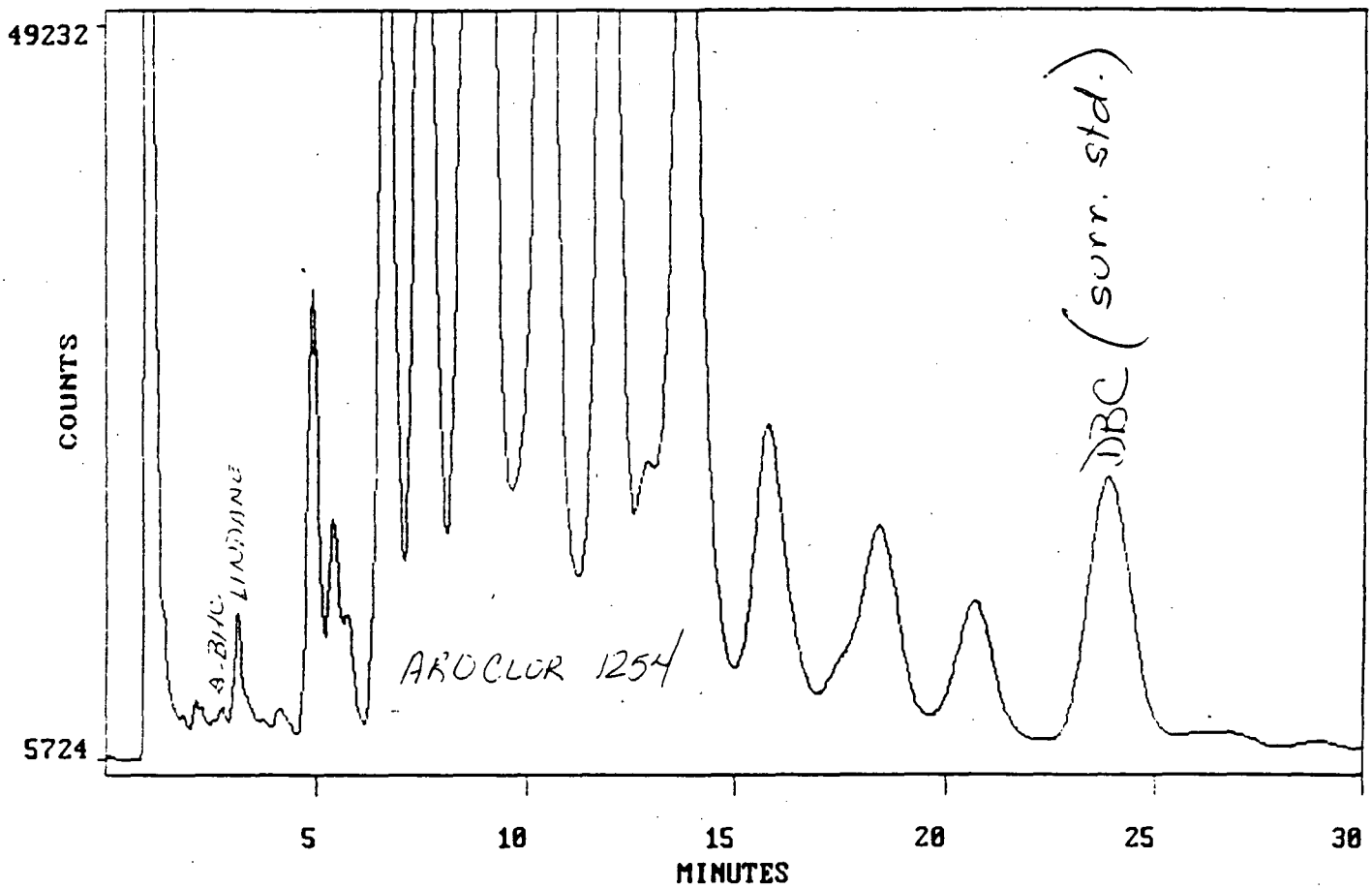
CONFIRMATORY COLUMN

Time 20:19:20 Date THU 09 OCT 86

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time 18:55:21 Date THU 09 OCT 86
Method PEST2

FILE: PEST2309 SCALE: 20 RANGE (MIN.): 0.03 TO 30.00



Channel # ....4 Time 19:26:08 Date THU 09 OCT 86
Run #4 of 100

Sample name..... NJDEP
Data file..... DAT258:PEST2309
Method name..... PEST2

Author..... LAL
Instrument..... ECD
Column ..... ~~E~~ Y-2 3% SP-2100 on 100/120 SUPELCOPORT
Notes..... ~~Primary~~ Secondary Column Runs

Run time..... 30.00 min. Delay time... 0.00 min.
Acq. time..... 18:55:21 Acq. date... THU 09 OCT 86
Start PW..... 20.00 sec. End PW..... 150.00 sec.
Actual PW.... 140.0
Slope sens..... 0.75 uv/sec.

Area reject.... 500
peaks found.. 26
Vol. Inj ..... 5.0 ul Sample amount.. 1.000
Conv. factor... 1.000

METHOD NOT CALIBRATED!

AREA PERCENT REPORT

Peak	R.T.(min)	R/S	Peak name		Area %	Area	Peak Ht	BL
1	0.098				0.003	1069	104	BB
2	1.100				32.640	11245397	869548	BB
3	1.846				0.008	2665	476	BB
4	2.178				0.076	26034	1767	BV
5	2.598				0.016	5475	632	VV
6	2.789		B-BHC		0.049	16891	1392	VV
7	3.158		LINDANE		0.344	118493	7035	VE
8	3.736				0.022	7476	473	EV
9	4.164				0.085	29180	1501	VB
10	4.914				1.407	484619	26562	BV
11	5.398				0.686	236413	12817	VV
12	5.716		unknown	*	0.344	118677	7170	VV
13	6.671				4.474	1541536	58033	VV
14	7.584				6.884	2371839	70936	VV
15	8.673				4.177	1438967	58694	VV
16	9.061				8.100	2790622	83931	VV
17	10.488				9.680	3334943	80912	VV
18	11.983				8.628	2972588	74155	VV
19	12.911				1.243	428267	16415	VV

wrong RT
* 4 Aldrin RT = 2.70
↓
146 ng/ml
↓
Aldrin * <100
20

22	18.435					
23	20.677		1.629	561332	8408	VV
24	23.866		3.438	1184582	15830	VE
25	26.464	DBC	0.189	64987	763	EB
26	28.947		0.052	17992	345	BB
TOTALS			100.000	34452495		

III. 2. Reporting Package
NJ DEP I.D. # S-2

H2M

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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Lab No. 660542
Type: Misc. - Tier I
Point: Soil #2
Date Collected: 9/11/86
Date Received: 9/12/86
Collected By: CL 99

PRIORITY POLLUTANTS ANALYSIS - PURGEABLE ORGANICS

Scan No.	Cas Number	Compound	ug/kg
	74-87-3	Chloromethane	10U
	74-83-9	Bromomethane	10U
	75-01-4	Vinyl chloride	10U
	75-00-3	Chloroethane	10U
127	75-09-2	Methylene chloride	5000
	75-69-4	Trichlorofluoromsthane	10U
201	75-35-4	1,1-dichloroethene	38
	75-34-3	1,1-dichloroethane	10U
252	156-60-5	Cis/Trans-1,2-dichloroethene	100
266	57-66-3	Chloroform	19
	107-06-2	1,2-dichloroethane	10U
322	71-55-6	1,1,1-Trichloroethane	74B
	56-23-5	Carbon tetrachloride	10U
	75-27-4	Bromodichloromethane	10U
	79-34-5	1,1,2,2-Tetrachloroethane	10U
	70-87-5	1,2-dichloropropane	10U
	10061-02-6	Trans-1,3-dichloropropene	10U
409	79-01-6	Trichloroethene	79
	124-48-1	Dibromochloromethane	10U
	79-00-5	1,1,2-trichloroethane	10U
426	71-43-2	Benzene	3J
	10061-01-5	cis-1,3-Dichloropropene	10U
	110-75-8	2-chloroethylvinyl ether	10U
	75-25-2	Bromoform	10U
	127-10-4	Tetrachloroethene	10U
595	106-88-3	Toluene	5J
	106-90-7	Chlorobenzene	10U
	100-41-4	Ethylbenzene	10U
	541-73-1	1,2-Dichlorobenzene	10U
	95-50-1	1,3-Dichlorobenzene	10U
	106-46-1	1,4-Dichlorobenzene	10U

Date Reported: 10/15/86

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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample # SOil #2

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob. FIT	% Prob. REIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Unknown (Carbon Dioxide)			12	320B
2.		Unknown			226	110
3.	560-21-4	Trimethylpentane	89	87	576	30
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J Mixla

H2M

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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

Lab Nams: H2M Labs
Sample Lab No. 660543 - S-2
Concentration: Low

Date Extracted: 9/24/86
Date Analyzed: 10/6/86
Dil. Factor: 1:2

Semi-Volatile Compounds

C.A.S. Number		ug/kg	C.A.S. Number		ug/kg	Sca No
65-75-9	N-Nitrosodimethylamine	20000U	83-32-9	Acenaphthene	20000U	
108-95-2	Phenol	20000U	51-28-5	2,4-Dinitrophenol	20000U	
62-53-3	Aniline	20000U	100-02-7	4-Nitrophenol	20000U	
111-44-4	bis(2-Chloroethyl)Ether	20000U	121-14-2	2,4-Dinitrotoluene	20000U	
96-57-8	2-Chlorophenol	20000U	606-20-2	2,6-Dinitrotoluene	20000U	
541-73-1	1,3-Dichlorobenzene	20000U	84-66-2	Diethylphthalate	20000U	
106-46-7	1,4-Dichlorobenzene	20000U	7005-72-3	4-Chlorophenyl-phenylether	20000U	
96-50-1	1,2-Dichlorobenzene	20000U	86-73-7	Fluorene	20000U	
39638329	bis(2-chloroisopropyl)ether	20000U	534-52-1	4,6-Dinitro-2-Methylphenol	20000U	
621-64-7	N-Nitroso-Di-n-Propylamine	20000U	86-30-6	N-Nitrososdiphenylamine (1)	20000U	
67-72-1	Hexachloroethane	20000U	101-55-3	4-Bromophenyl-phenylether	20000U	
98-95-3	Nitrobenzene	20000U	118-74-1	Hexachlorobenzene	20000U	
78-59-1	Isophorone	20000U	87-86-5	Pentachlorophenol	20000U	
88-75-5	2-Nitrophenol	20000U	85-01-8	Phenanthrene	3000J	110
106-67-9	2,4-Dimethylphenol	20000U	120-12-7	Anthracene	20000U	
111-91-1	bis(2-Chloroethoxy)Methane	20000U	84-74-2	Di-n-Butylphthalate	20000U	
120-83-2	2,4-Dichlorophenol	20000U	206-44-0	Fluoranthene	20000U	
120-82-1	1,2,4-Trichlorobenzene	20000U	92-87-5	Benzidine	60000U	
91-20-3	Naphthalene *	3100J	129-00-0	Pyrene	20000U	
87-68-3	Hexachlorobutadiene	20000U	85-68-7	Butylbenzylphthalate	20000U	
59-50-7	4-Chloro-3-MethyIphenol	20000U	91-94-1	3,3'-Dichlorobenzidine	20000U	
77-47-4	Hexachlorocyclopentadiene	20000U	56-55-3	Benzo(a)Anthracene	20000U	
88-06-2	2,4,6-Trichlorophenol	20000U	117-81-7	bis(2-Ethylhexyl)Phthalate	20000U	
91-58-7	2-Chloronaphthalene	20000U	218-01-9	Chrysene	20000U	
131-11-3	Dimethyl Phthalate	20000U	117-84-0	Di-n-Octyl Phthalate	20000U	
208-96-8	Acenaphthylene	20000U	206-99-2	Benzo(b)Fluoranthene	20000U	
			207-08-9	Benzo(k)Fluoranthene	20000U	
			60-32-8	Benzo(a)Pyrene	20000U	
			193-39-5	Indeno(1,2,3-cd)Pyrene	20000U	
			53-70-3	Dibenzo(a,h)Anthracene	20000U	
			191-24-2	Benzo(g,h,i)Perylene	20000U	

* Scan No. 616

(1) Cannot be separated from diphenylamine

Date Reported: 10/16/86

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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample #: S-2

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob. FIT|RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		No compounds found > 10%			
2.		internal standards			
3.					
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H2M

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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Sample Lab No. 650544
Date Extracted: 9/18/86
Date Analyzed: 10/7/86
Type: Misc. - Tier I
Point: S-2
Collected By: CL 99

ANALYSIS POR PESTICIDES/PCB's

C.A.S. No.	Compound	ug/kg
319-84-6	Alpha-BHC	8U
319-87-7	Beta-BHC	470
319-86-8	Delta-BHC	170B
58-89-9	Gamma-BHC (Lindane)	8U
76-44-8	Heptachlor	40U
309-00-2	Aldrin	100U
1024-57-3	Heptachlor Epoxide	1000U
959-98-8	Endosulfan I	200U
58-57-1	Dieldrin	1000U
72-55-9	4,4'-DDE	200U
72-20-8	Endrin	200U
33213-65-9	Endosulfan II	200U
72-54-8	4,4'-DDD	200U
1031-07-8	Endosulfan Sulfate	200U
50-29-3	4,4'-DDT	1000U
72-43-5	Methoxychlor	80U
53494-70-5	Endrin Ketone	16U
57-74-9	Chlordane	200U
8001-35-2	Toxaphene	200U
12674-11-2	Aroclor 1016	200U
11104-28-2	Aroclor 1221	200U
11141-16-5	Aroclor 1232	200U
53469-21-9	Aroclor 1242	200U
12672-29-6	Aroclor 1248	200U
11097-69-1	Aroclor 1254	190000
11096-82-5	Aroclor 1260	1000U

Vi = Volume of extract injected (uL)
Ws = Weight of sample extracted (g)
Vs = Ws = 9.81 g Vt = 10 mL
Date Reported: 10/17/86

Vs = Volume of water extracted (mL)
Vt = Volume of Total extract (mL)
Vi = 5 uL

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* *
****
S.C. McLendon, P.E.
Laboratory Director

21

Lab Name : H2M LABS

Sample Number
660544

NJDEP #CD9I0-S2
Run 2268

ORGANICS ANALYSIS DATA SHEET

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Probability Fit : Rev.F	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		Unknown		1.38	54
2.		Unknown		1.75	190
3.		Unknown		2.23	190
4.		Unknown		2.43	48
5.		Unknown		2.74	47
6.		Unknown		17.67	56
7.		Unknown		19.26	410
8.		Unknown		20.49	150
9.		Unknown		21.52	120
10.		Unknown		4.39	410
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30.					

Date Reported: I0-I6-86

S.C. McLendon, P.E.
Laboratory Director

H2M
Environmental Engineers & Scientists
HOLZMACHER, McLENDON and MURRELL, P.C.
575 BROAD HOLLOW ROAD, MELVILLE, NEW YORK 11747 (516) 694-3040

WATER RESOURCES • WATER SUPPLY & TREATMENT • SEWERAGE & TREATMENT • ECOLOGICAL & IMPACT STUDIES
MODEL STUDIES • PILOT PLANT STUDIES • WATER/WASTE WATER LABORATORY AND ANALYTICAL SERVICES

LABORATORY REPORT

LAB NO. 660545
PROJECT NO. 2C

CLIENT'S NAME AND ADDRESS

NEW JERSEY D.E.P.
63 PROSPECT ST.
TRENTON, NEW JERSEY 08618

TYPE OF SAMPLE - MISCELLANEOUS COLLECTED BY CL 99
DATE COLLECTED - 9/11/86 DATE RECEIVED - 9/12/86

NJDEP SAMPLE ICD 910-S2
NJDEP SAMPLE POINT I.D. #SOIL 2
SOIL SAMPLE

PARAMETER	RESULT	PARAMETER	RESULT
ANTIMONY	<12.9 N	SELENIUM	1.70 S N
ARSENIC	10.9	SILVER	2.10 N
BERYLLIUM	1.10	THALLIUM	<2.20 N
CADMIUM	3.20	ZINC	64.3 N
CHROMIUM	15.1	PHENOLS	0.07
COPPER	62.4	CYANIDE	<1.70
LEAD	581.	TOTAL SOLIDS	93.0 %
MERCURY	1.00 N		
NICKEL	16.3		

ALL RESULTS REPORTED IN mg/kg DRY WEIGHT

ALL RESULTS IN (MG/L) EXCEPT AS NOTED BY # (UG/L) OR % (PERCENT) AND
T.COLI BACT. & FECAL COLI (MPN/100ML)
COLOR, ODOR, TURBIDITY & PH (UNITS)
APC & FECAL STREP (COUNTS/ML)
SPEC.COND. (UMHOS) SETT.SOLIDS(ML/L)

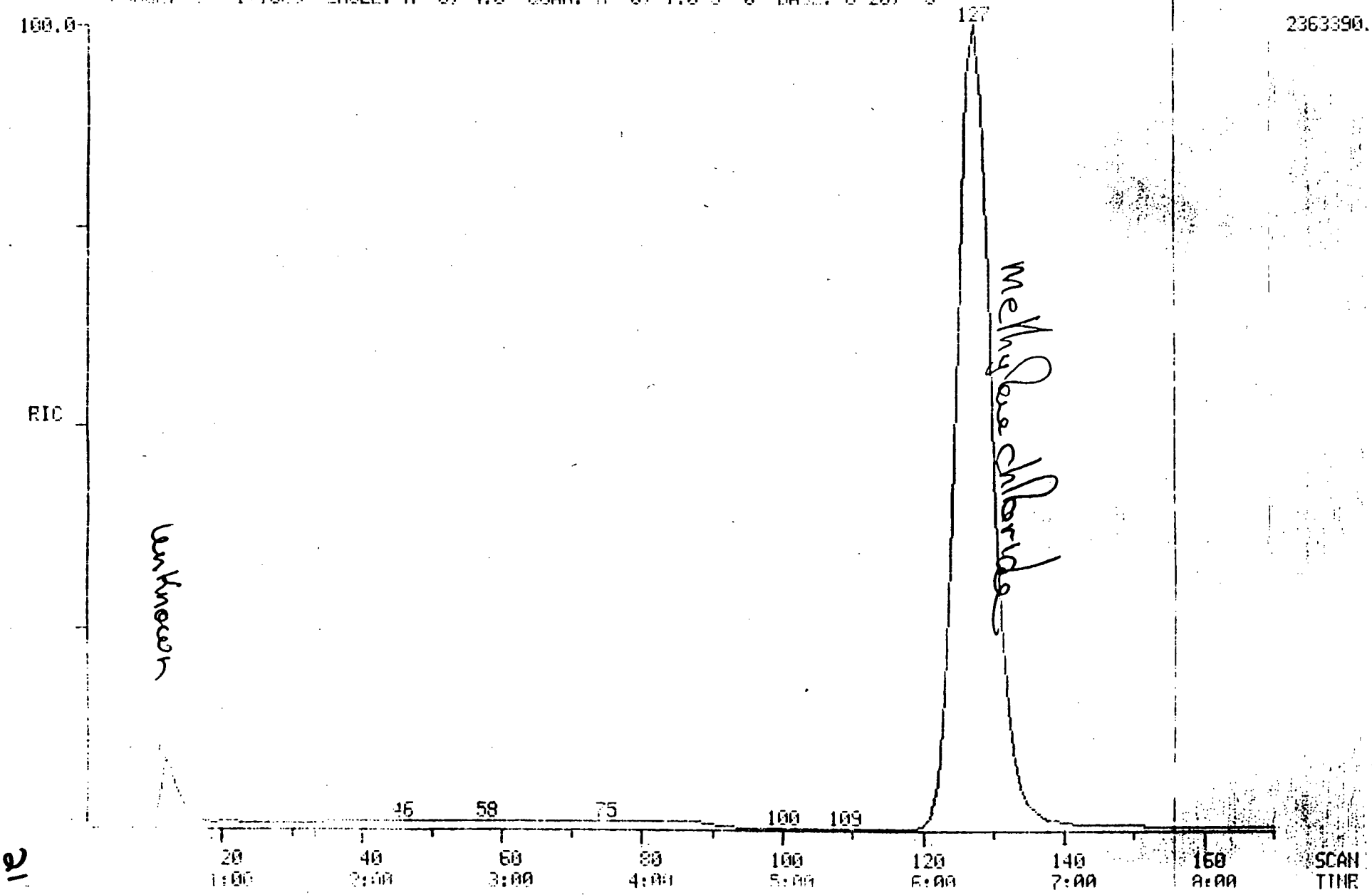
DATE REPORTED 10/ 8/86

S. C. McLENDON, P.E., LABORATORY DIRECTOR

THE LIABILITY OF H2M CORP. SHALL BE LIMITED TO THE PRICE OF THE SERVICE RENDERED AND PAID.

RIC
08/25/86 19:18:00
SAMPLE: 650542
CONDS.:
RANGE: % 1-1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

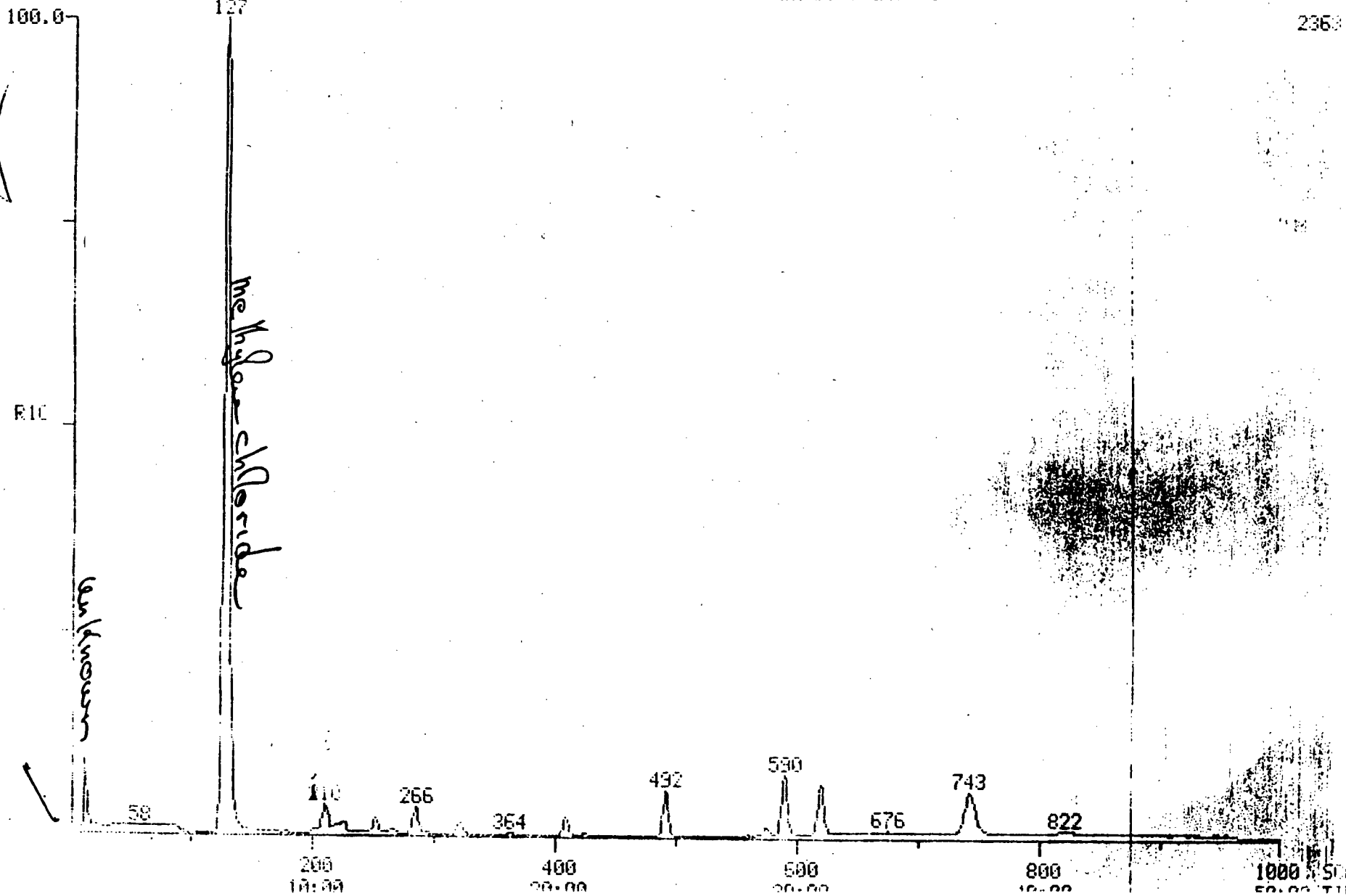
DATA: PU6433 #409 SCANS 1 TO 170
CALI: PU6433 #2



21

DATA: PU6433 #1 SCANS 1 TO 1000
CALI: PU6433 #2

16/86 19:18:00
SAMPLE: 660542
COMDS.:
RANGE: G 1.1000 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BAIL: 0 20. 3



TOA FINISHED, ... FOUND
FINISHED AT ... 29

QUANTITATION REPORT FILE: PU6433

DATA: PU6433.TI
09/26/86 19:18:00
SAMPLE: 6605A3
COMDS:
SUBMITTED BY NJDEF ANALYST: CC

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
RESP. FAC. FROM LIBRARY ENTRY

No	Name
1	BROMOCHRLOROMETHANE (INT. STD.)
2	1,2-DICHLOROETHANE D4 (SURR. STD)
3	CHLOROMETHANE
4	BROMOMETHANE
5	VINYL CHLORIDE
6	CHLOROETHANE
7	METHYLENE CHLORIDE (C)
8	ACETONE
9	CARBON DISULPHIDE
10	1,1-DICHLOROETHENE (B)
11	1,1-DICHLOROETHANE(E)
12	TRANS -1,2-DICHLOROETHENE (D)
13	CHLOROFORM
14	1,2-DICHLOROETHANE(H)
15	TRICHLOROFLUOROMETHANE
16	DICHLOROFLUOROMETHANE
17	ACROLEIN
IS	ACRYLONITRILE
19	1,4-DIFLUOROEENZENE(INT. STD)
20	2-BUTANONE (MEK)
21	1,1,1-TRICHLOROETHANE (I)
22	CARBON TETRA CHLORIDE
23	BROMODICHLOROMETHANE(L)
24	1,2-DICHLOROPROPANE(X)
25	TRANS-1,3-DICHLOROPROPENE (AA)
26	TRICHLOROETHENE(K)
27	DIBROMOCHLOROMETHANE(O)
28	1,1,2-TRICHLOROETANE(M)
29	BENZENE(BEN)
30	CIS-1,3-DICHLOROPROPENE(Z)
31	2-CHLOROETHYLVINYLETHER(NN)
32	BROMOFORM(P)
33	CHLOROBENZENE-D5 (INT. STD)
34	2-HEXANONE(MBK)
35	4-METHYL-2-PENTANONE(MIBK)
26	TETRACHLOROETHENE(N)
37	ETHANE, 1,1,2,2-TETRACHLORO-
3S	TOLUENE(TOL)
39	CHLOROBENZENE(Q)
40	ETHYLBENZENE(EB)
41	STYRENE
42	META-XYLENE
43	ORTHO/PARA-XYLENE
44	META-DICHLOROBENZENE(MDCB)
45	ORTHO-DICHLOROBENZENE(ODCB)
46	PARA-DICHLOROBENZENE(PDCB)
47	D8-TOLUENE(SURR. STD)
48	BROMOFLUORBENZENE(SURR. STD)

21

No	+/-	Scan	Time	Sec	RRT	Meth	Area(Hght)	Amount	%Tot

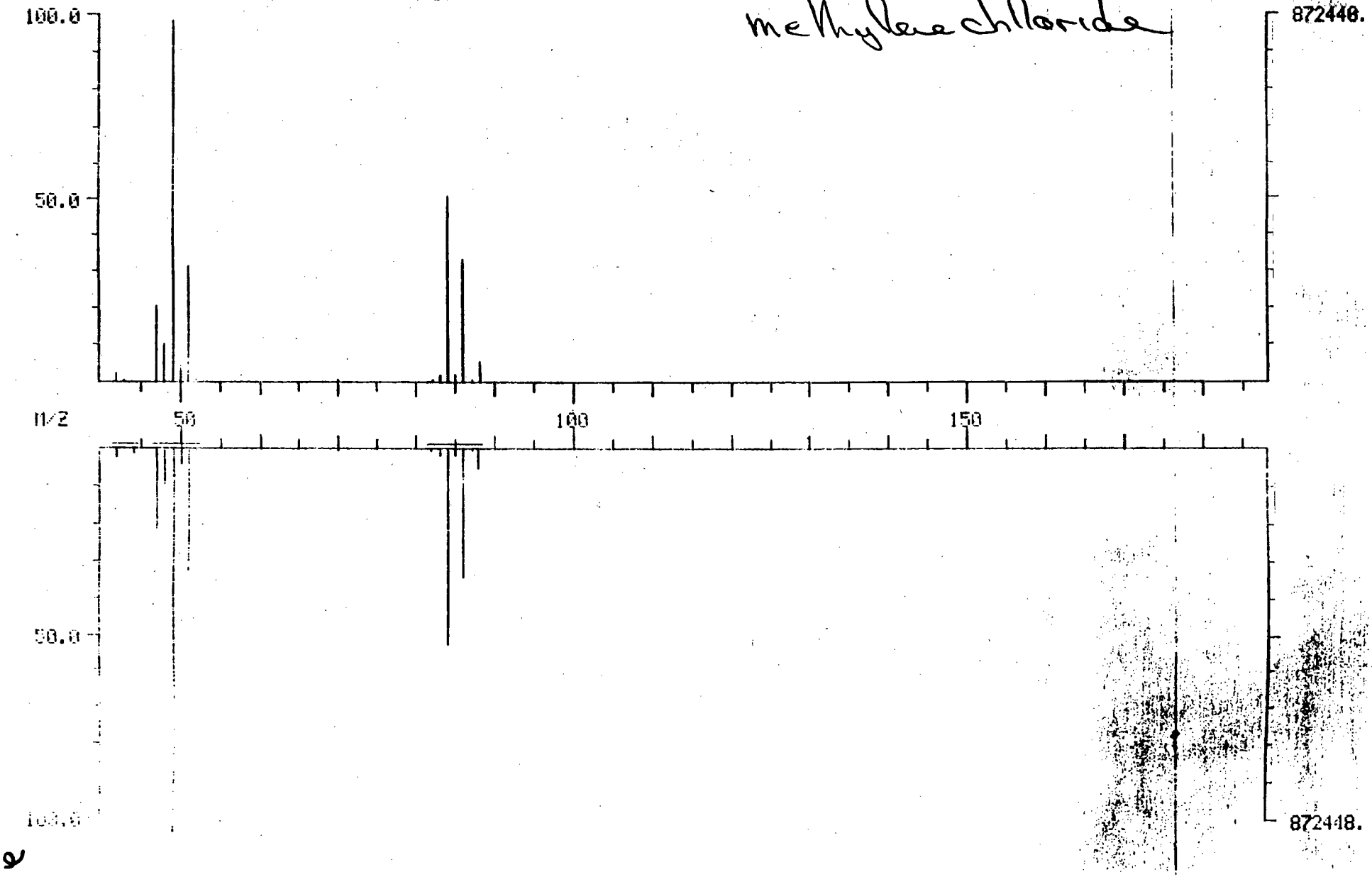
4	NOT FOUND									
5	NOT FOUND									
6	NOT FOUND									
7	84	127	6:21	1	0.605	A BB	2647650.	5969.010	NG	67.04
8	43	150	7:30	1	0.714	A BB	19833.	119.411	NG	1.34
9	NOT FOUND									
10	96	201	10:03	1	0.957	A BB	13586.	46.164	NG	0.52
11	NOT FOUND									
12	96	252	12:36	1	1.200	A BB	43977.	122.340	NG	1.37
13	83	266	13:18	1	1.267	A BB	18361.	22.818	NG	0.26
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	114	492	24:36	19	1.000	A BB	272821.	250.000	NG	2.81
20	43	293	14:39	19	0.596	A*VB	11937.	47.160	NG	0.53
21	97	322	16:06	19	0.654	A BB	42609.	89.347	NG	1.00
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	130	409	20:27	19	0.831	A BB	46935.	94.525	NG	1.06
27	NOT FOUND									
28	NOT FOUND									
29	78	426	21:18	19	0.866	A BB	6922.	3.865	NG	0.04
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	117	620	31:00	33	1.000	A BB	227003.	250.000	NG	2.81
34	43	511	25:33	33	0.824	A VV	3966.	656.681	NG	7.38
25	43	553	27:39	33	0.892	A BB	2843.	68.934	NG	0.77
36	NOT FOUND									
37	NOT FOUND									
38	92	595	29:45	33	0.960	A BB	5275.	5.834	NG	0.07
39	NOT FOUND									
40	106	676	33:48	33	1.090	A BB	2376.	4.274	NG	0.05
41	NOT FOUND									
42	NOT FOUND									
43	106	797	39:51	33	1.285	A BB	778.	379.110	NG	4.26
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	100	590	29:30	33	0.952	A BB	137464.	234.561	NG	3.[illegible]
48	95	743	37:09	33	1.198	A BB	204752.	232.605	NG	3.[illegible]

FINAL MASS SPECTRUM
[illegible] 15:18:00 + 6:21
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #127
CALI: PU6433 #2

BASE M/Z: 49 [illegible] 49
PIC: 2285560./ 2363330.

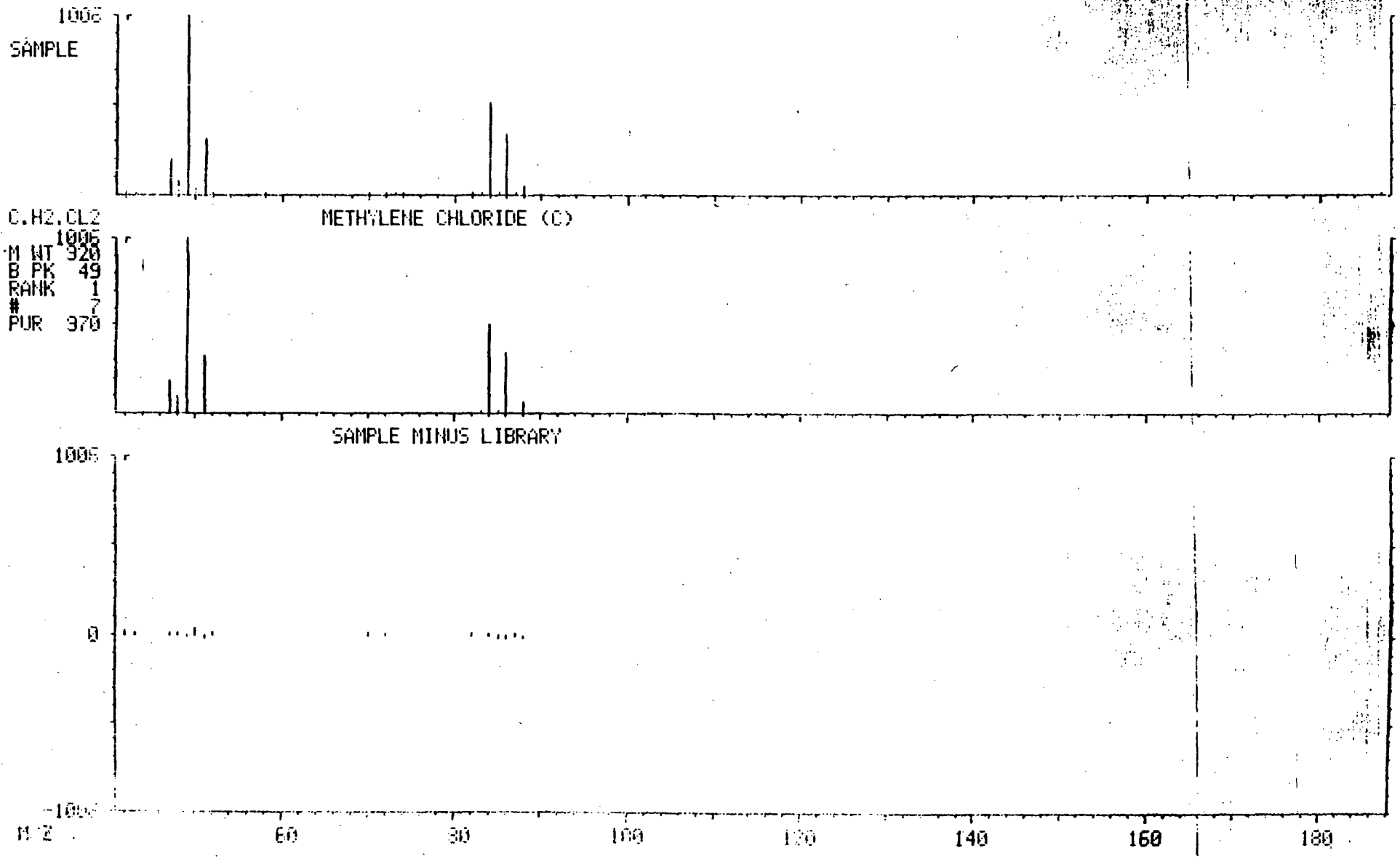
methylene chloride



LIBRARY SEARCH
03/26/86 13:18:00 + 6:21
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 # 127
CALI: PU6433 # 2

BASE M/Z: 49
RIC: 2285360.

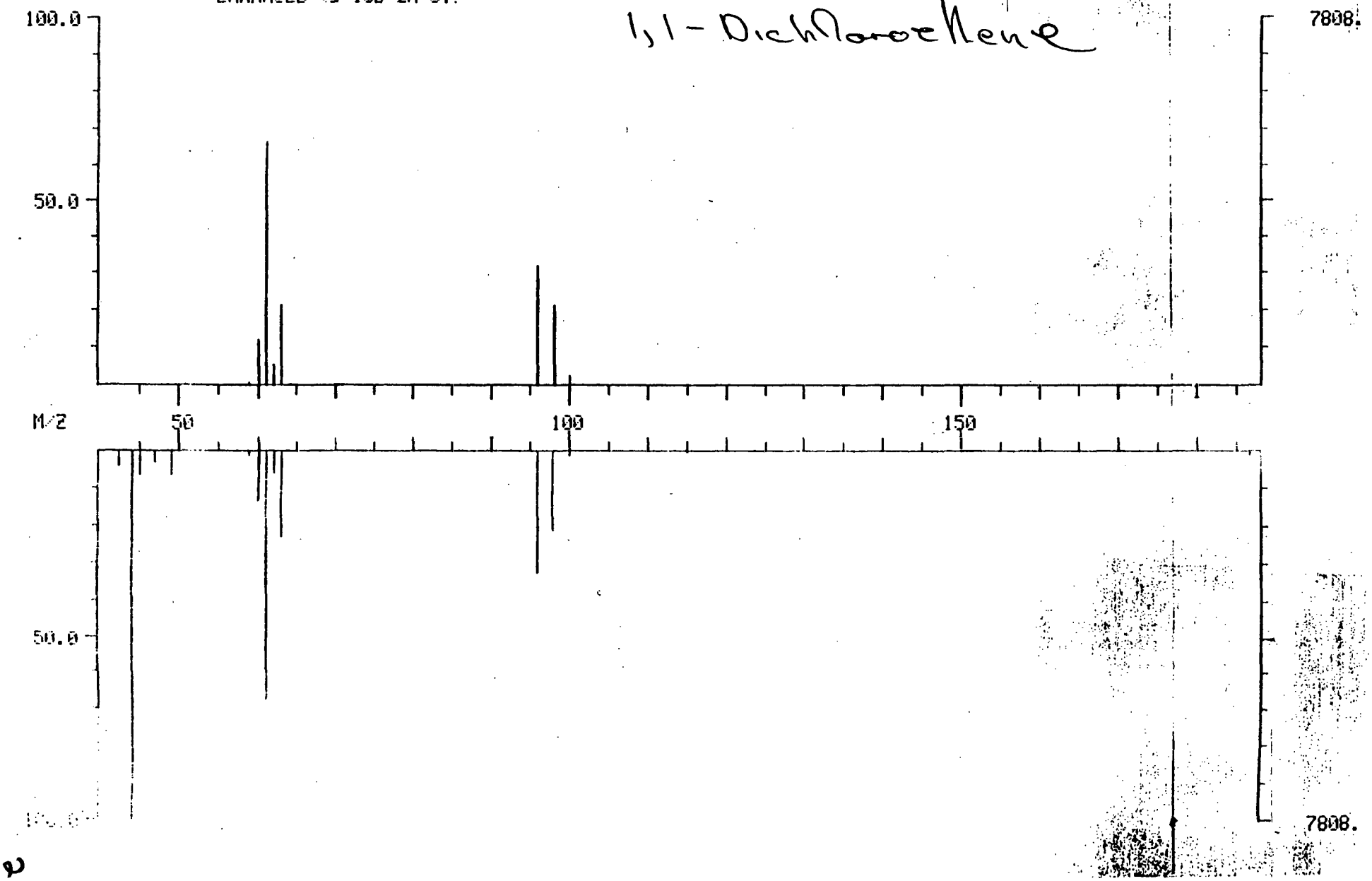


DUAL MASS SPECTRUM
[illegible] 19:10:00 + 10:03
SAMPLE: 660542
COMDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #201
CAL1: PU6433 #2

BASE M/Z: 61/ 44
RIC: 12607./ 22527.

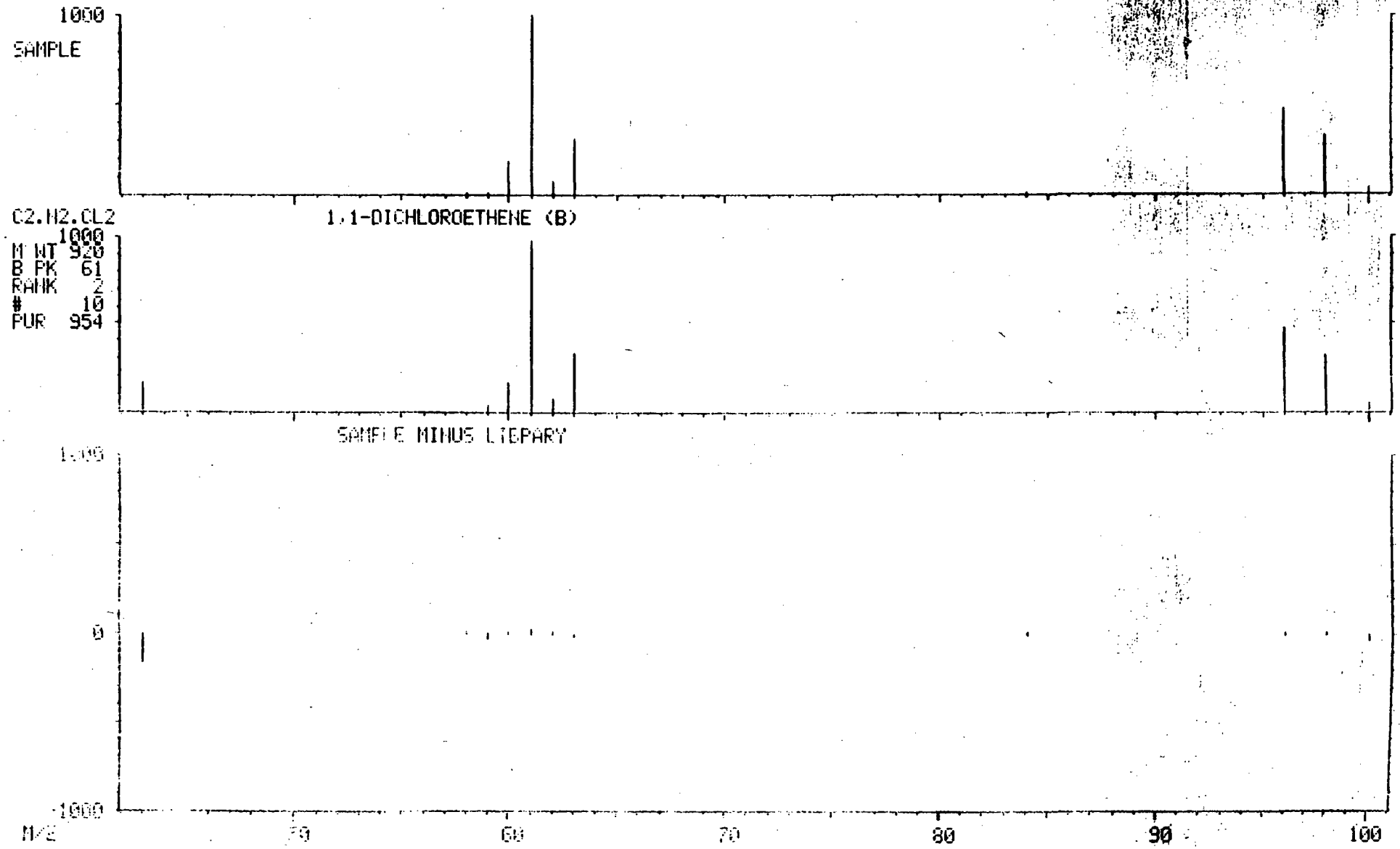
1,1-Dichloroethene



LIBRARY SEARCH
09/25/86 19:18:08 + 10:03
SAMPLE: 860542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 # 201
CALI: PU6433 # 2

BASE M/Z: 61
RIC: 12607.



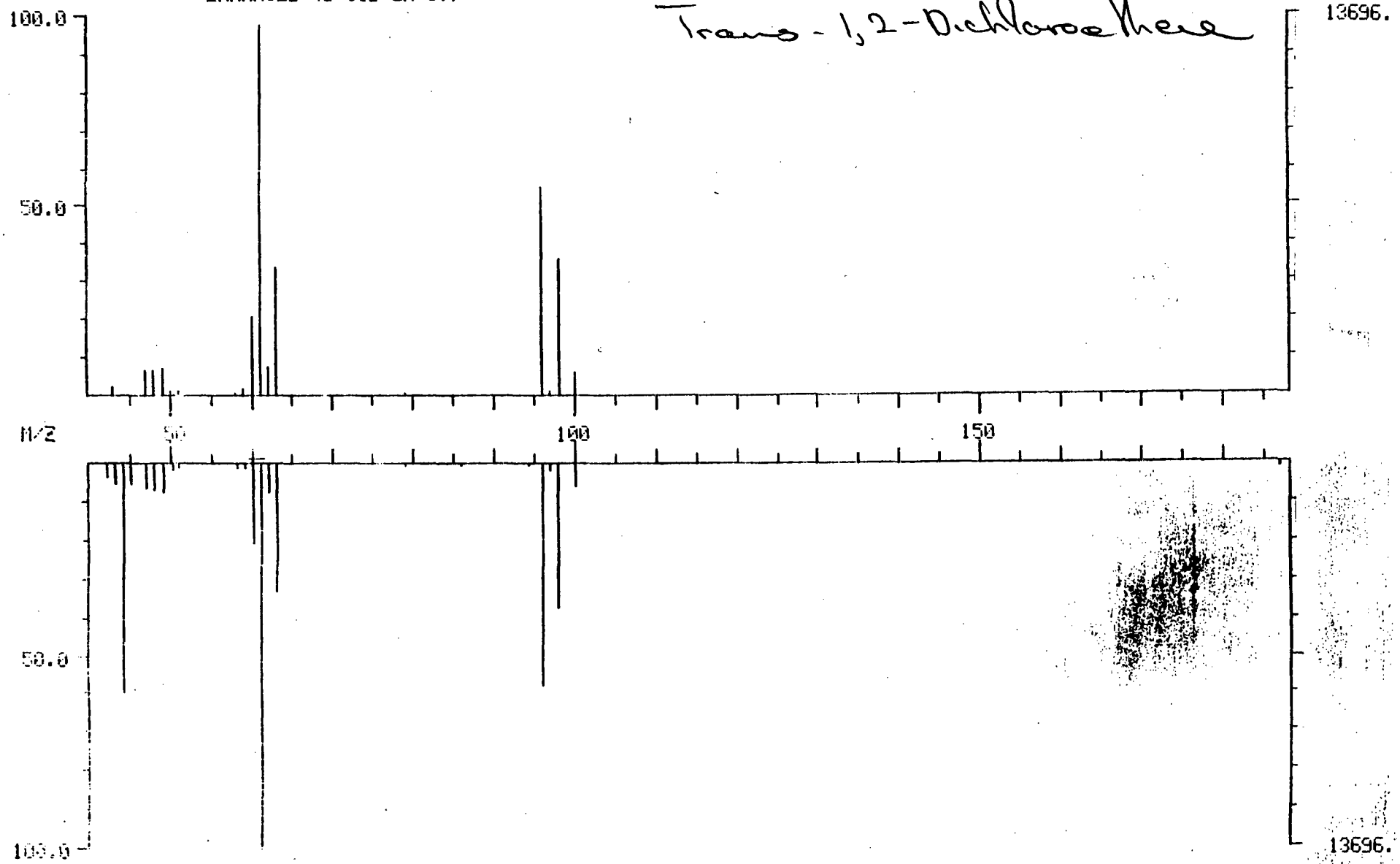
12

DUAL MASS SPECTRUM
09/26/86 13:18:00 + 12:36
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #252
CALI: PU6433 #2

BASE M/Z: 61/ 61
RIC: 39359./ 50303.

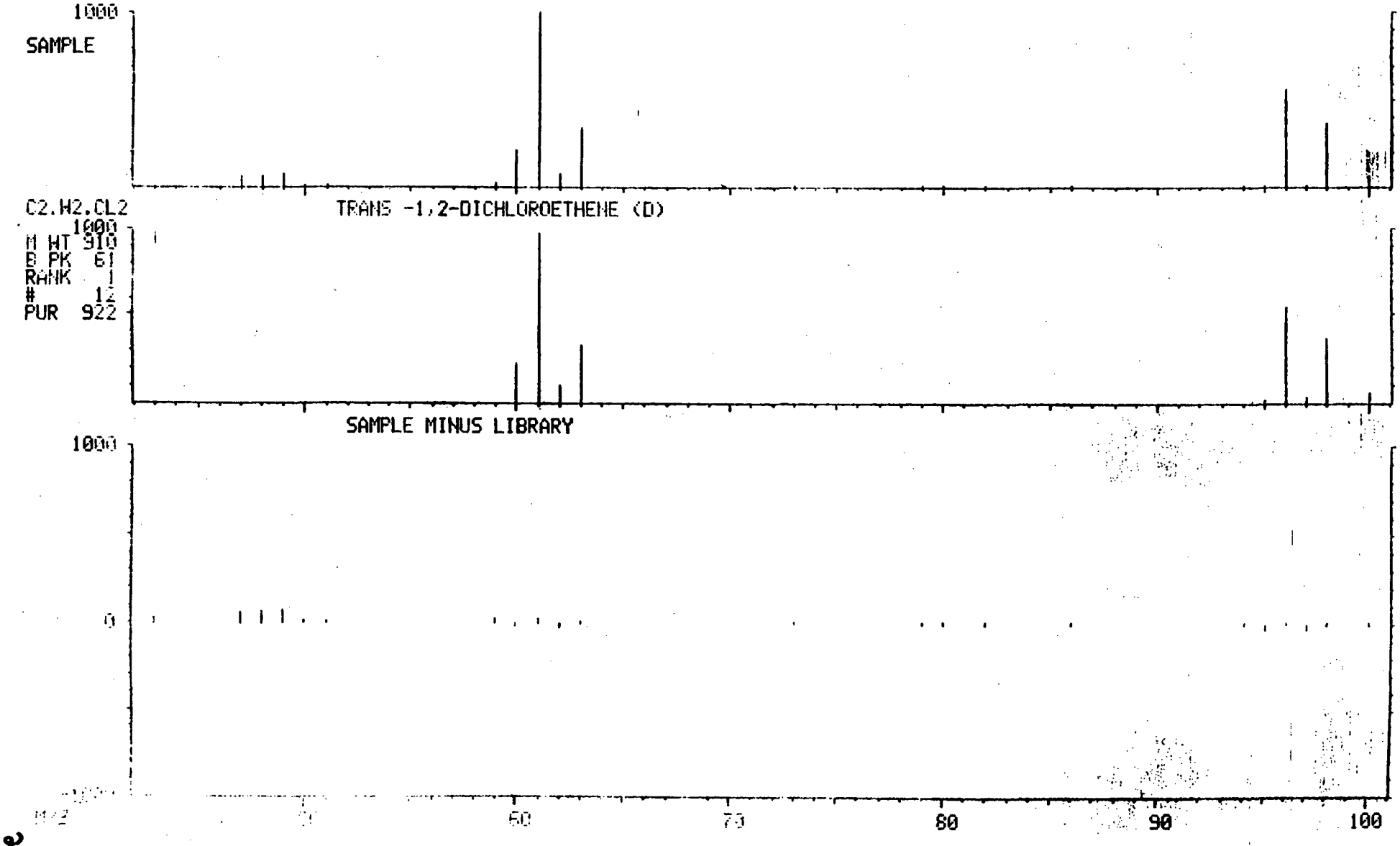
Trans-1,2-Dichloroethene



LIBRARY SEARCH
09-DEC-86 17:18:00 + 12:36
SAMPLE: [illegible]
METHOD:
ENHANCED (5 150 2N 0T)

DATA: FU6433 # 252
CALI: FU6433 # 2

BASE M/Z: 61
RIC: 39295.

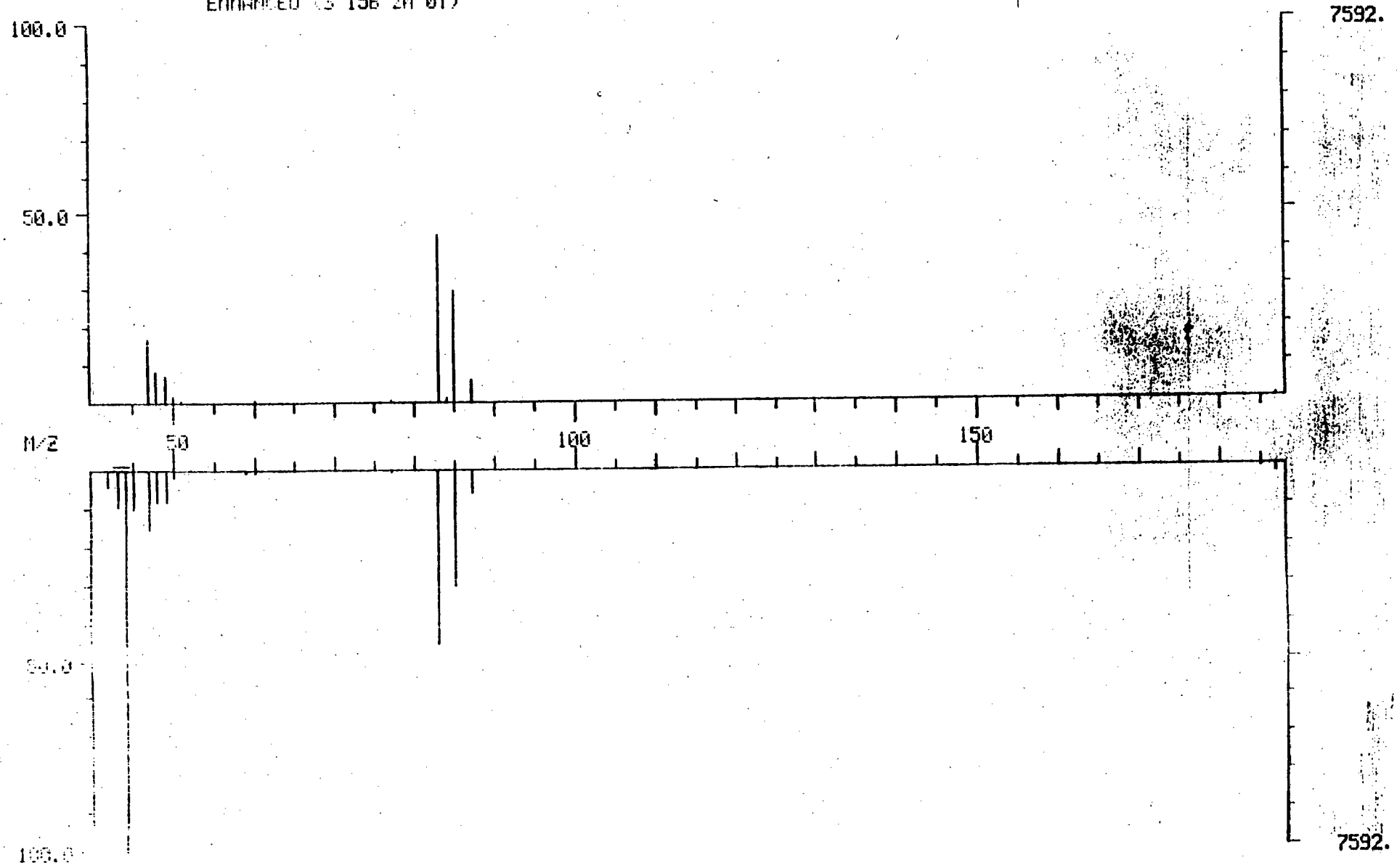


DUMP MASS SPECTRUM
09/26/86 19:18:00 + 13:18
SAMPLE: 660510
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #266
CAL: PU6433 #2

BASE M/Z: 83/ 44
RIC: 8959. 18559.

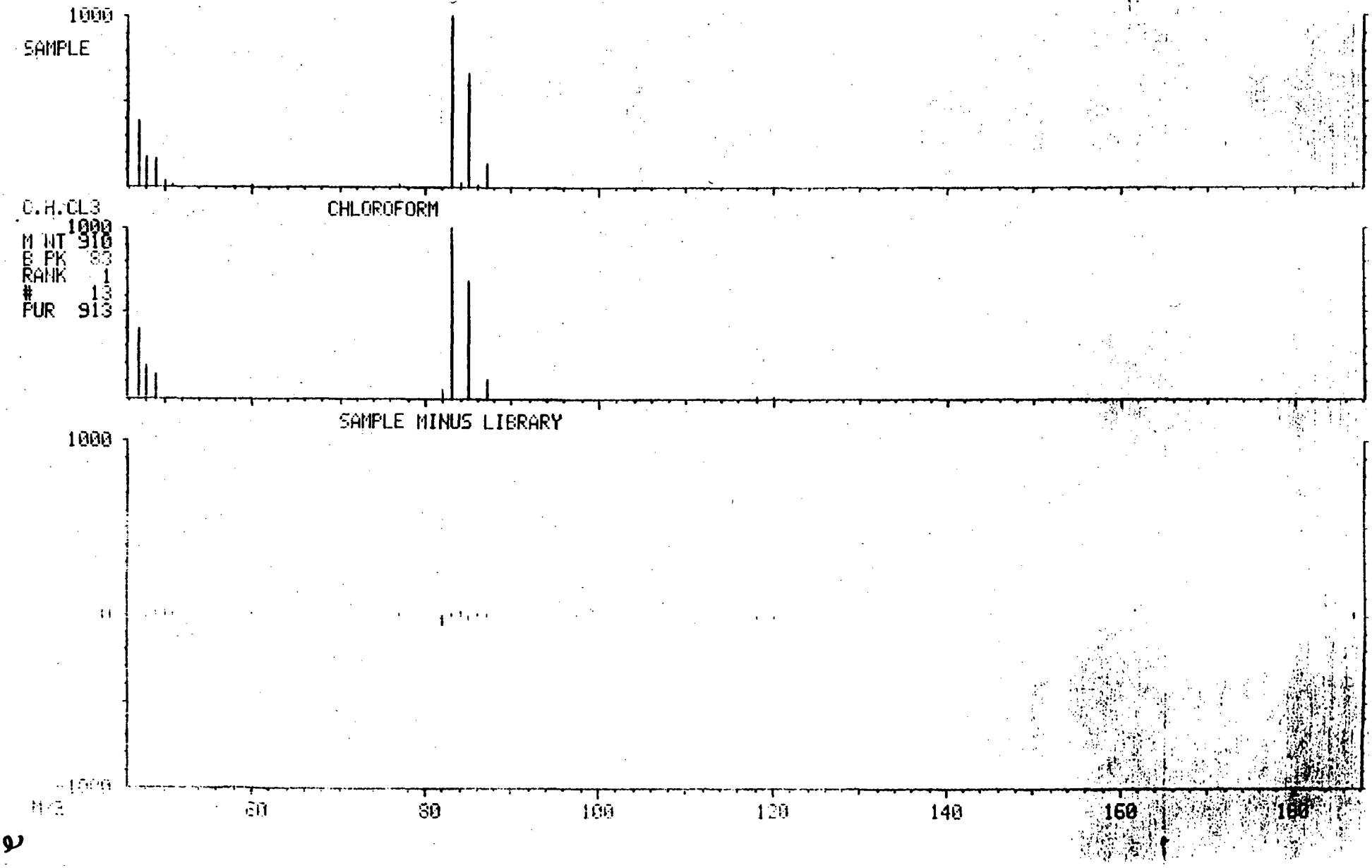
Chloroform



LIBRARY SEARCH
09/26/85 19:14:50 + 13:13
SAMPLE: 000542
CONDS.:
ENHANCED (S 15B 2N 0T)

Data: FU6433 # 285
Lib: FU6433 # 2

BASE M/Z: 83
RIC: 4458

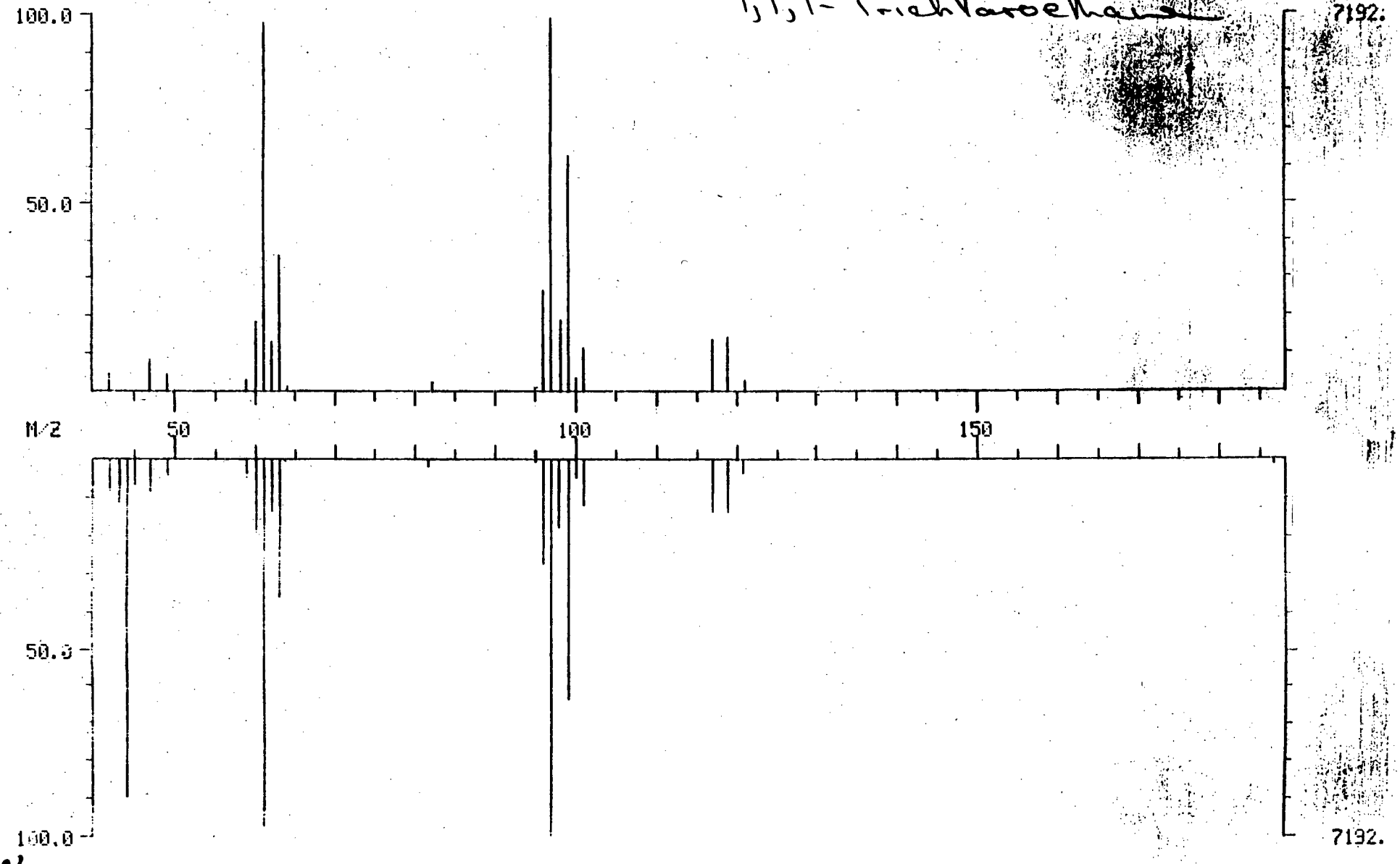


DUAL MASS SPECTRUM
09/28/86 19:13:00 + 16:06
SAMPLE: [illegible]
CONDS.:
ENHANCED (S 15B 2N 0T)

Data: PUE433 #322
Ref: PUE433 #2

BASE M/Z: 97/ 97
RIC: 31371./ 39399.

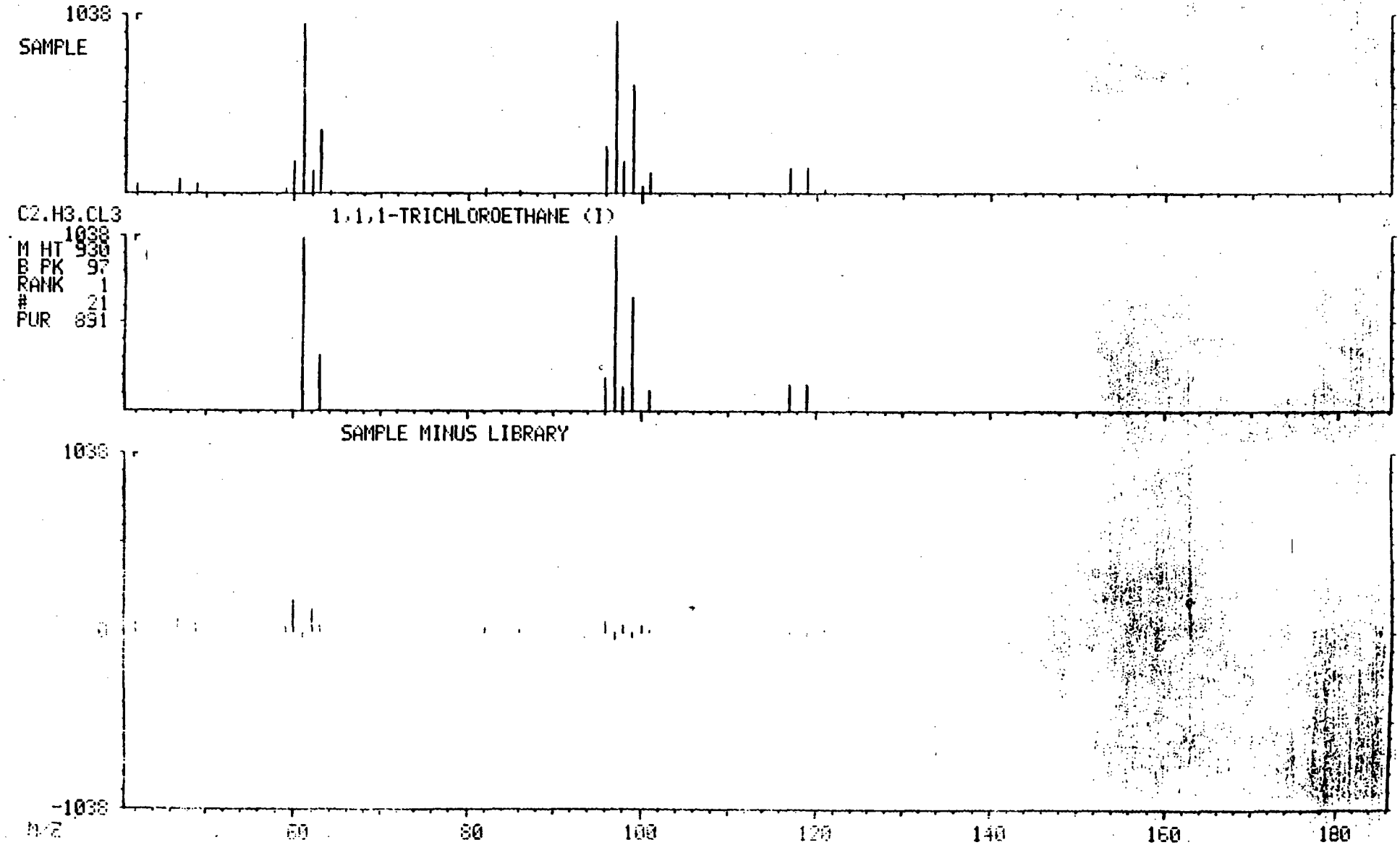
1,1,1-Trichloroethane



LIBRARY SEARCH
09/26/86 13:18:00 + 16:06
SAMPLE: 880542
COMDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 # 322
CALI: PU6433 # 2

BASE M/Z: 97
RIC: 31839.

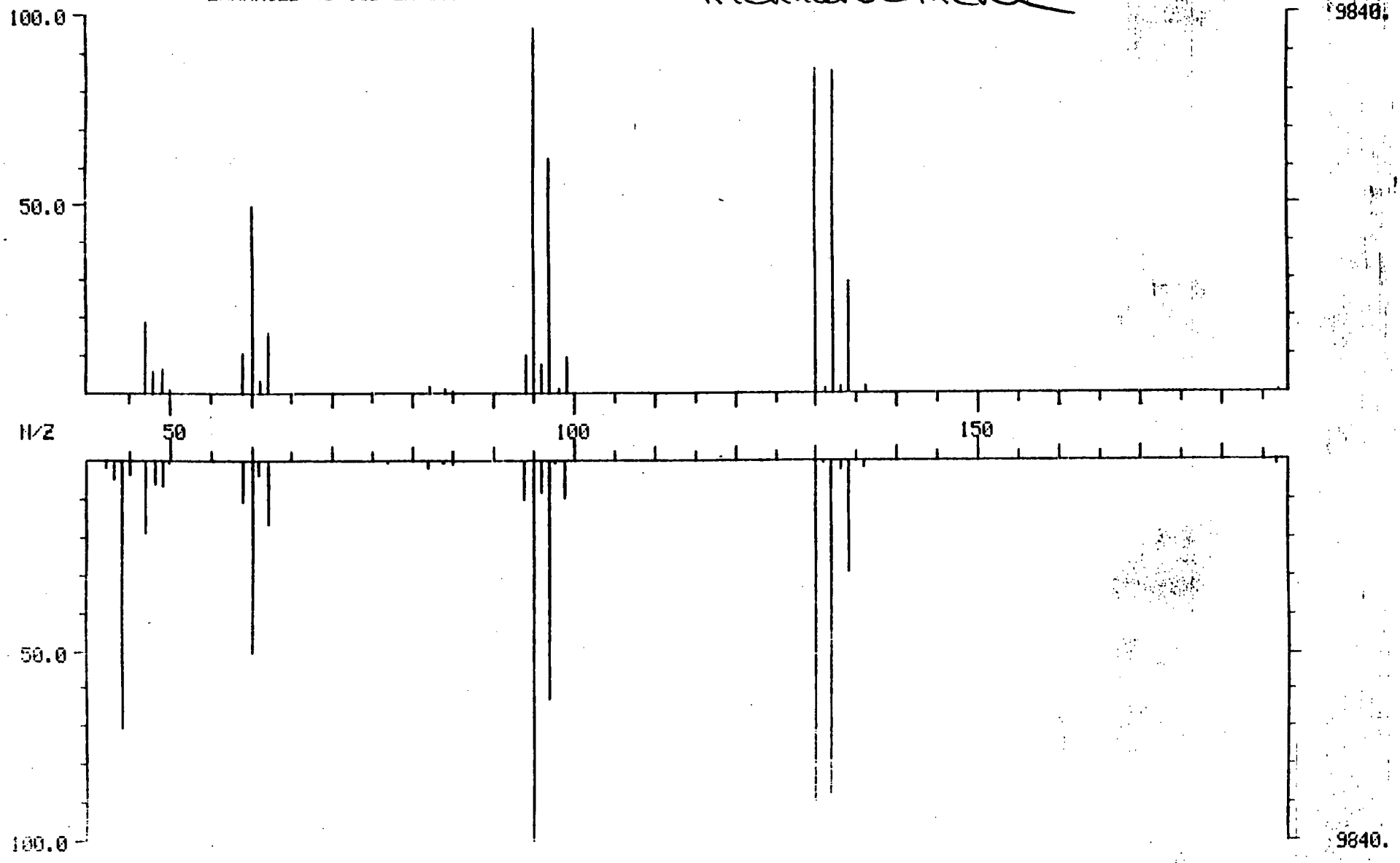


DUAL MASS SPECTRUM
09/26/86 19:13:00 + 20:27
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #409
CALI: PU6433 #2

BASE M/Z: 95/ 95
RIC: 50175./ 58879.

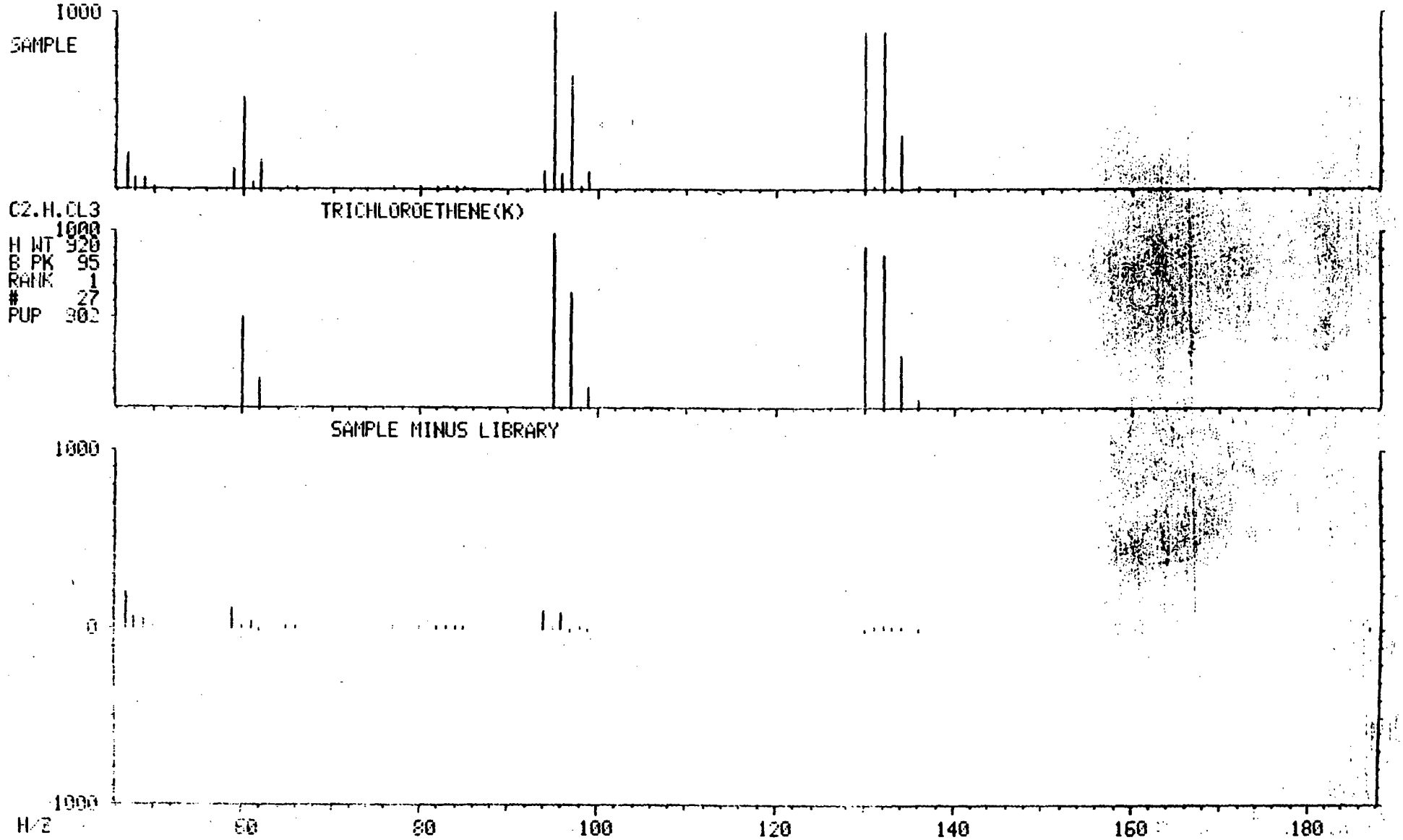
Trichloroethene



LIBRARY SEARCH
09/26/86 19:18:00 + 20:27
SAMPLE: 660542
COMDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6433 # 469
CALI: PU6433 # 2

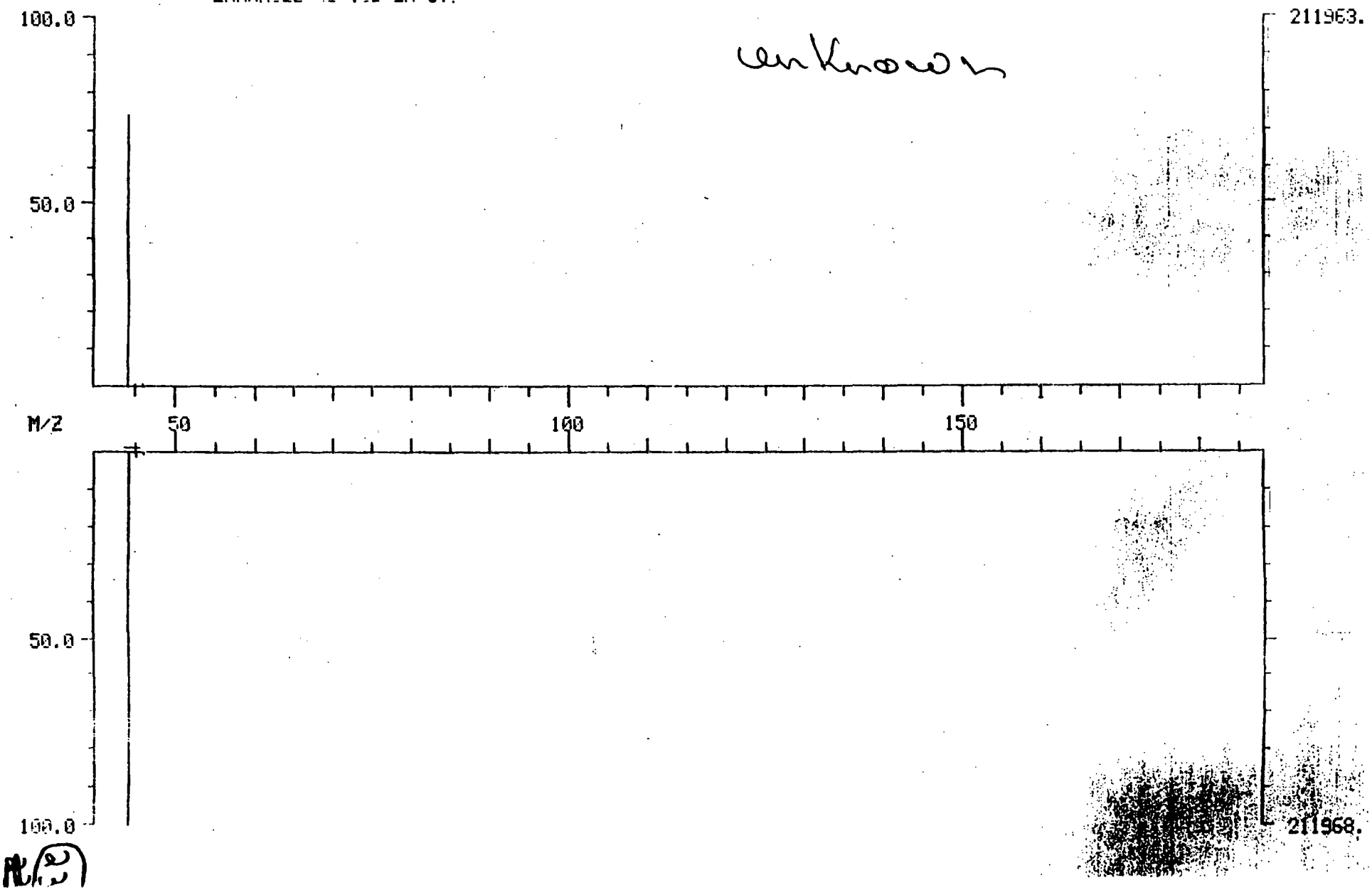
BASE M/Z: 95
RIC: 50111.



DUAL MASS SPECTRUM
09/28/86 19:13:00 + 0:36
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #12
CALI: PU6433 #2

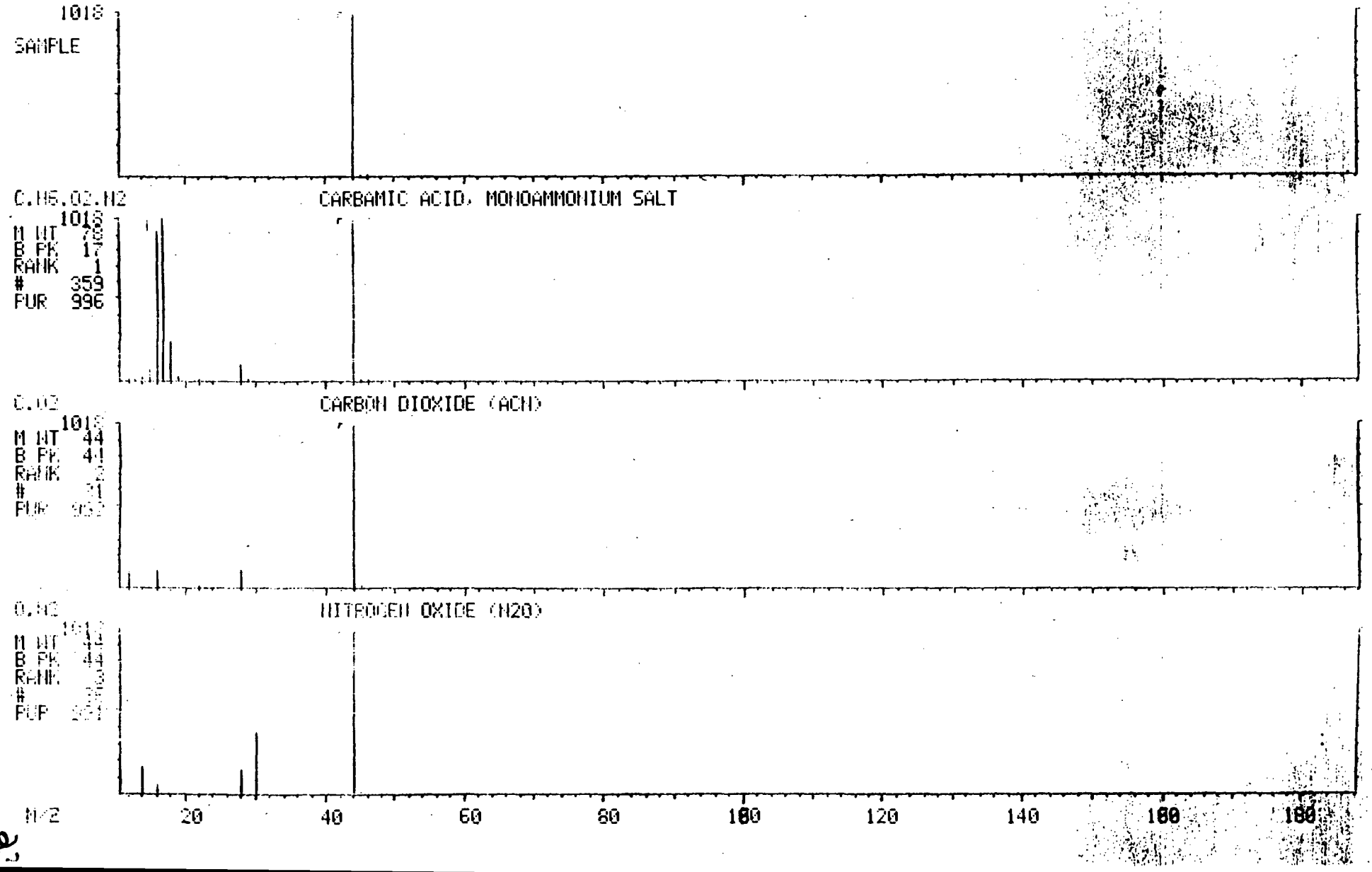
BASE M/Z: 44/ 44
RIC: 159743./ 216063.



LIBRARY SEARCH
09/26/86 19:13:00 + 0:36
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6433 # 12
CALI: PU6433 # 2

BASE M/Z: 44
RIC: 159743.



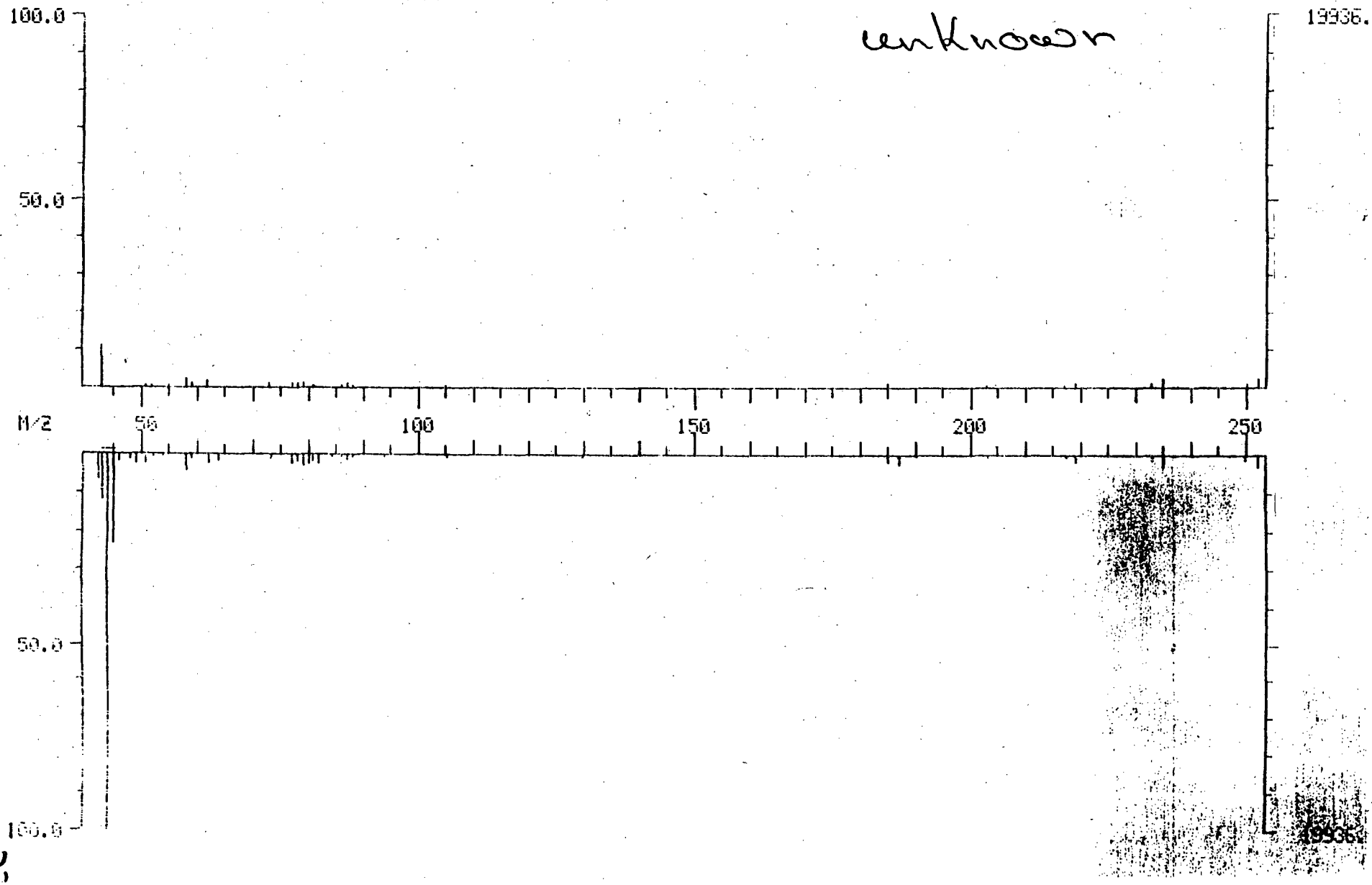
12

DUAL MASS SPECTRUM
09/26/85 19:18:00 + 11:18
SAMPLE: 660542
CONDS.:
ENHANCED (S 15P 2N 0T)

DATA: PU6433 #226
CALI: PU6433 #2

BASE M/Z: 43/ 44
RIC: 7671./ 38911.

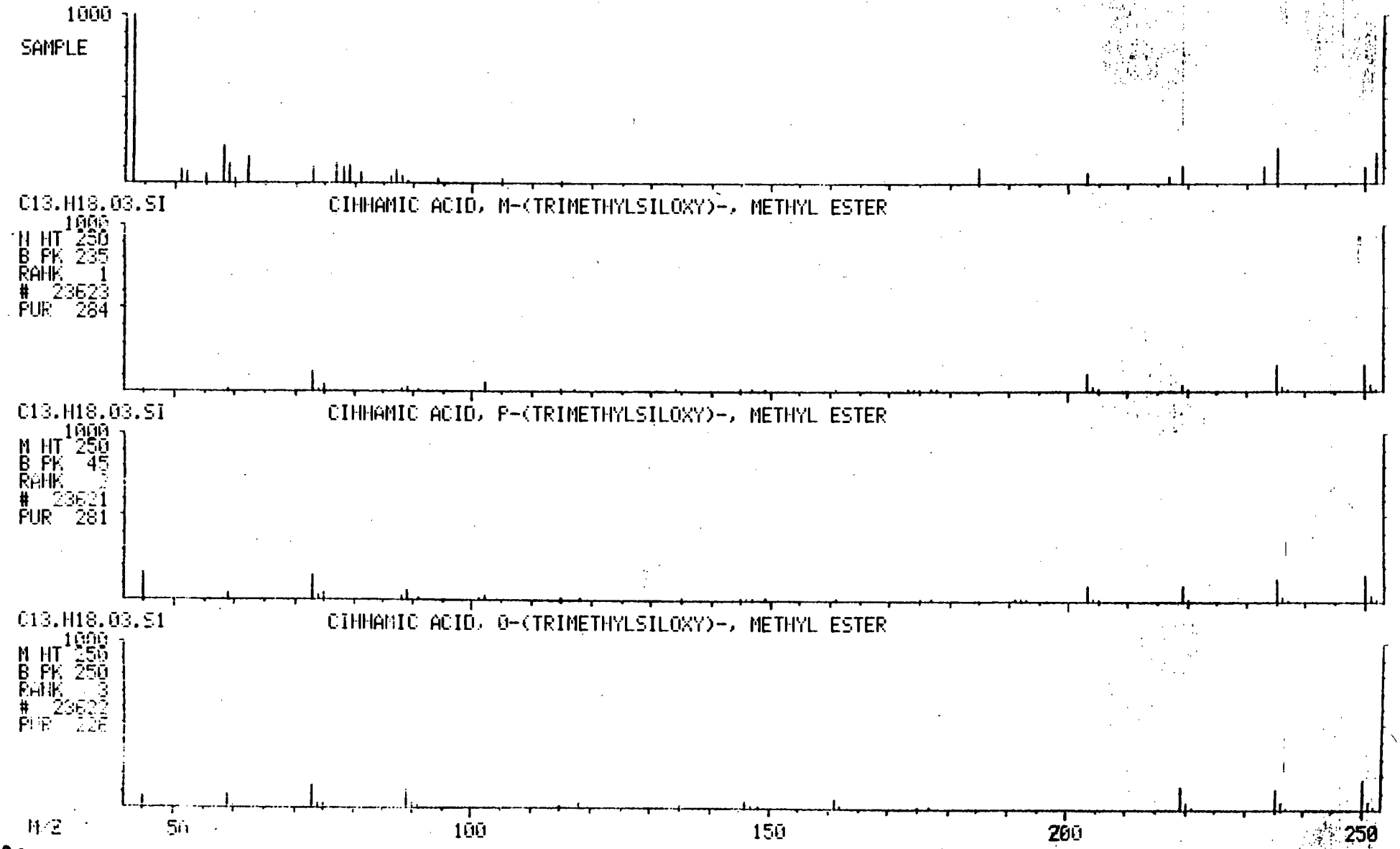
unknown



LIBRARY SEARCH
03/26/86 19:10:00 + 11:18
SAMPLE: 660542
COMDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6433 # 226
CALI: PU6433 # 2

BASE M/Z: 43
RIC: 7543.

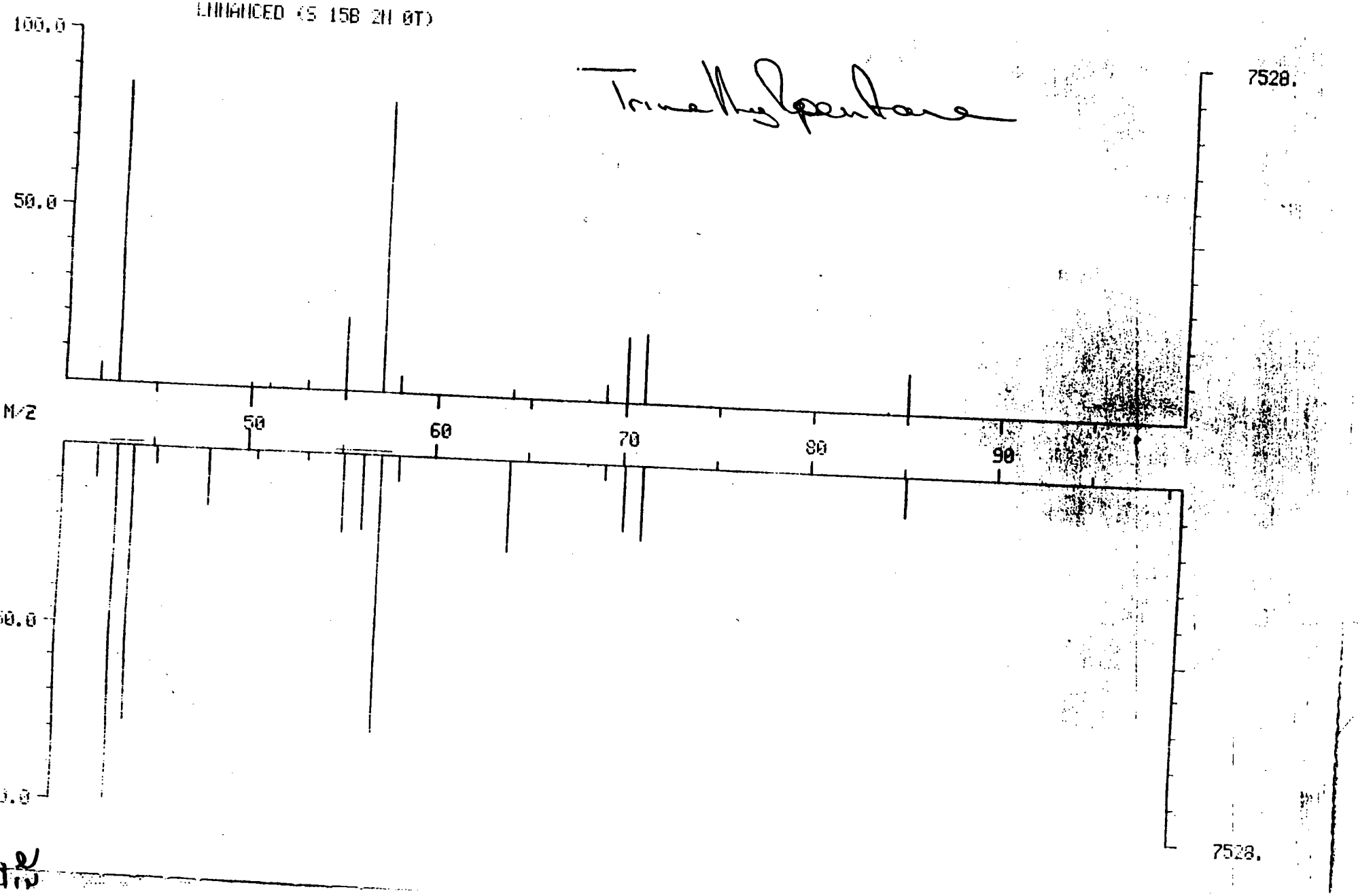


DUAL MASS SPECTRUM
03/26/86 13:18:00 + 28:48
SAMPLE: 660542
COMMS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #576
CALI: PU6433 #2

BASE M/Z: 43/ 43
RIC: 19679./ 32063.

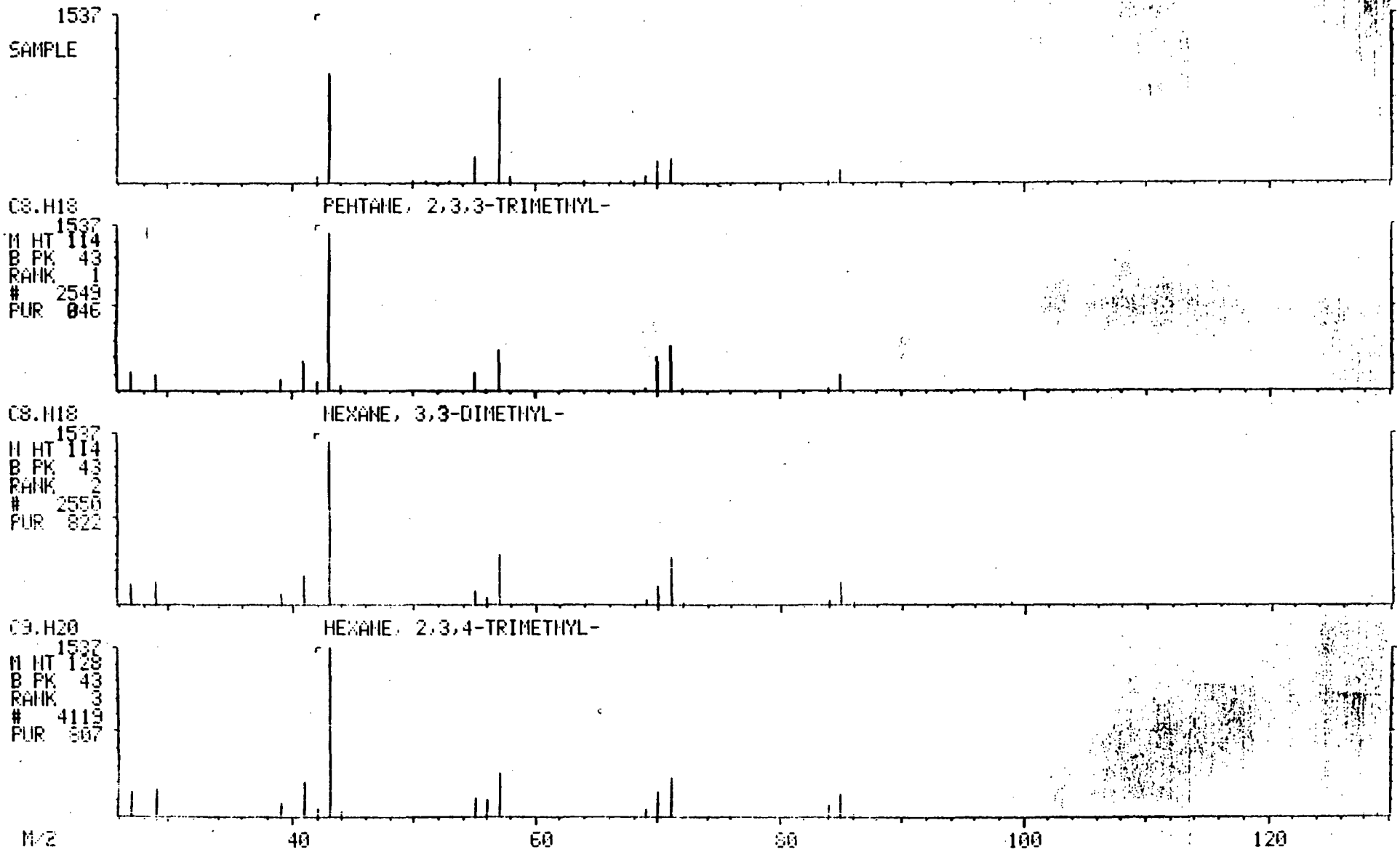
Trimethylpentane



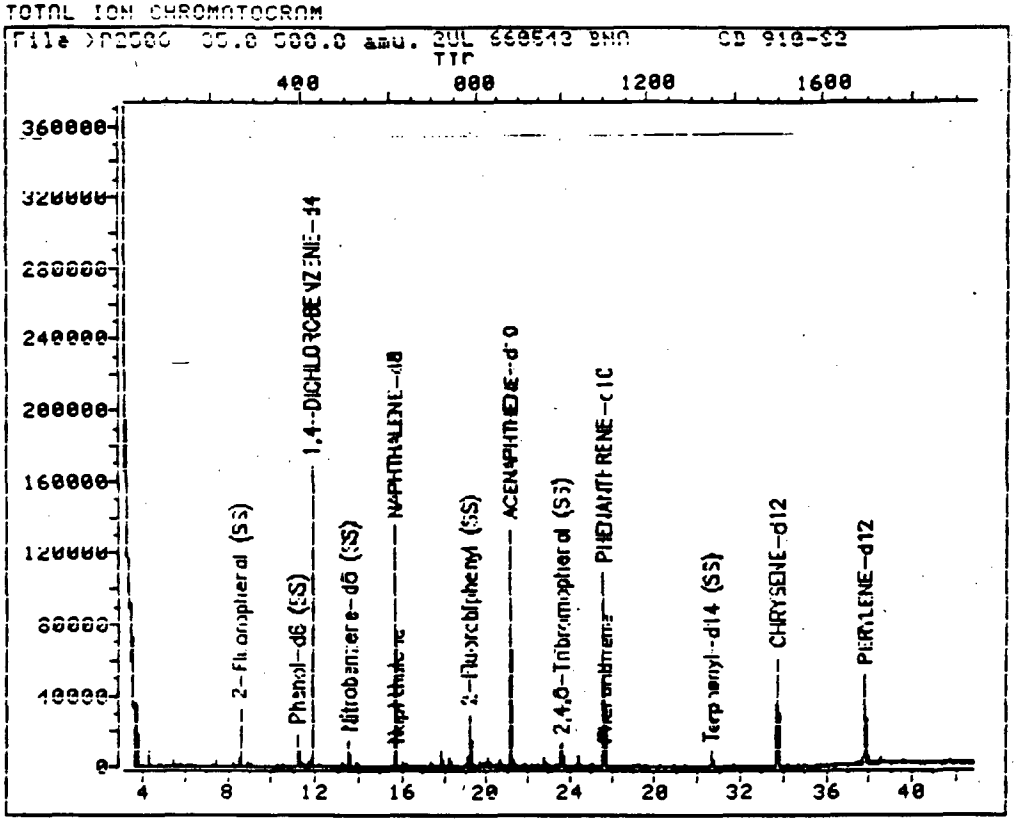
LIBRARY SEARCH
09/26/86 19:18:00 + 28:48
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6433 # 576
CNI: PU6433 # 2

BASE M/Z: 43
RIC: 19679.



TOTAL ION CHROMATOGRAM



Data File: >P2506::D3
Name: 2UL 660543 BNA
Misc: CD 910-S2

BTL#96

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861007 00:34
Injected at: 861006 23:49

QUANT REPORT

Operator ID: STEVE Quant Rev: 4 Quant Time: 861007 00:34
Output File: ^P2506::DR Injected at: 861006 23:49
Data File: >P2506::D3 Dilution Factor: 1.00
Name: 2UL 660543 BNA
Miac: CD 910-S2 BTL#96

ID File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4	11.80	426	56934	40.00	NG	90
3)	2-Fluorophenol (SS)	8.50	265	18792	11.80	NG	92
7)	Phenol-d6 (SS)	11.14	394	16755	9.50	NG	73
15)	*NAPHTHALENE-d8	15.62	613	169333	40.00	NG	47
16)	Nitrobenzene-d5 (SS)	13.51	510	9057	5.79	NG	74
24)	Naphthalene	15.68	616	4947	.93	NG	39
27)	*ACENAPHTHENE-d10	21.10	881	66047	40.00	NG	91
31)	2-Fluorobiphenyl (SS)	19.14	785	21488	8.11	NG	98
42)	2,4,6-Tribromophenol (SS)	23.53	1000	5690	9.63	NG	84
43)	*PHENANTHRENE-d10	25.58	1100	102203	40.00	NG	51
50)	Phenanthrene	25.64	1103	2834	.91	NG	51
54)	*CHRYSENE-d12	33.70	1497	75064	40.00	NG	46
55)	Terphenyl-d14 (SS)	30.61	1346	11789	9.80	NG	35
63)	*PERYLENE-d12	37.75	1695	71348	40.00	NG	82

* Compound is ISTD

MS data file header from : >P2506

Sample: 2UL 660543 BNA Operator: STEVE MS 10/06/86 23:49
Misc : CD 910-S2 BTL#96
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: EXTRII Tuning file: MT9301 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 280

Chromatographic temperatures :	30.	300.	0.	0.	0.
Chromatographic times, min. :	4.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

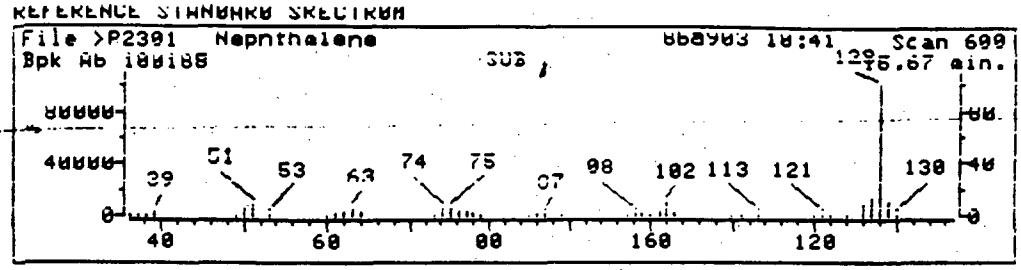
>P2506 2UL 660543 BNA CD 910-S2
35.01 500.0 CLP ADC TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.619	610	613	620	133315	690339	690339	100.00	39.61
2	25.578	1097	1100	1106	108146	530860	528660	76.58	30.33
3	33.696	1493	1497	1505	60868	358852	355064	51.43	20.37
4	37.745	1691	1695	1702	49133	193261	168452	24.40	9.66

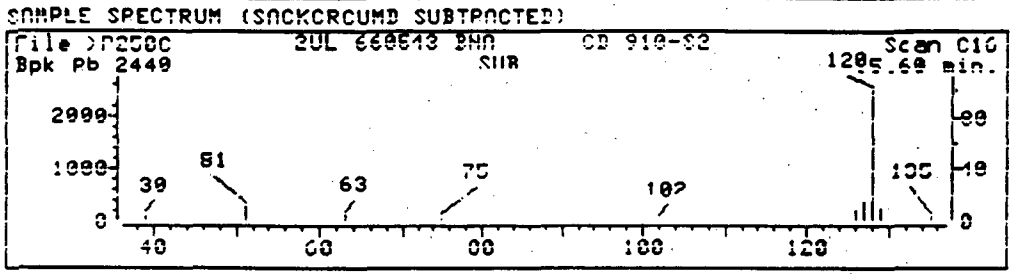
Sum of corrected areas: 1742515.

4:08 PM TUE., 7 OCT., 1986

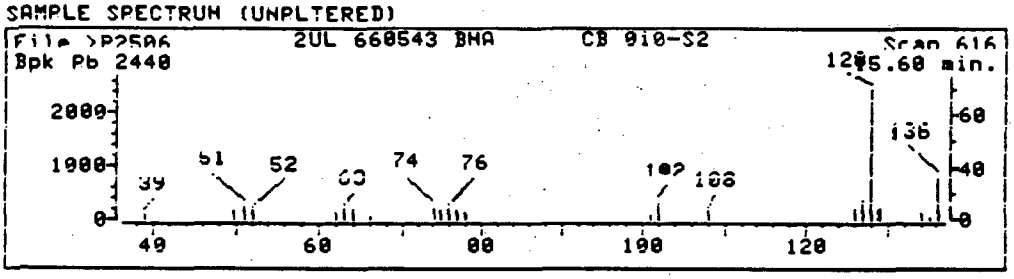
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

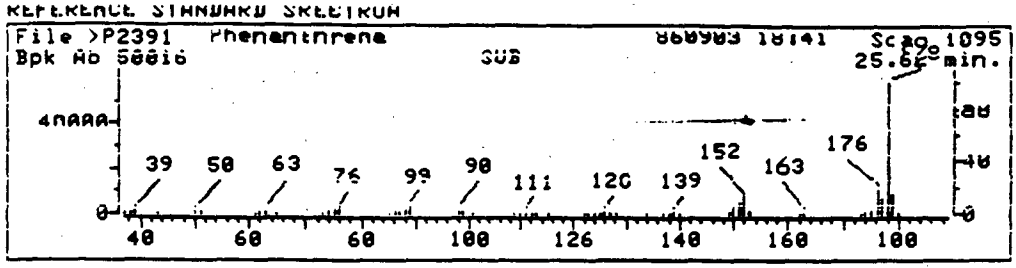


Data File: >P2506::D3
Name: 2UL 660543 BNA
Misc: CD 910-S2
Quant Time: 861007 00:34
Injected at: 861006 23:49

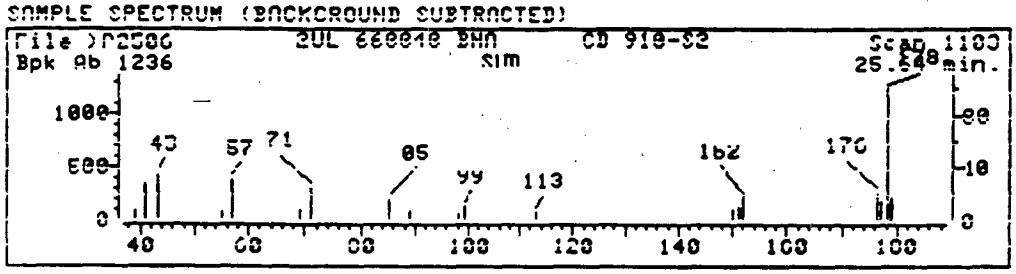
BTL#96

Compound No: 24
Compound Name: Naphthalene
Scan Number: 616
Retention Time: 15.68 min.
Area: 4947
Concentration: .93 NG
q-value: 39

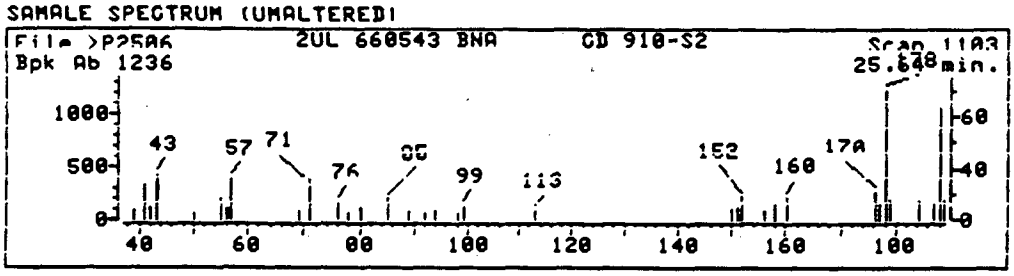
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >P2506::D3
Name: 2UL 660543 BNA
Misc: CD 910-S2
Quant Time: 861007 00:34
Injected at: 861006 23:49

BTL#96

Compound No: 50
Compound Name: Phenanthrene
Scan Number: 1103
Retention Time: 25.64 min.
Area: 2834
Concentration: .91 NG < 1 ng
q-value: 51

660544

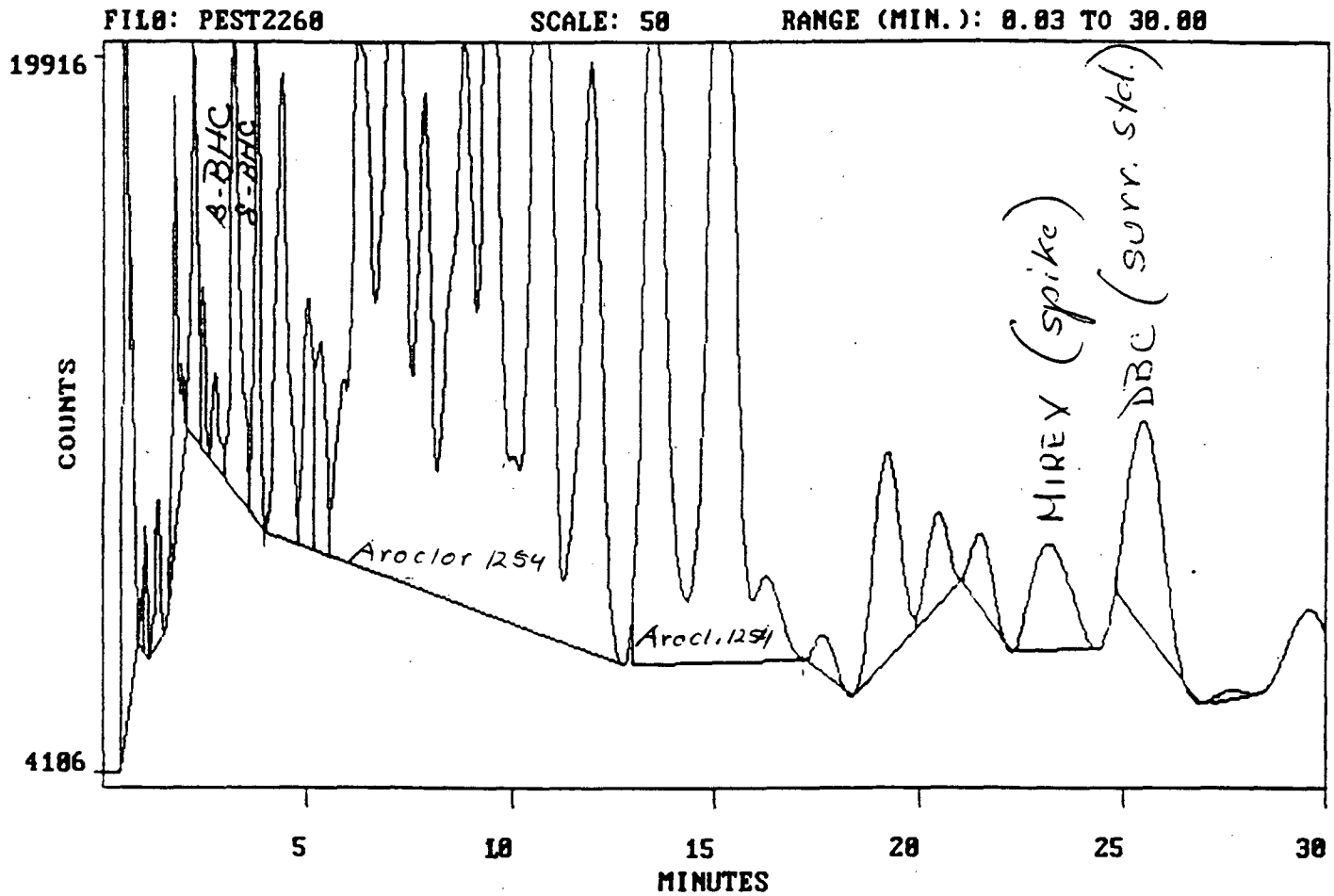
CD910-S2

PRIMARY COLUMN

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time:15:02:35 Date:MON 13 OCT 86

Time:19:12:24 Date:TUE 07 OCT 86
Method:ARO1254C



Channel # REINT Time 15:01:22 Date MON 13 OCT 86

Sample name.....
Data file..... PEST2268
Method name..... AROI254C

Author..... LAL
Instrument..... Tracor 550 - ECD
Column..... 1.5% SP-2250/1.95% SP-2401 on 100/120
Notes..... Reintegration of Aroclors

Run time..... 30.00 min. Delay time... 0.00 min.
Acq. time..... 19:12:24 Acq. date.... TUE 07 OCT 86
Start PW..... 20.00 sec. End PW..... 150.00 sec.
Actual PW.... 140 0
Slope sens..... 0.75 uv/sec.

Area reject ... 500
peaks found 22
Vol. Inj. 5.0 ul Sample amount..1 000
Conv. factor 1.000

METHOD NOT CALIBRATED!

AREA PERCENT REPORT

Peak	R T.(min)	R/S	Peak name	Area %	Area	Peak Ht.	EL
1	0.556			32.665	3413403	830588	EE
2	0.961			0.058	6072	1273	BV
3	1.074			0.117	12266	2862	VE
4	1.383			0.255	26647	3346	BB
5	1.751			0.889	92928	10310	BB
6	2.233			0.904	94473	10001	BV
7	2.433			0.224	23406	3572	VV
8	2.742			0.222	23150	2057	VV
9	3.224		β-BHC	1.664	173872	13931	VV
10	3.760		δ-BHC	1.086	113470	11185	VB
11	4.390		unknown (not dieldrin)	1.941	202853	10271	BV
12	5.017		→ rep. limit from sec. col.	0.946	98357	5611	VV
13	5.334			0.708	73940	4693	VV
14	10.721			35.453	3704786	25894	VE
15	15.200			15.478	1617382	21163	EB
16	17.671			0.265	27684	849	SB
17	19.256			1.930	201696	4525	EV
18	20.493			0.703	73452	1988	VB
19	21.519			0.541	56506	1621	BB
20	23.211			1.420	148398	2014	BB
21	25.532			2.459	256927	4595	BB
22	27.818			0.072	7564	145	BB

24

660544
CD910-S2

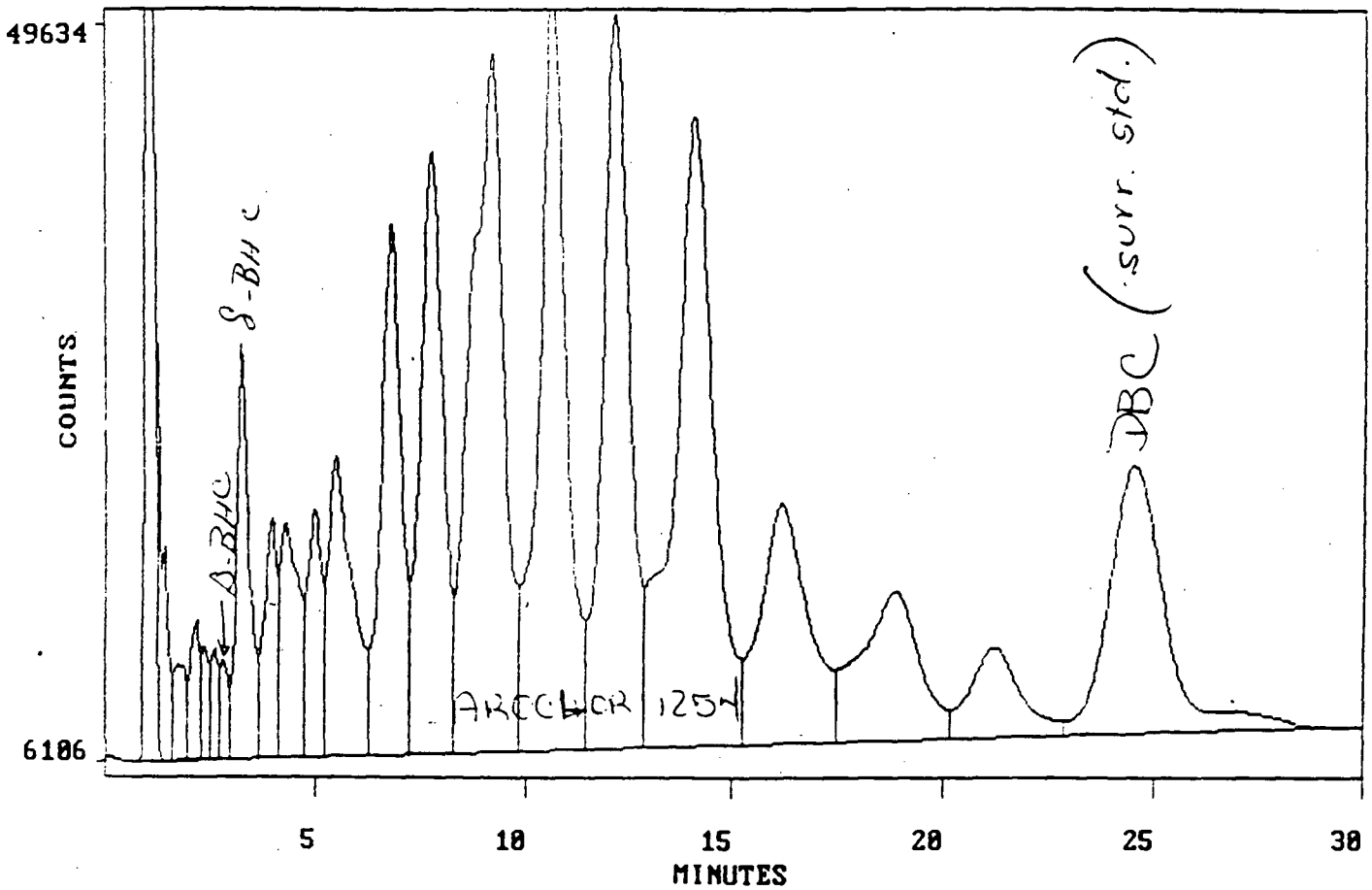
CONFIRMATORY COLUMN

Time 20:09:52 Date THU 09 OCT 96

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time:19:27.00 Date THU 09 OCT 96
Method PEST2

FILE: PEST2310 SCALE: 20 RANGE (MIN.): 0.03 TO 30.00



246

Channel # 4 Time:19:58:52 Date:THU 09 OCT 86
Run #5 of 100

Sample name .....NJDEP
Data file DAT258:PEST2310
Method name PEST2

Author.....LAL
Instrument.....ECD
Column .....G
Notes .....Primary Column Runs

Run time.....30.00 min. Delay time...0.00 min.
Acq. time.....19:27:02 Acq. date...THU 09 OCT 86
Start PW.....20.00 sec. End PW.....150.00 sec.
Actual PW ...140.0
Slope sens.....0.75 uv/sec.

Area reject....500
peaks found..23
Vol. Inj.....5.0 ul Sample amount..1.000
Conv. factor...1.000

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METHOD NOT CALIBRATED!

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AREA PERCENT REPORT

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Peak	R.T.(min)	R/S	Peak name	Area %	Area	Peak Ht.	BL
1	0.102			0.006	1658	159	BB
2	1.117			38.867	11609795	872043	BE
3	1.427			0.810	241874	12603	EV
4	1.746			0.457	136480	5746	EV
5	2.186			0.526	157023	8318	EV
6	2.383			0.340	101540	6738	EV
7	2.625			0.349	104358	6550	EV
8	2.828		B-BHC	0.306	91270	5910	EV
9	3.265		= δ-BHC	1.716	512594	24389	VV
10	3.968			0.990	295864	14087	VV
11	4.305			1.399	417834	13895	VV
12	4.975			1.150	343514	14542	VV
13	5.476			2.357	703980	17673	VV
14	6.751			3.454	1031631	31446	VV
15	7.734			4.670	1395047	35616	VV
16	9.218			7.720	2306052	41243	VV
17	10.689			7.032	2100589	45334	VV
18	12.230			6.528	1949848	43358	VV
19	14.127			8.103	2420337	37103	VV
20	16.173			3.768	1125475	14150	VV
21	18.847			2.925	873789	8772	VV
22	21.214			1.513	451804	5353	VV

23	24.627	DBC	5.015	1497996	15651 VB
TOTALS			100.000	29870352	

III. 2. Reporting Package
NJ DEP I.D. # S-3

H2M

HOLZMACHER, McLENDON and MURRELL, P.C • CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS and PLANNERS

575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Lab No. 660546
Type: Misc. - Tier I
Point: Background
Date Collected: 9/11/86
Date Received: 9/12/86
Collected By: CL 99

PRIORITY POLLUTANTS ANALYSIS - PURGEABLE ORGANICS

Scan No.	Cas Number	Compound	ug/kg
	74-87-3	Chloromethane	10U
	74-83-9	Bromomethane	10U
	75-01-4	Vinyl chloride	10U
	75-00-3	Chloroethane	10U
111	75-09-2	Methylene chloride	4000
	75-69-4	Trichlorofluoromethane	10U
188	75-35-4	1,1-dichloroethene	61
	75-34-3	1,1-dichloroethane	10U
	156-60-5	Cis/Trans-1,2-dichloroethene	10U
	67-66-3	Chloroform	10U
	107-06-2	1,2-dichloroethane	10U
317	71-55-6	1,1,1-Trichloroethane	110B
	56-23-5	Carbon tetrachloride	10U
	75-27-4	Bromodichloromethane	10U
	79-34-5	1,1,2,2-Tetrachloroethane	10U
	70-87-5	1,2-dichloropropane	10U
	10061-02-6	Trans-1,3-dichloropropene	10U
407	79-01-6	Trichloroethene	6J
	124-48-1	Dibromochloromethane	10U
	79-00-5	1,1,2-trichloroethane	10U
	71-43-2	Benzene	10U
	10061-01-5	cis-1,3-Dichloropropene	10U
	110-75-8	2-chloroethylvinyl ether	10U
	75-25-2	Bromoform	10U
	127-10-4	Tetrachloroethene	10U
594	106-88-3	Toluene	3J
	106-90-7	Chlorobenzene	10U
	100-41-4	Ethylbenzene	10U
	541-73-1	1,2-Dichlorobenzene	10U
	95-50-1	1,3-Dichlorobenzene	10U
	106-46-1	1,4-Dichlorobenzene	10U

Date Reported: 10/15/86

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* *
****
S.C. McLendon, P.E.
Laboratory Director

25c
~~23~~

NJ DEP Sample #: S-3

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob. FIT	% Prob. RFTT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Unknown (Carbon Dioxide)	-	-	13	330B
2.		Unknown	-	-	150	31
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H2M

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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

Lab Nams: H2M Labs

Sample Lab No. 660547 - S-3

Concentration: Low

Date Extracted: 9/24/86

Date Analyzed: 10/6/86

Dil. Factor: 1:2

Semi-Volatile Compounds

C.A.S. Number		ug/kg	C.A.S. Number		ug/kg	Scan No.
65-75-9	N-Nitrosodimethylamine	20000U	83-32-9	Acenaphthene	760J	88
108-95-2	Phenol	20000U	51-28-5	2,4-Dinitrophenol	20000U	
62-53-3	Aniline	20000U	100-02-7	4-Nitrophenol	20000U	
111-44-4	bis(2-Chloroethyl)Ether	20000U	121-14-2	2,4-Dinitrotoluene	20000U	
95-57-8	2-Chlorophenol	20000U	606-20-2	2,6-Dinitrotoluene	20000U	
541-73-1	1,3-Dichlorobenzene	20000U	84-66-2	Diethylphthalate	20000U	
106-46-7	1,4-Dichlorobenzene	20000U	7005-72-3	4-Chlorophenyl-phenylether	20000U	
95-50-1	1,2-Dichlorobenzene	20000U	86-73-7	Fluorene	20000U	
39638329	bis(2-chloroisopropyl)ether	20000U	534-52-1	4,6-Dinitro-2-MethyIphenol	20000U	
621-64-7	N-Nitroso-Di-n-Propylamine	20000U	86-30-6	N-Nitrososdiphenylamine (1)	20000U	
67-72-1	Hexachloroethane	20000U	101-55-3	4-Bromophenyl-phenylether	20000U	
98-95-3	Nitrobenzene	20000U	118-74-1	Hexachlorobenzene	20000U	
78-59-1	Isophorone	20000U	87-86-5	Pentachlorophenol	20000U	
88-75-5	2-Nitrophenol	20000U	85-01-8	Phenanthrene	15000J	110
105-67-9	2,4-Dimethylphenol	20000U	120-12-7	Anthracene	2900J	110
111-91-1	bis(2-Chloroethoxy)Methane	20000U	84-74-2	Di-n-Butylphthalate	20000U	
120-83-2	2,4-Dichlorophenol	20000U	206-44-0	Fluoranthene	40000	128
120-82-1	1,2,4-Trichlorobenzene	20000U	92-87-5	Benzidine	60000U	
91-20-3	Naphthalene *	620J	129-00-0	Pyrene	25000	131
87-68-3	Hexachlorobutadiene	20000U	85-68-7	Butylbenzylphthalate	20000U	
59-50-7	4-Chloro-3-Methylphenol	20000U	91-94-1	3,3'-Dichlorobenzidine	20000U	
77-47-4	Hexachlorocyclopentadiene	20000U	56-55-3	Benzo(a)Anthracene	12000J	149
88-06-2	2,4,6-Trichlorophenol	20000U	117-81-7	bis(2-Ethylhexyl)Phthalate	3400J	152
91-58-7	2-Chloronaphthalene	20000U	218-01-9	Chrysene	14000J	150
131-11-3	Dimethyl Phthalate	20000U	117-84-0	Di-n-Octyl Phthalate	20000U	
208-96-8	Acenaphthylene	20000U	205-99-2	Benzo(b)Fluoranthene	12000J	164
			207-08-9	Benzo(k)Fluoranthene	12000J	164
			50-32-8	Benzo(a)Pyrene	12200J	168
			193-39-5	Indeno(1,2,3-cd)Pyrene	9600J	184
			53-70-3	Dibenzo(a,h)Anthracene	20000U	
			191-24-2	Benzo(g,h,i)Perylene	12000J	189

* Scan #615

(1) Cannot be separated from diphenylamine

Date Reported: 10/16/86

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S.C. McLendon, P.E.
Laboratory Director

NJ DEP Sample #: S-3

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	% Prob FIT | RFIT	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Polychlorinated Biphenyl	96	1342	21000J
2.		Polychlorinated Biphenyl	96	1354	16000J
3.		Polychlorinated Biphenyl	96	1384	21000J
4.		Polychlorinated Biphenyl	98	1442	15000J
5.		Polynuclear Aromatic	-	1649	21000J
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H2M

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575 BROAD HOLLOW ROAD, MELVILLE, N.Y. 11747 • 516-694-3040

N.J. DEP
65 Prospect St.
Trenton, NJ 08618

Sample Lab No. 660548
Date Extracted: 9/18/86
Date Analyzed: 10/7/86
Type: Misc. - Tier I
Point: S-3
Collected By: CL 99

ANALYSIS FOR PESTICIDES/PCB's

C.A.S. No.	Compound	ug/kg
319-84-6	Alpha-BHC	100U
319-87-7	Beta-BHC	100U
319-86-8	Delta-BHC	100U
58-89-9	Gamma-BHC (Lindane)	100U
76-44-8	Heptachlor	100U
309-00-2	Aldrin	100U
1024-57-3	Heptachlor Epoxide	2000U
959-98-8	Endosulfan I	400U
68-57-1	Dieldrin	2000U
72-55-9	4,4'-DDE	400U
72-20-8	Endrin	400U
33213-65-9	Endosulfan II	400U
72-54-8	4,4'-DDD	400U
1031-07-8	Endosulfan Sulfate	400U
50-29-3	4,4'-DDT	2000U
72-43-5	Methoxychlor	80U
53494-70-5	Endrin Ketone	16U
57-74-9	Chlordane	400U
8001-35-2	Toxaphene	400U
12674-11-2	Aroclor 1016	300U
11104-28-2	Aroclor 1221	300U
11141-16-5	Aroclor 1232	300U
53469-21-9	Aroclor 1242	300U
12672-29-6	Aroclor 1248	300U
11097-69-1	Aroclor 1254	410000
11096-82-5	Aroclor 1260	2000U

Vi = Volume of extract injected (uL)
Ws = Weight of sample extracted (g)
Vs = Ws = 9.05 g Vt = 10 mL
Date Reported: 10/17/86

Vs = Volume of water extracted (mL)
Vt = Volume of Total extract (mL)
Vi = 5 uL

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* *
****
S.C. McLendon, P.E.
Laboratory Director

Lab Name : H2M LABS

ORGANICS ANALYSIS DATA SHEET

Sample Number
660548

NJDEP #CD910-S3
Run2269

Tentatively Identified Compounds

C.A.S. Number	Compound Name	% Probability Fit	% Probability REFIT	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.	Unknown			2.22	80
2.	Unknown			2.74	270
3.	Unknown			3.09	220
4.	Unknown			348	980
5.	Unknown			4.25	1300
6.	Unknown			17.54	88
7.	Unknown			19.11	700
8.	Unknown			20.36	32
9.	Unknown			21.38	380
10.	Unknown			29.41	230
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H2M
Environmental Engineers & Scientists
HOLZMACHER, McLENDON and MURRELL, P.C.
575 BROAD HOLLOW ROAD, MELVILLE, NEW YORK 11747 (516) 694-3040

WATER RESOURCES • WATER SUPPLY & TREATMENT • SEWERAGE & TREATMENT • ECOLOGICAL & IMPACT STUDIES
MODEL STUDIES • PILOT PLANT STUDIES • WATER/WASTE WATER LABORATORY AND ANALYTICAL SERVICES

LABORATORY REPORT

LAB NO. 660549
PROJECT NO. 2C

CLIENT'S NAME AND ADDRESS

NEW JERSEY D.E.P.
65 PROSPECT ST.
TRENTON, NEW JERSEY 08618

TYPE OF SAMPLE - MISCELLANEOUS
COLLECTED BY CL 99
DATE COLLECTED - 9/11/86
DATE RECEIVED - 9/12/86

NJDEP SAMPLE #CD 910-S3
NJDEP SAMPLE POINT I.D. #BACKGROUND
SOIL SAMPLE

PARAMETER	RESULT	PARAMETER	RESULT
ANTIMONY	30.4 N	SELENIUM	<0.20 N
ARSENIC	26.2	SILVER	11.1 N
BERYLLIUM	2.90	THALLIUM	<2.20 N
CADMIUM	55.3	ZINC	1800 N
CHROMIUM	242.	PHENOLS	0.07
COPPER	1600	CYANIDE	<3.50
LEAD	1930	TOTAL SOLIDS	90.0 %
MERCURY	1.40 N		
NICKEL	589.		

ALL RESULTS REPORTED IN mg/kg DRY WEIGHT

ALL RESULTS IN (MG/L) EXCEPT AS NOTED BY # (UG/L) OR % (PERCENT) AND
T.COLI BACT. & FECAL COLI (MPN/100ML)
COLOR, ODOR, TURBIDITY & PH (UNITS)
APC & FECAL STREP (COUNTS/ML)
SPEC.COND. (UMHOS) SETT.SOLIDS(ML/L)

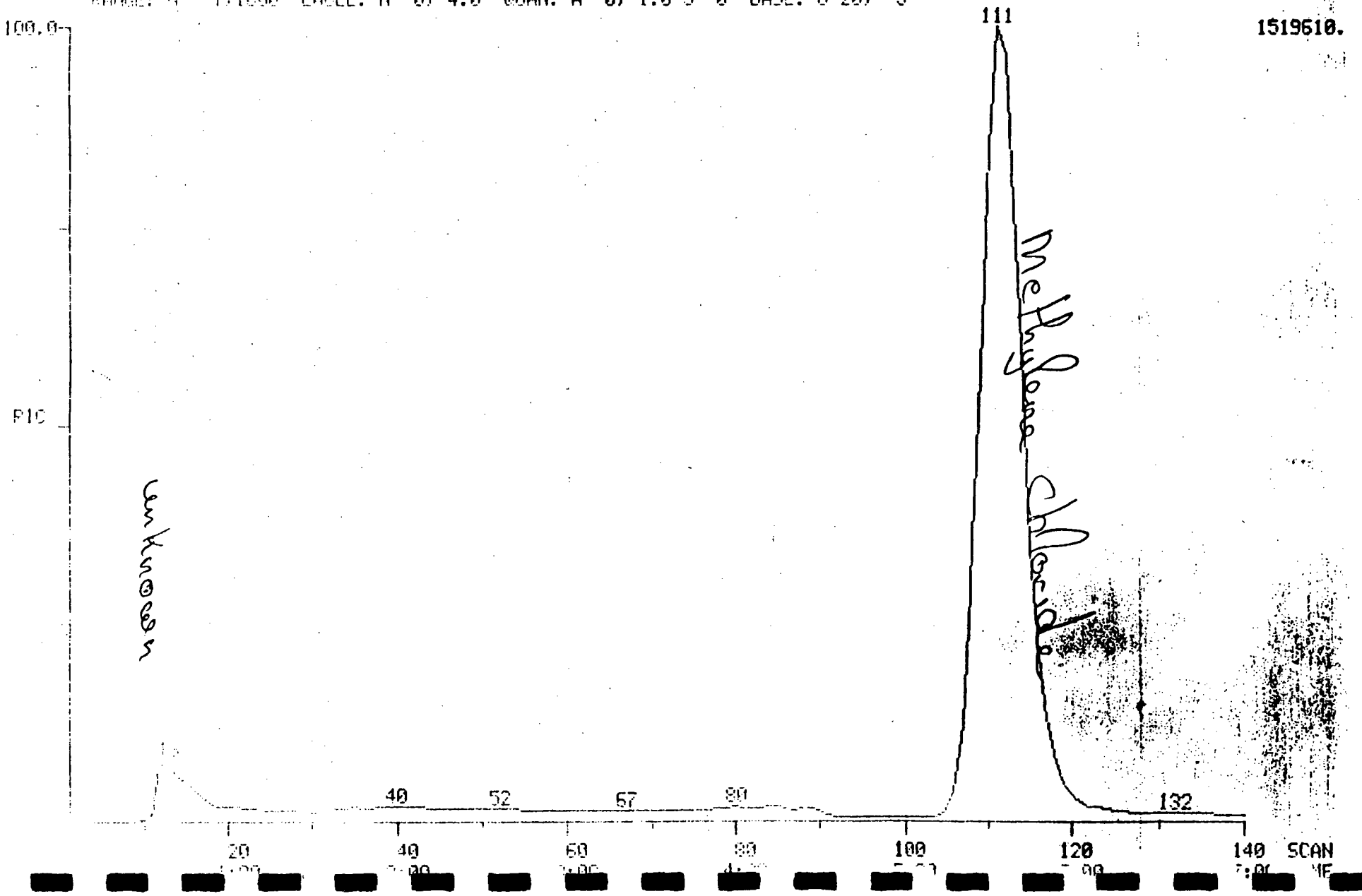
DATE REPORTED 10/ 8/86

S. C. McLENDON, P.E., LABORATORY DIRECTOR

THE LIABILITY OF H2M CORP. SHALL BE LIMITED TO THE PRICE OF THE SERVICE RENDERED AND PAID.

PIC
20:03:00
SAMPLE: 500558
COMMS.: 46 gms
RANGE: G 1.1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: FU6434 #1 SCANS 1 TO 140
CALI: FU6434 #2

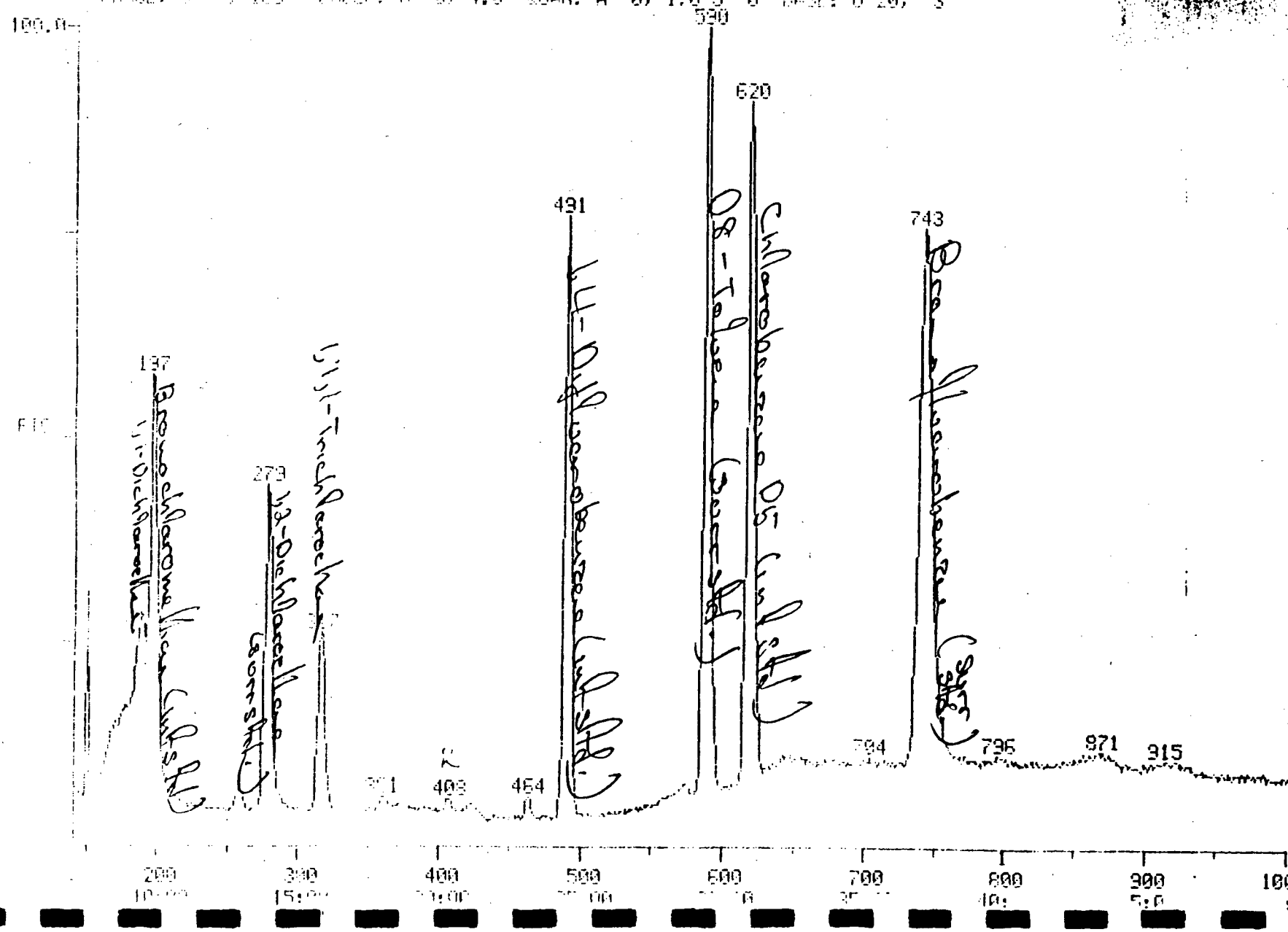


DATA: FU6434 #1 SCANS 140 TO 1000
CALT: FU6434 #2

16 gms

PRNGE: 0 1-1000 LABEL: U 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

182528.



65e

QUANTITATION REPORT FILE: PU6434

DATA: PU6434.TI
09/26/86 20:09:00
SAMPLE: 660536
CONDS.: 46 gms
SUBMITTED BY: NJDEP ANALYST: CC

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
RESP. FACT. FROM LIBRARY ENTRY

No	Name
1	BROMOCHRLOROMETHANE (INT STD.)
2	1,S-DICHLOROETHANE D4 (SURR. STD)
3	CHLOROMETHANE
4	BROMOMETHANE
5	VINYL CHLORIDE
6	CHLOROETHANE
7	METHYLENE CHLORIDE (C)
8	ACETONE
9	CARBON DISULPHIDE
10	1,1-DICHLOROETHENE (P)
11	1,1-DICHLOROETHANE(E)
12	TRANS -1,2-DICHLOROETHENE (D)
13	CHLOROFORM
14	1,2-DICHLOROETHANE(H)
15	TRICHLOROFLUOROMETHANE
16	DICHLOROFLUOROMETHANE
17	ACROLEIN
18	ACRYLONITRILE
19	1,4-DIFLUOROEENZENE(INT STD)
20	2-BUTANONE (MEK)
21	1,1,1-TRICHLOROETHANE (I)
22	CARBON TETRA CHLORIDE
23	BROMODICHLOROMETHANE(L)
24	1,2-DICHLOROPROPANE(X)
25	TRANS-1,3-DICHLOROPROPENE (AA)
26	TRICHLOROETHENE(K)
27	DIBROMOCHLOROMETHANE(O)
28	1,1,2-TRICHLOROETANE(M)
29	BENZENE(BEN)
30	CIS-1,3-DICHLOROPROPENE(Z)
31	2-CHLOROETHYLVINYLETHER(NN)
32	BROMOFORM(P)
33	CHLOROBENZENE-D5 (INT STD)
34	2-HEXANONE(MBK)
35	4-METHYL-2-PENTANONE(MIBK)
36	TETRACHLOROETHENE(Q)
37	ETHANE, 1,1,2,2-TETRACHLORO-
38	TOLUENE(TOL)
39	CHLOROBENZENE(G)
40	ETHYLBENZENE(EB)
41	STYRENE
42	META-XYLENE
43	ORTHO/PARA-XYLENE
44	META-DICHLOROBENZENE(V)
45	ORTHO-DICHLOROBENZENE(W)
46	PARA-DICHLOROBENZENE(Y)
47	1,2,4-TRICHLOROBENZENE(BB)
48	BROMOFLUOROBENZENE(SURR STD)

No	MW	SCAN	TIME	RT	RRT	METH	AREA(NGHT)	AMOUNT

24

Q9e

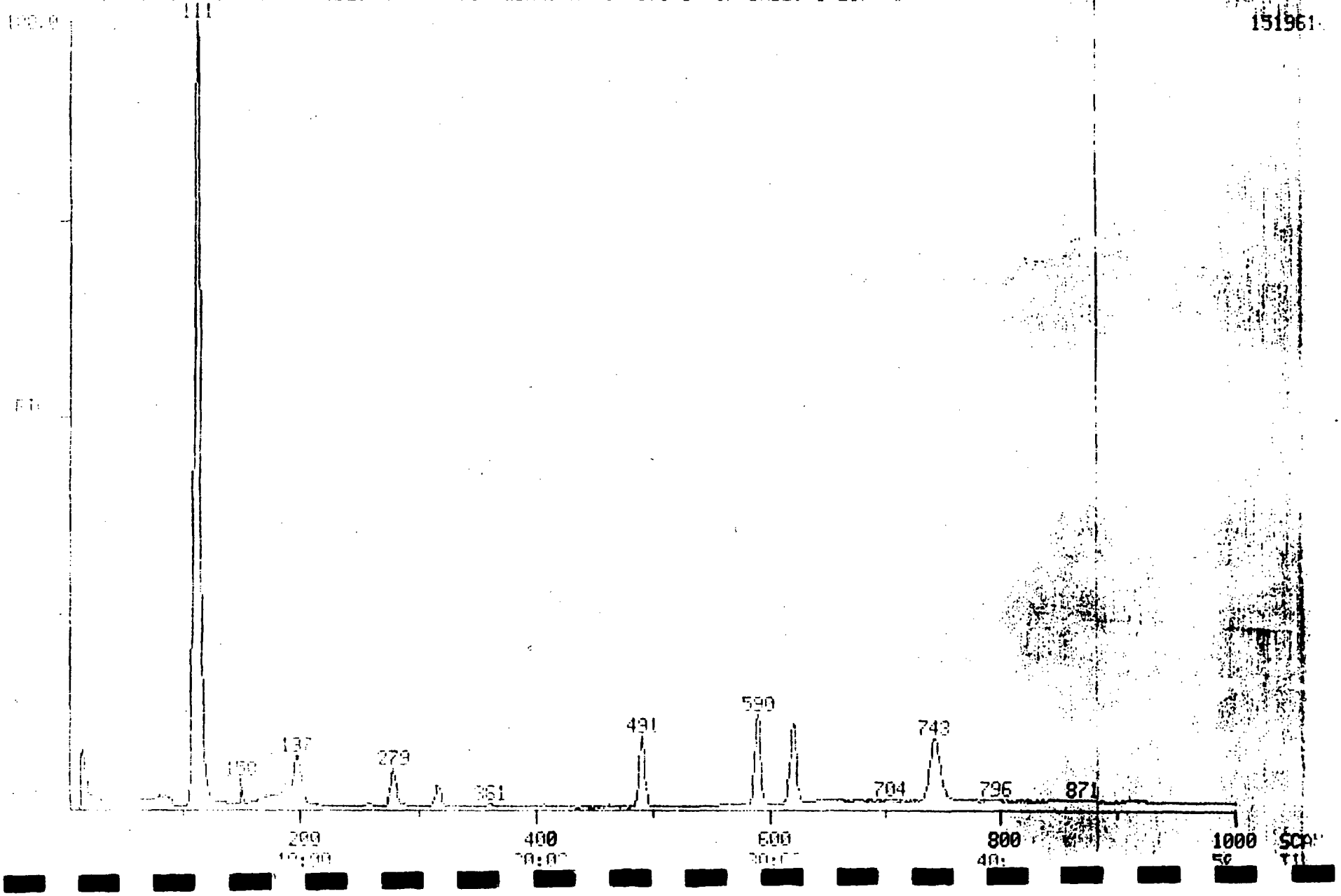
4	NOT FOUND								
5	NOT FOUND								
6	NOT FOUND								
7	84	111	5:33	1	0.561	A BB	1704080.	3711.170	NG	60.95
8	43	139	6:57	1	0.702	A BB	7297.	42.440	NG	0.76
9	NOT FOUND								
10	96	188	9:24	1	0.949	A BB	17275.	56.704	NG	0.93
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	85	32	2:36	1	0.263	A BB	3489.	456.821	NG	7.50
17	NOT FOUND								
18	NOT FOUND								
19	114	491	24:33	19	1.000	A BB	287823.	250.000	NG	4.11
20	43	287	14:21	19	0.585	A*VB	13119.	49.128	NG	0.81
21	97	317	15:51	19	0.646	A BB	50609.	100.591	NG	1.65
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	130	407	20:21	19	0.829	A BB	3047.	5.817	NG	0.10
27	NOT FOUND								
28	NOT FOUND								
29	70	438	21:36	[illegible]	0.880	A BB	191.	0.101	NG	0.04
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	117	620	31:00	33	1.000	A BB	240303.	250.000	NG	4.11
34	43	511	25:33	33	0.824	A*BB	881.	137.748	NG	2.26
35	43	549	27:27	33	0.885	A BV	2899.	66.413	NG	1.09
36	NOT FOUND								
37	NOT FOUND								
38	92	594	29:42	33	0.958	A BB	2532.	2.645	NG	0.04
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	106	796	39:48	33	1.284	A BB	340.	156.508	NG	2.57
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	100	590	29:30	33	0.952	A BB	171910.	277.103	NG	4.55
48	95	743	37:09	33	1.198	A BB	216741	238.597	NG	3.93

DATA: PU6434 #1 SCANS 1 TO 1000
CALI: PU6434 #2

46 gms

1.1900 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0. BASE: U 20. 3

151961

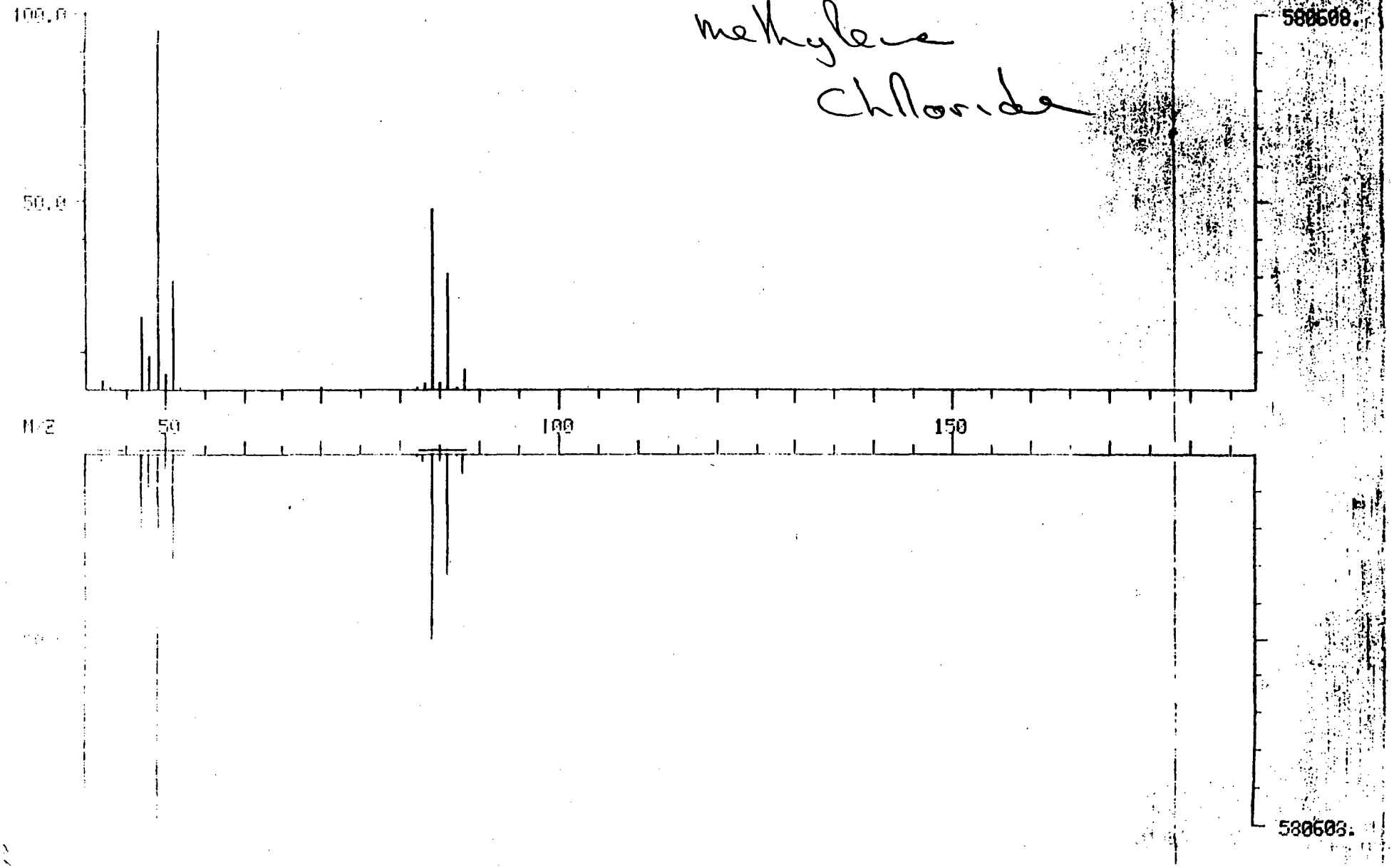


SPECTRUM
05 20:03:00 + 5:33
SAMPLE: 5505%
CONDS.: 46gm
ENHANCED (S 15B 21 0T)

DATA: FU6434 #111
CAL: FU6434 #2

BASE M/Z: 49/ 49
RIC: 1441799./ 1521660.

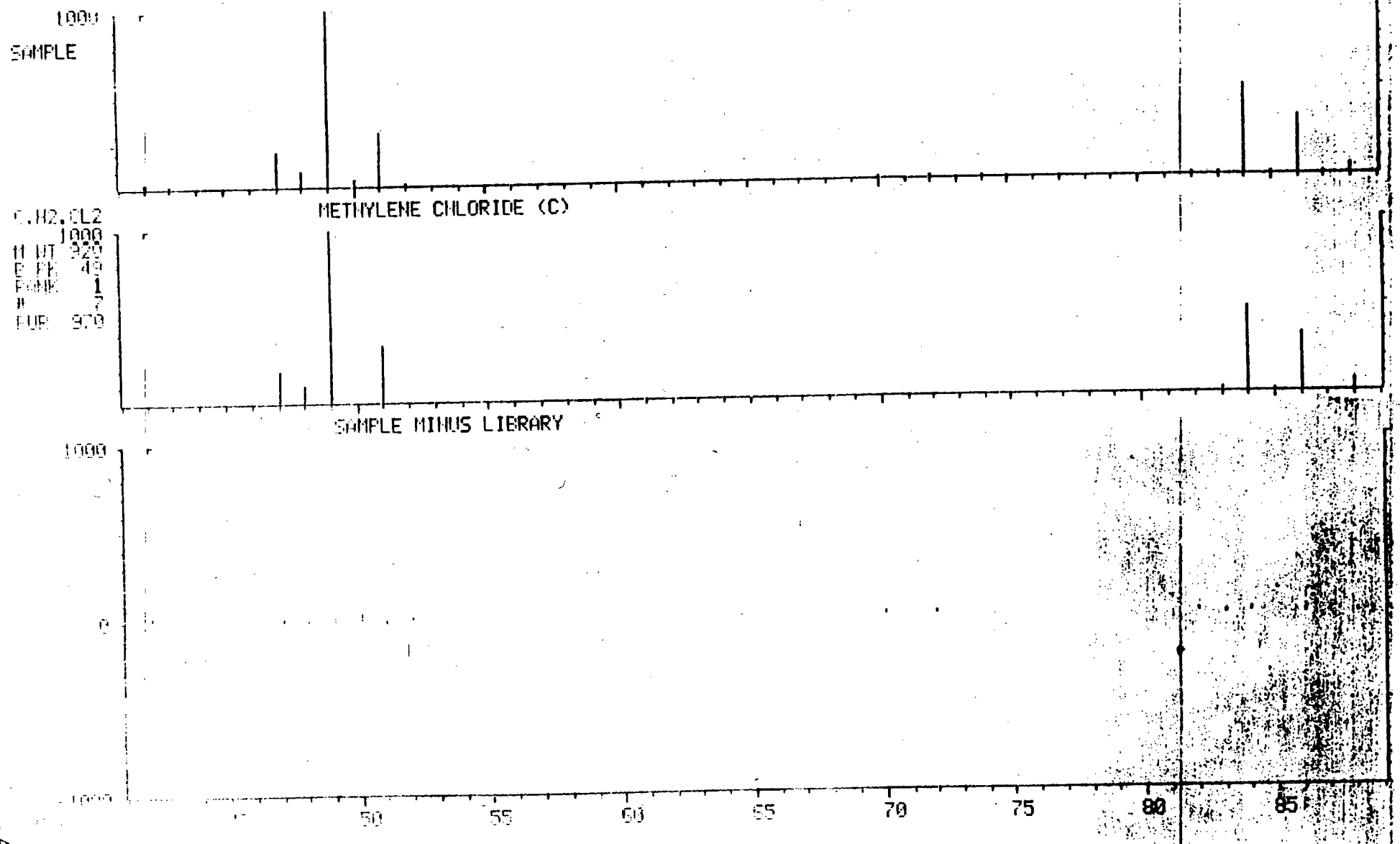
methylene Chloride



LIBRARY SEARCH
[illegible] 20:02:09 + 5:33
SAMPLE: 660538
46 gms
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6434 # 111
CALI: PU6434 # 2

BASE M/Z: 49
RIC: 1441730.



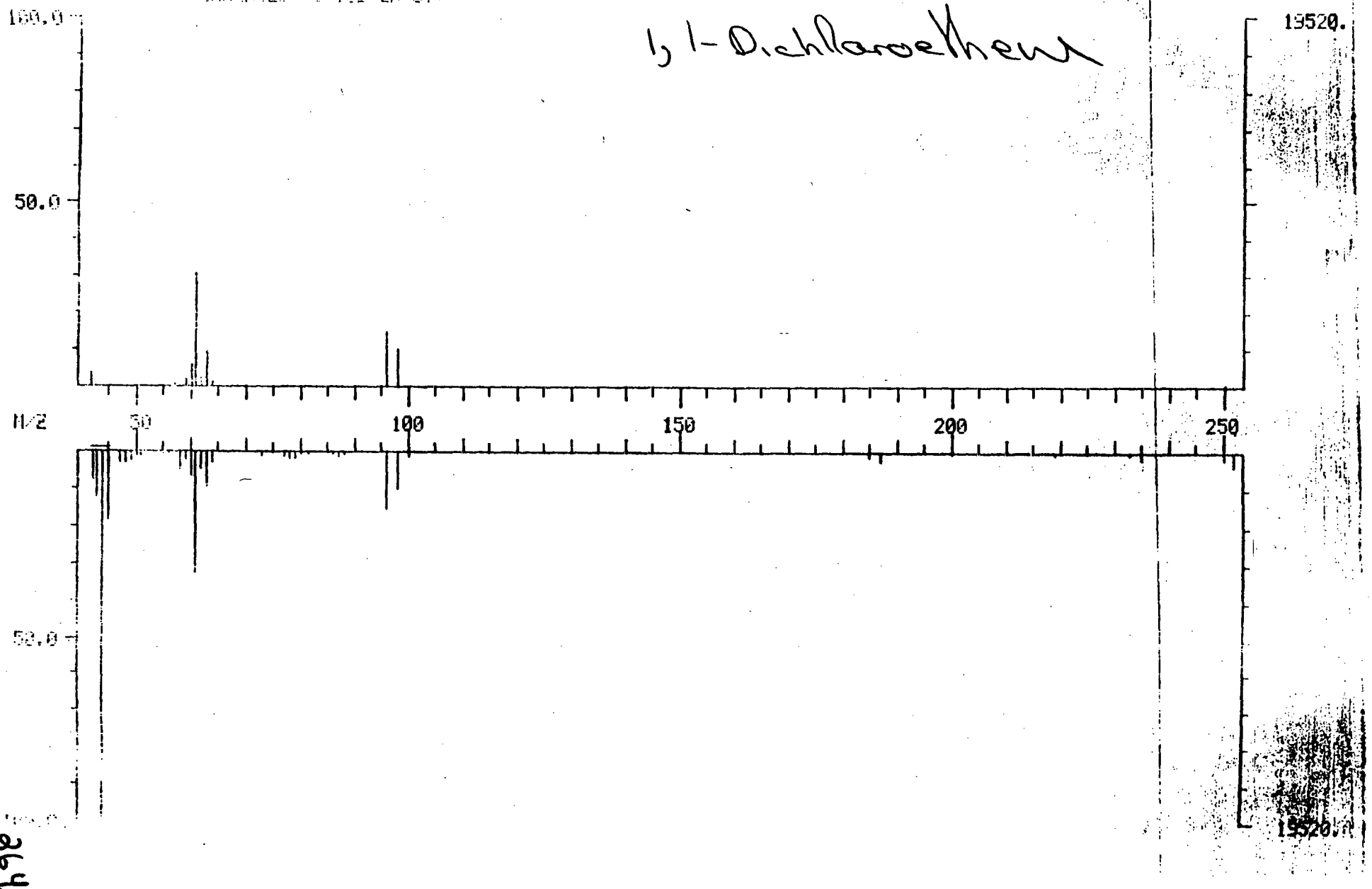
24

DUAL MASS SPECTRUM
09/26/86 20:09:00 + 3:24
SAMPLE: 6605X
CONDS.: 46 gms
ENHANCED (S 15B 2N 0T)

DATA: PU6434 #188
CALI: PU6434 #2

BASE M/Z: 61 44
RIC: 15871. 51455.

1,1-Dichloroethene

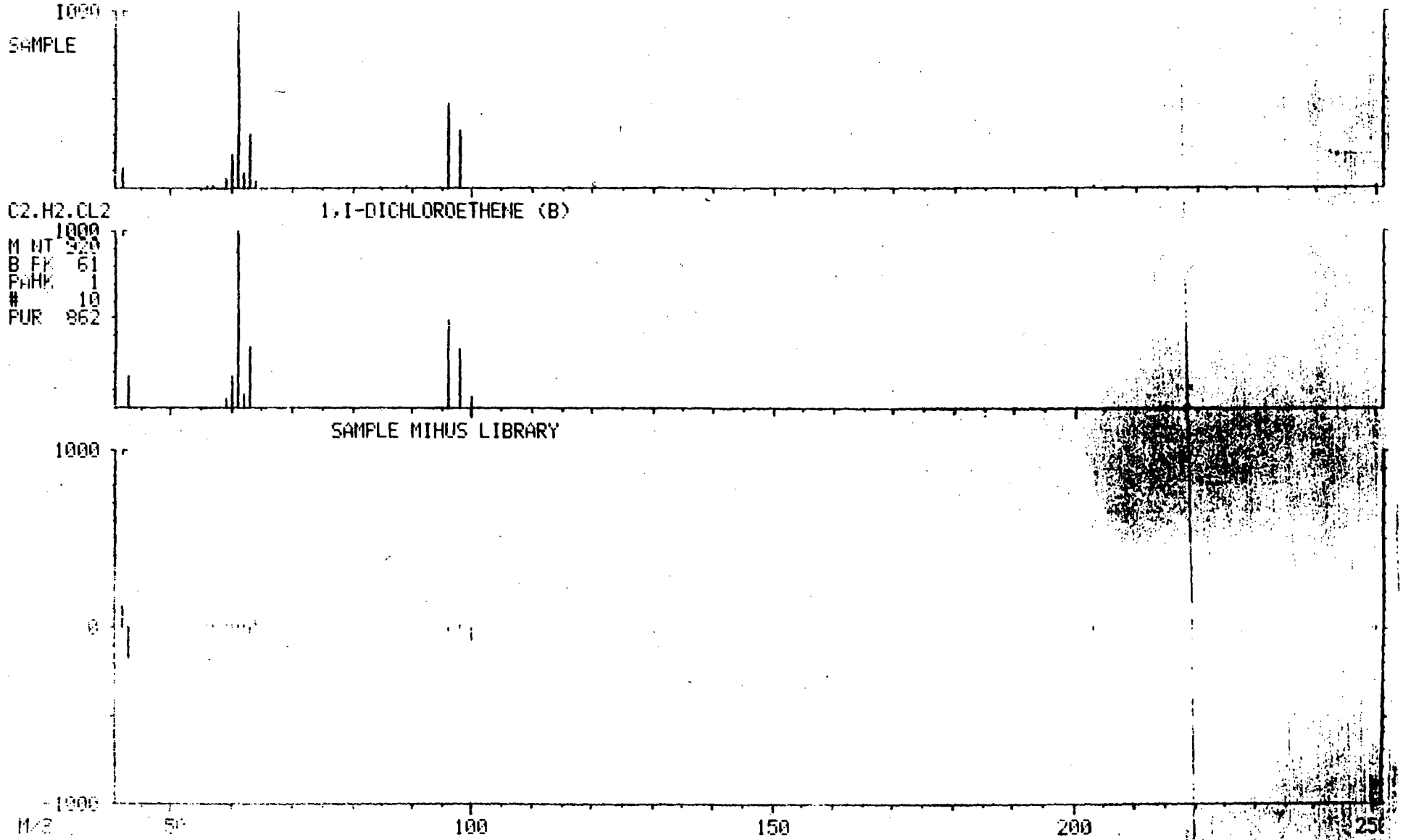


264

LIBRARY SEARCH
09/26/85 20:09:00 + 9:24
SAMPLE: 660596
CONDS.: 46 gms
ENHANCED (S 150 2N 0T)

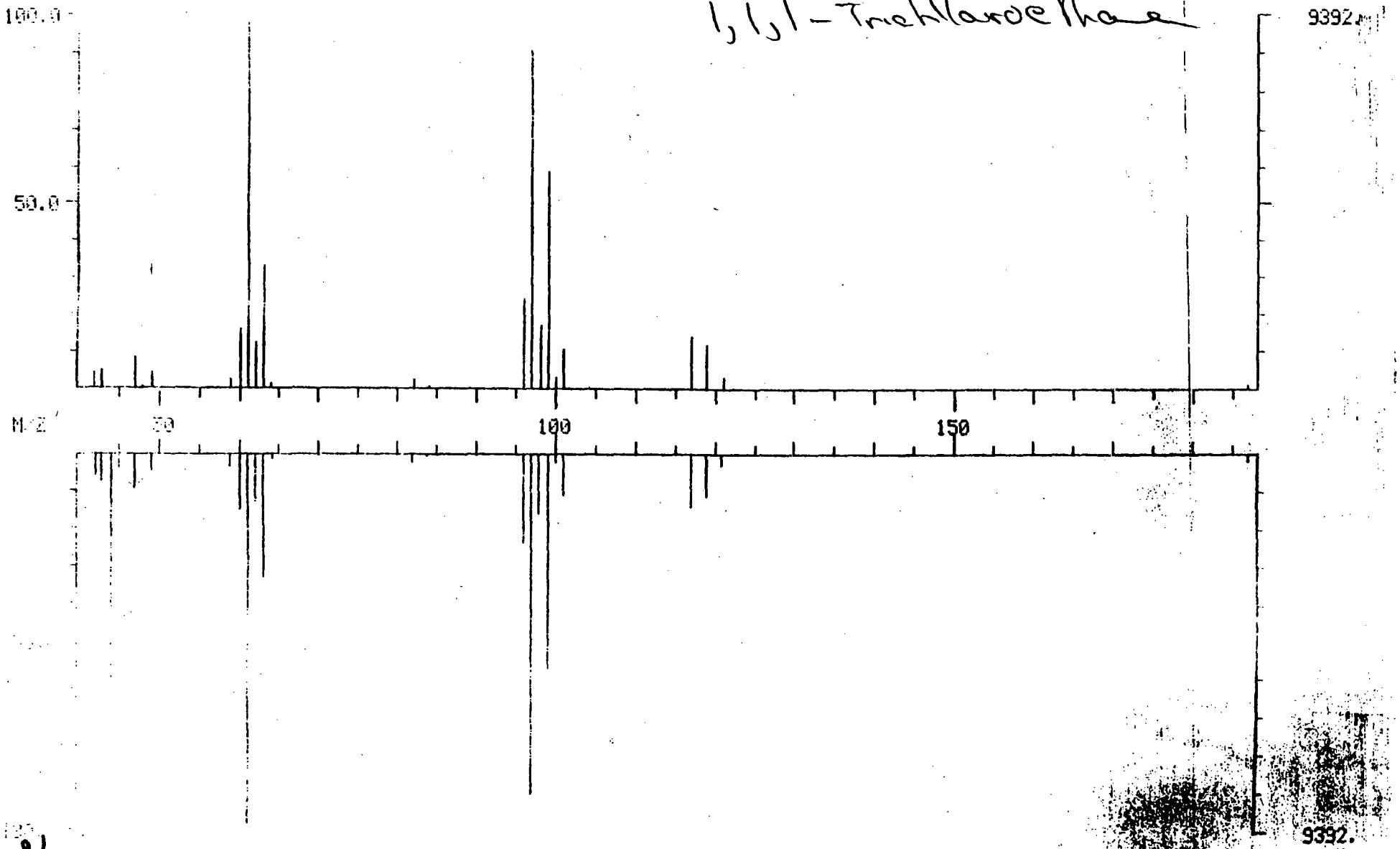
DATA: PU6434 # 188
CALI: PU6434 # 2

BASE M/Z: 61
PIC: 15871.



DATA: PU6434 #317 BASE M/Z: 61 51
CALI: PU6434 #2 RIC: 39615. 47615.

1,1,1-Trichloroethane

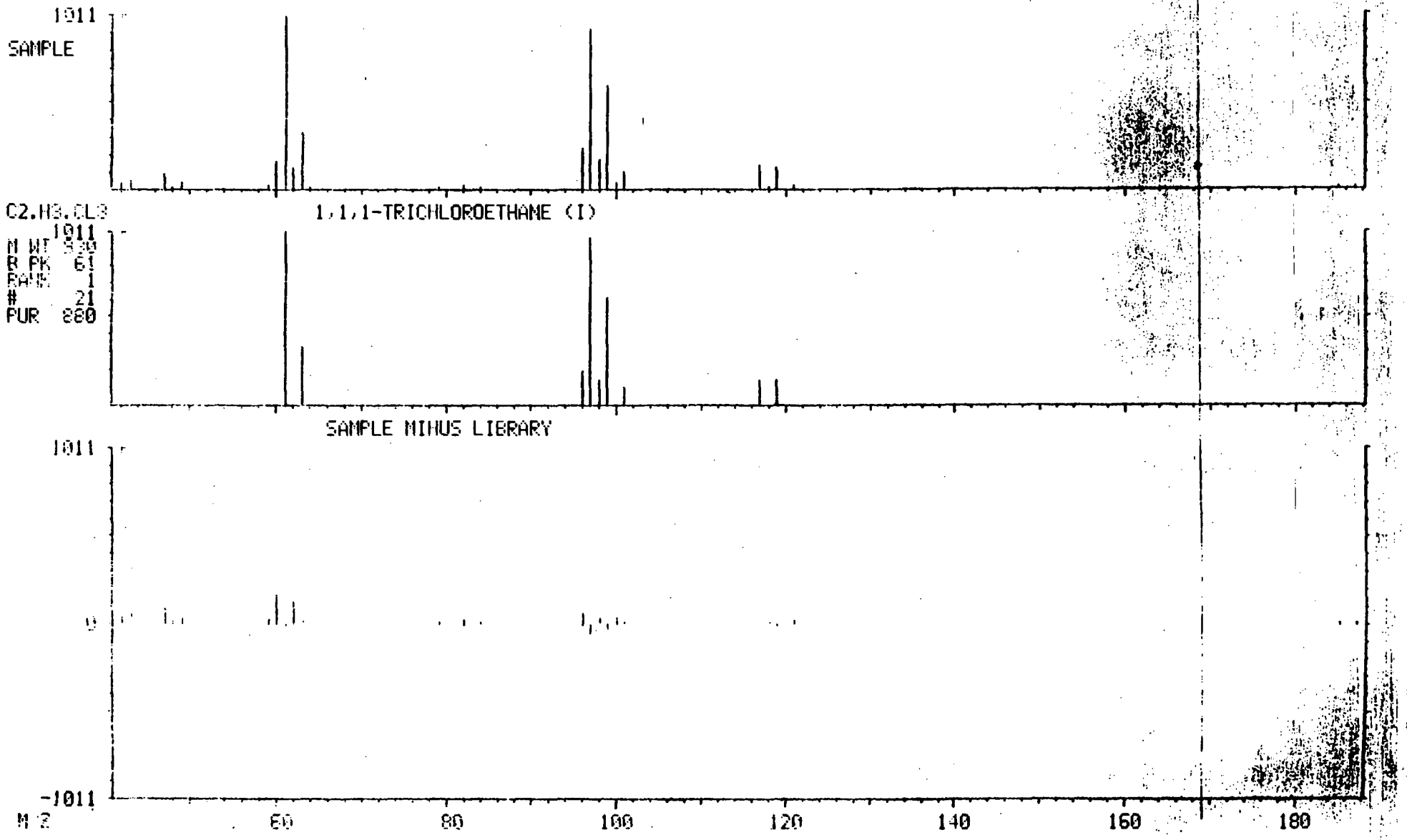


266

LIBRARY SEARCH
09/25/86 20:09:00 + 15:51
SAMPLE: 660526
CONDS.: 46 gms
ENHANCED (S 15B 2H 0T)

DATA: PU5434 # 317
CALI: PU5434 # 2

BASE M/Z: 61
BIC: 39615.



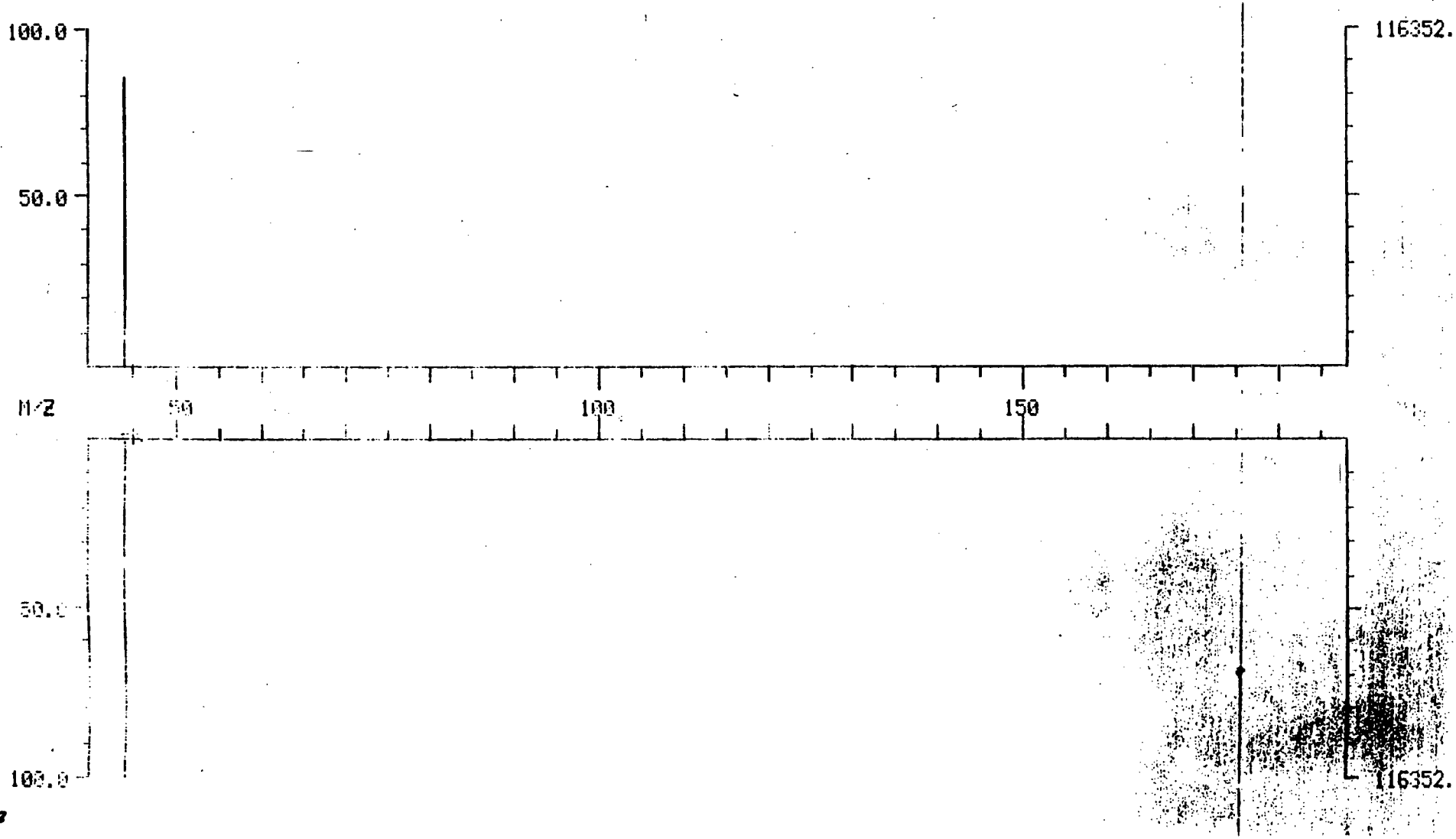
26.

DUAL MASS SPECTRUM
09/25/85 20:37:00 + 0:39
SAMPLE: [illegible] X 46 gms
COMPD.:
ENHANCED (G.15B 2N 0T)

DATA: PU6434 #13
CALI: PU6434 #2

BASE M/Z: 44/ 44
RIC: 100863. 118527.

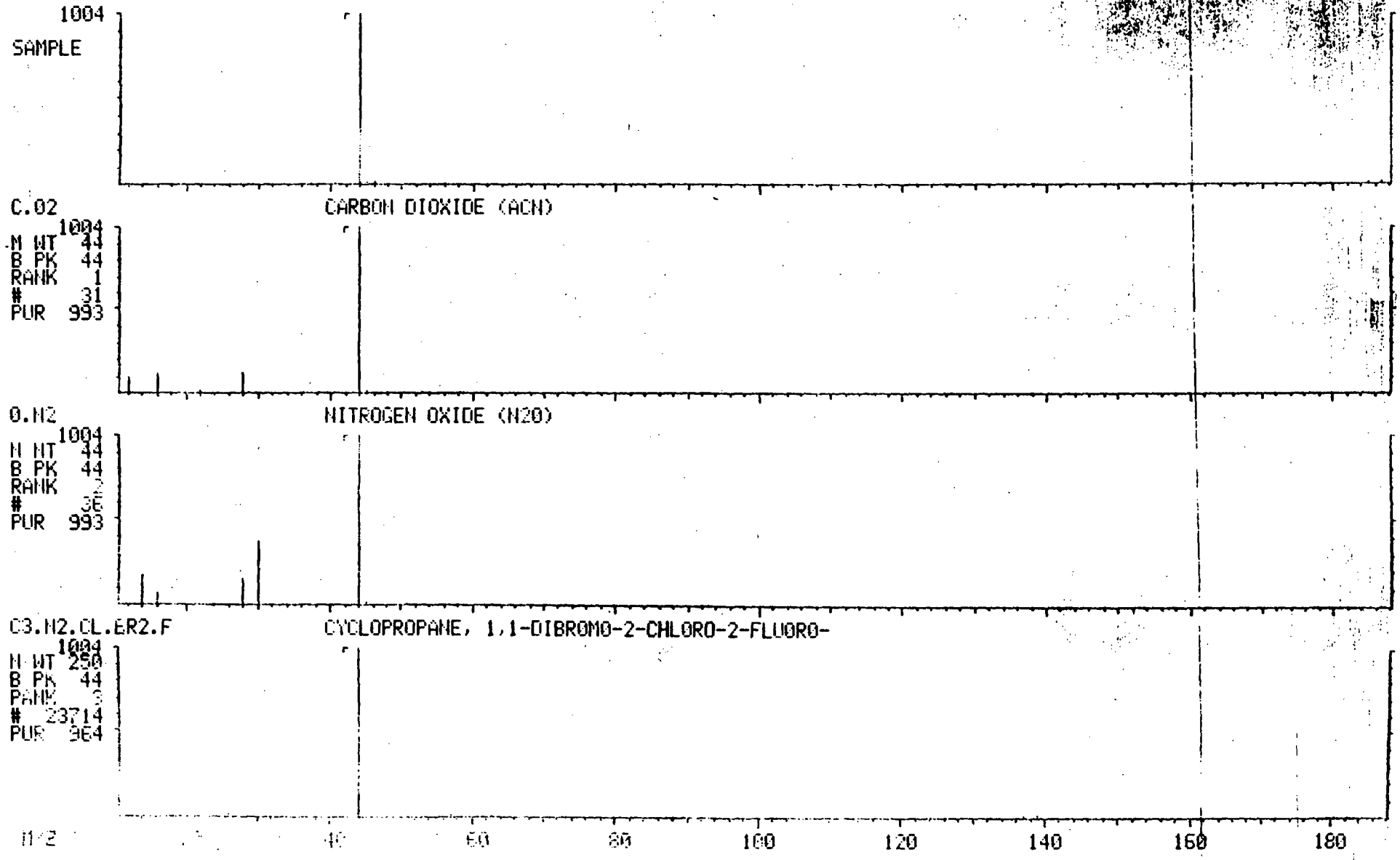
Unknown



LIBRARY SEARCH
05/26/86 20:09:00 + 0:39
SAMPLE: EF05X 46gms
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6434 # 13
CALI: PU6434 # 2

BASE M/Z: 44
RIC: 100863.



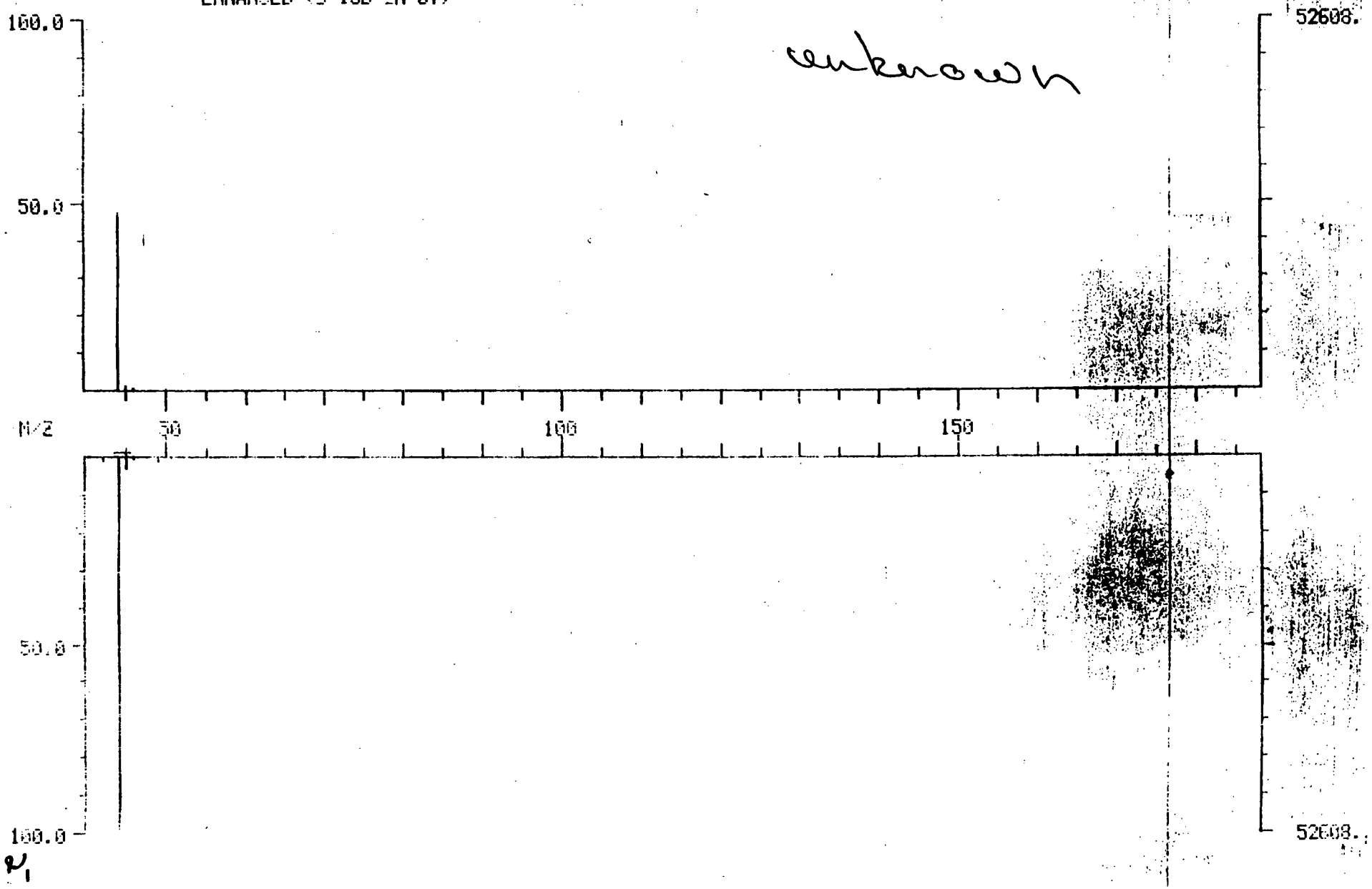
26

DUAL MASS SPECTRUM
09/26/86 20:00:00 + 7:30
SAMPLE: 660526 46 gms
CONDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6434 #150
CAL.: PU6434 #2

BASE M/Z: 44/ 44
PIC: 26175./ 56447.

unknown



LIBRARY SEARCH
03/26/86 20:09:00 + 7:30
SAMPLE: 6605 46
CONDS.: Jons
ENHANCED (S 15B 2N OT)

DATA: PU6434 # 150
CALI: PU6434 # 2

BASE M/Z: 44
RIC: 26175.

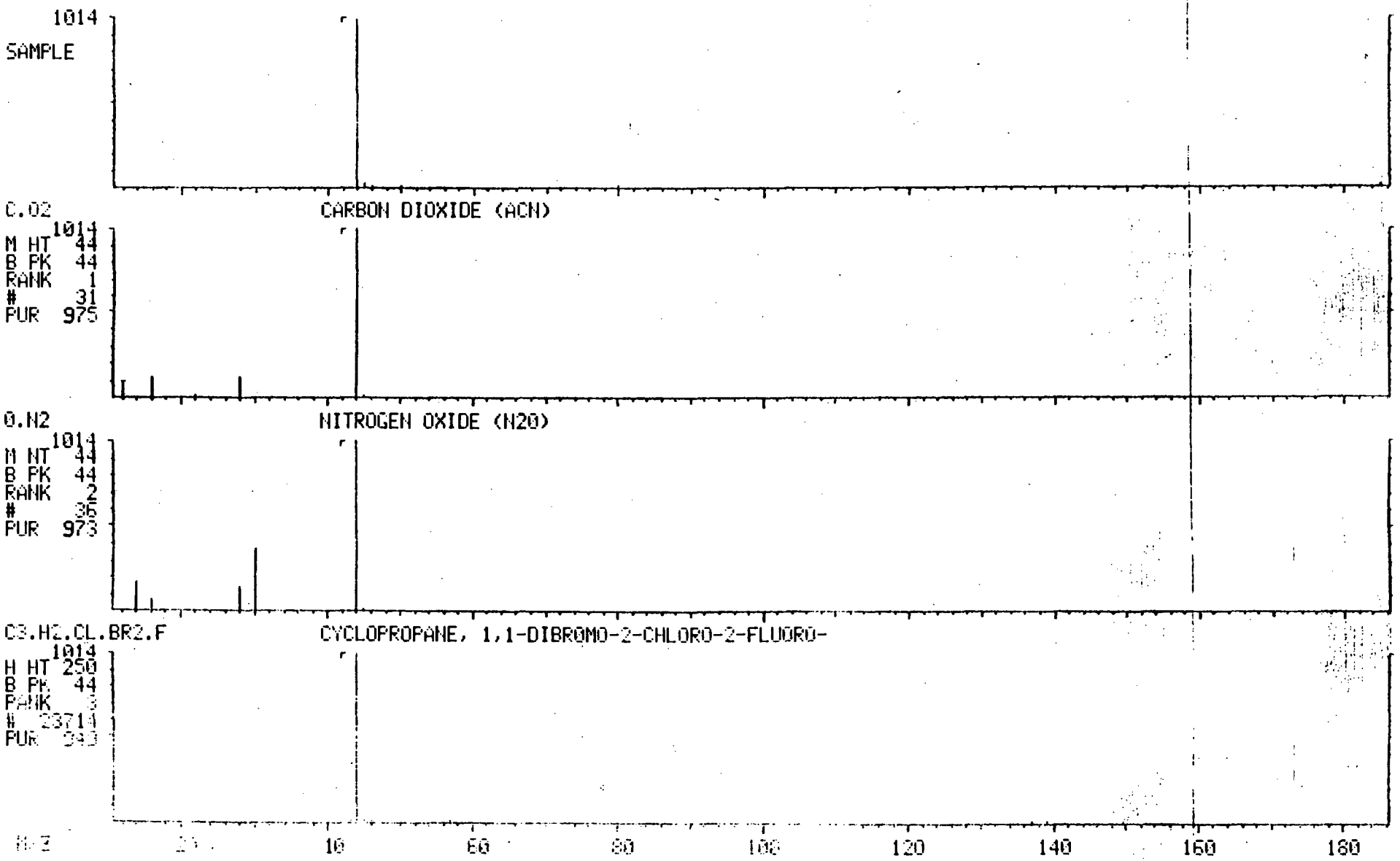


Fig 2

QUANT REPORT

Operator ID: STEVE
Output File: ^P2507::OP
Data File: >P2507::03
Name: 2UL 660547 BNA
Misc: CD 910-S3

Quant Rev: 4
Quant Time: 861007 01:25
Injected at: 861007 00:40
Dilution Factor: 1.00

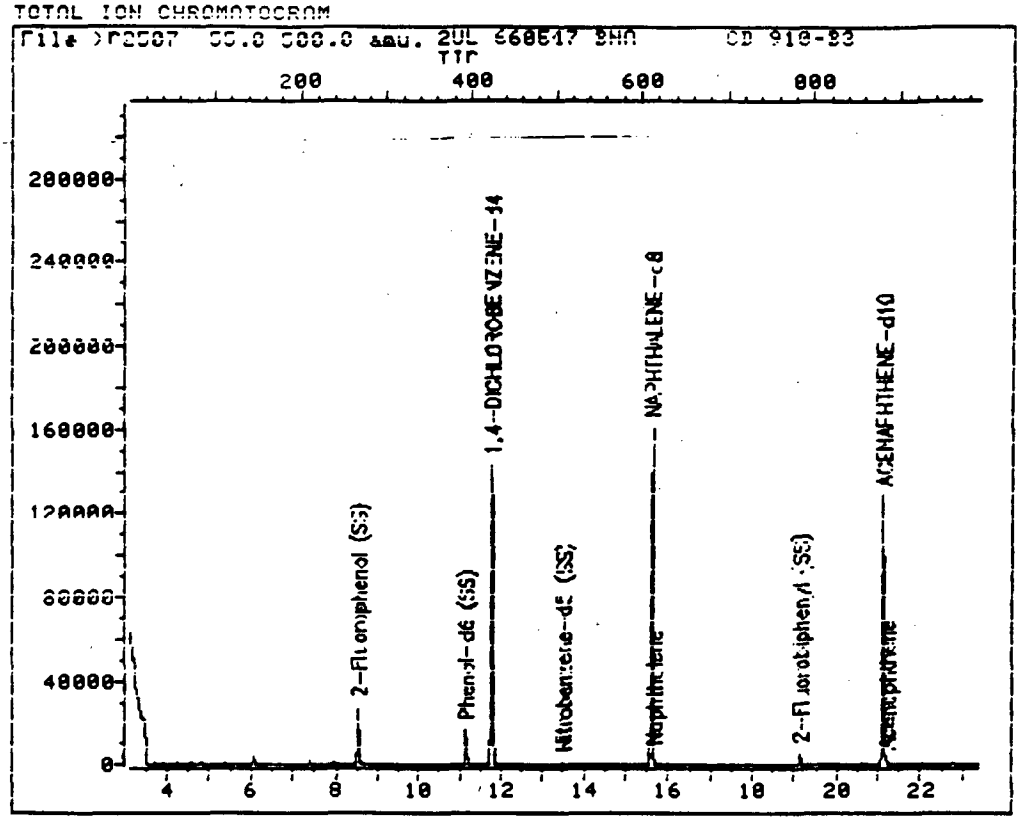
BTL#97

ID File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLGROBENZENE-d4	11.77	425	56278	40.00	NG	91
3)	2-Fluorophenol (SS)	8.52	266	16868	10.71	NG	83
7)	Phenol-d6 (SS)	11.14	394	13949	8.00	NG	71
15)	*NAPHTHALENE-d8	15.62	613	178929	40.00	NG	50
16)	Nitrobenzene-d5 (SS)	13.49	509	1020	.62	NG	82
24)	Naphthalene	15.66	615	1727	.31	NG	41
27)	*ACENAPHTHENE-d10	21.12	882	66354	40.00	NG	94
31)	2-Fluorobiphenyl (SS)	19.13	785	5541	2.08	NG	94
34)	Acenaphthene	21.20	886	988	.38	NG	90
42)	2,4,6-Tribromophenol (SS)	23.55	1001	4504	7.59	NG	80
43)	*PHENANTHRENE-d10	25.57	1100	91792	40.00	NG	53
50)	Phenanthrene	25.64	1103	20882	7.46	NG	49
51)	Anthracene	25.76	1109	4130	1.46	NG	49
53)	Fluoranthene	29.26	1280	30702	19.78	NG	58
54)	*CHRYSENE-d12	33.70	1497	66052	40.00	NG	46
55)	Terphenyl-d14 (SS)	30.59	1345	2895	2.74	NG	41
57)	Pyrene	29.91	1312	27863	12.41	NG	36
60)	Benzo(a)Anthracene	33.64	1494	12775	6.18	NG	76
61)	bis(2-Ethylhexyl)Phthalate	34.27	1525	2977	1.68	NG	87
62)	Chrysene	33.76	1500	14723	6.99	NG	98
63)	*PERYLENE-d12	37.78	1696	76342	40.00	NG	77
65)	Benzo(b)Fluoranthene	36.77	1647	16724	5.93	NG	94
66)	Benzo(k)Fluoranthene	36.81	1649	15518M	5.89	NG	95
67)	Benzo(a)Pyrene	37.61	1688	14765	6.06	NG	90
68)	Indeno(1,2,3-cd)Pyrene	40.89	1848	13917	4.77	NG	84
70)	Benzo(g,h,i)Perylene	41.75	1890	14003	5.87	NG	65

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3

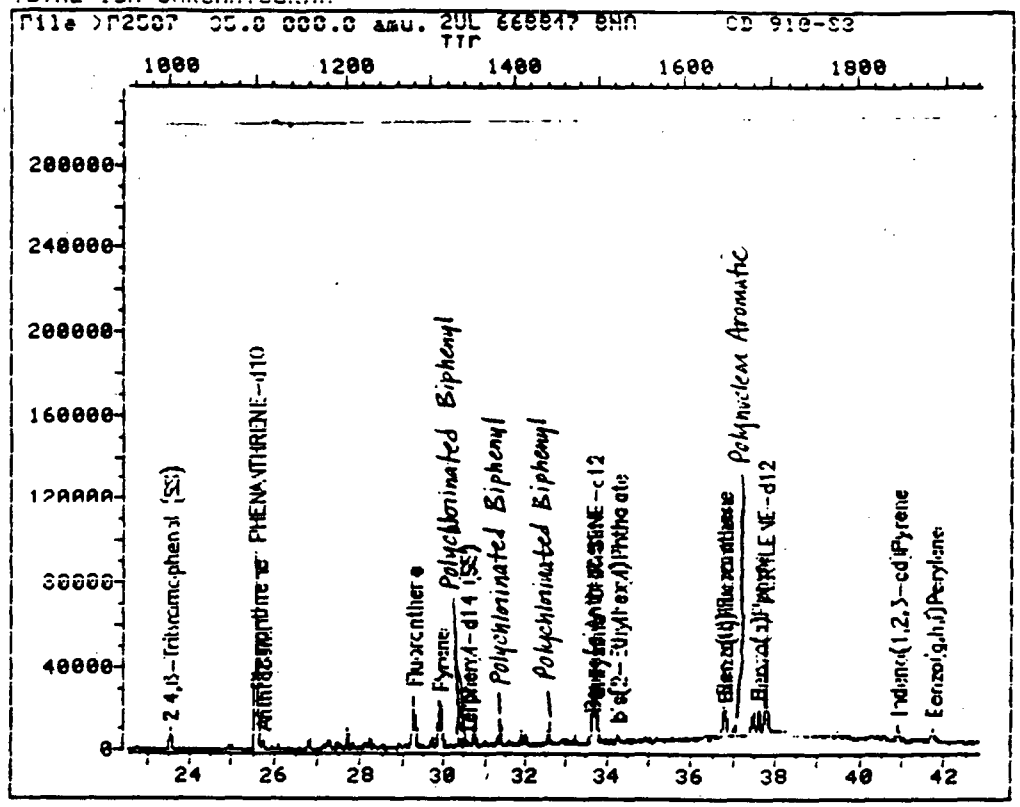
BTL#97

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861007 01:25
Injected at: 861007 00:40

TIC page 1 of 2

TOTAL ION CHROMATOGRAM



Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3

BTL#97

Id File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

Operator ID: STEVE
Quant Time: 861007 01:25
Injected at: 861007 00:40

TIC page 2 of 2

MS data file header from : >P2507

Sample: 2UL 660547 BNA Operator: STEVE MS 10/07/86 0:40
Misc : CD 910-S3 BTL#97
Sys. #: 1 MS model: 96 SU/HU rev.: CA ALS # : 0
Method file: EXTRII Tuning file: MT9301 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 280

Chromatographic temperatures :	30.	300.	0.	0.	0.
Chromatographic times, min. :	4.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

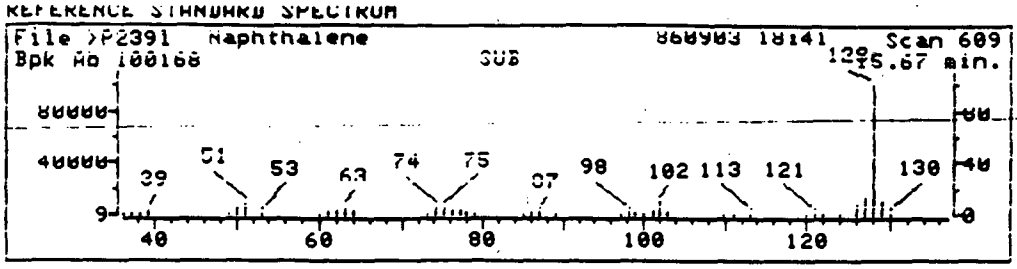
>P2507 2UL 660547 BNA CD 910-S3
35.01 500.0 CLP AOC TIC

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.597	609	612	619	119666	543703	543703	100.00	26.56
2	21.198	878	886	889	35354	239797	239797	44.10	11.71
3	25.554	1096	1099	1114	61455	527853	525952	96.74	25.70
4	30.526	1340	1342	1350	6884	66062	46813	8.61	2.28
5	30.771	1352	1354	1356	14519	43042	33700	6.20	1.64
6	31.386	1379	1384	1387	11633	66068	43732	8.04	2.13
7	32.573	1439	1442	1446	10938	57867	32940	6.06	1.61
8	33.679	1489	1496	1515	15446	273197	171795	31.60	8.39
9	36.814	1643	1649	1654	12495	169788	84893	15.61	4.14
10	37.716	1683	1693	1706	24554	573076	323156	59.44	15.79

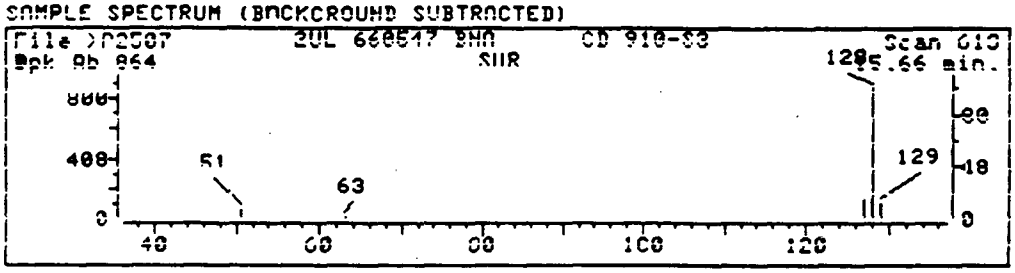
Sum of corrected areas: 2046481.

4:28 PM TUE., 7 OCT., 1986

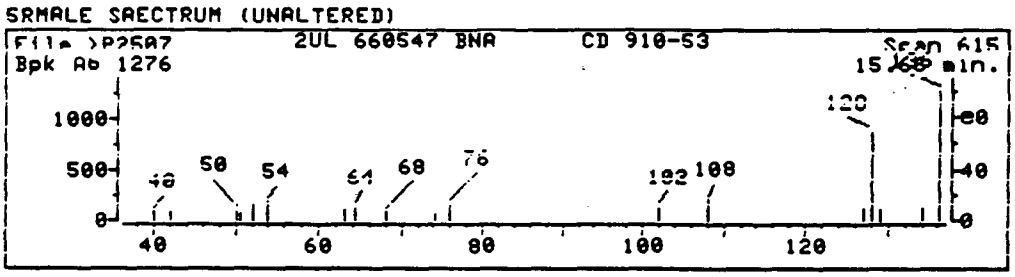
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

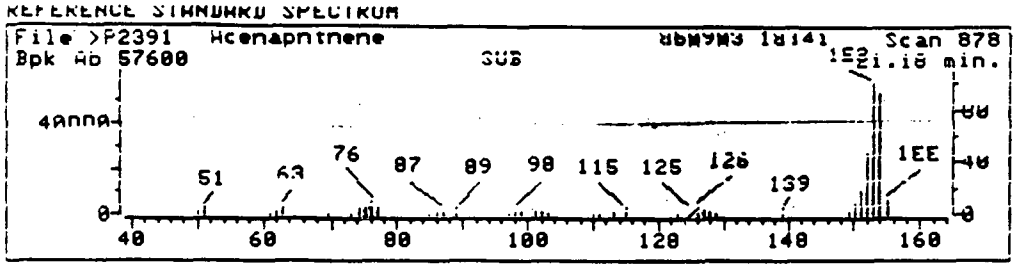


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

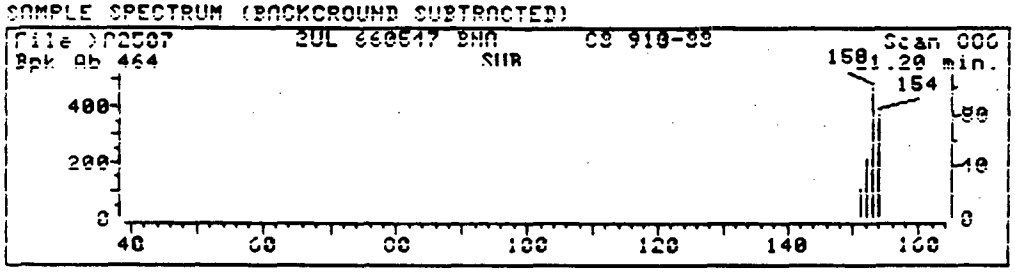
BTL#97

Compound No: 24
Compound Name: Naphthalene
Scan Number: 615
Retention Time: 15.66 min.
Area: 1727
Concentration: .31 NG
q-value: 41

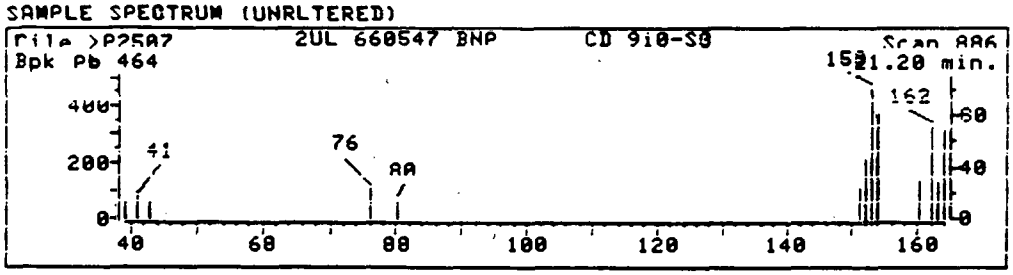
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

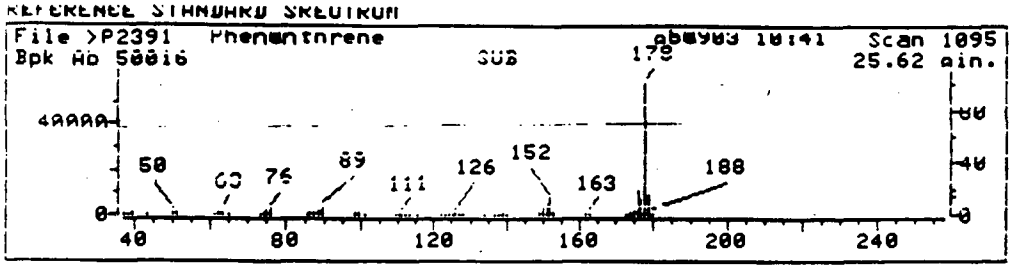


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

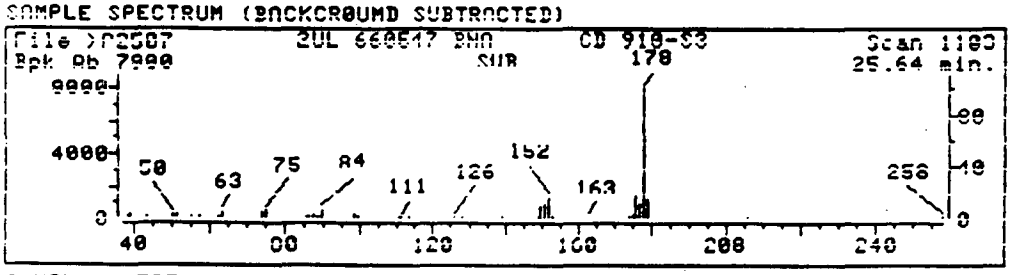
BTL#97

Compound No: 34
Compound Name: Acenaphthene
Scan Number: 886
Retention Time: 21.20 min.
Area: 988
Concentration: .38 NG
q-value: 90

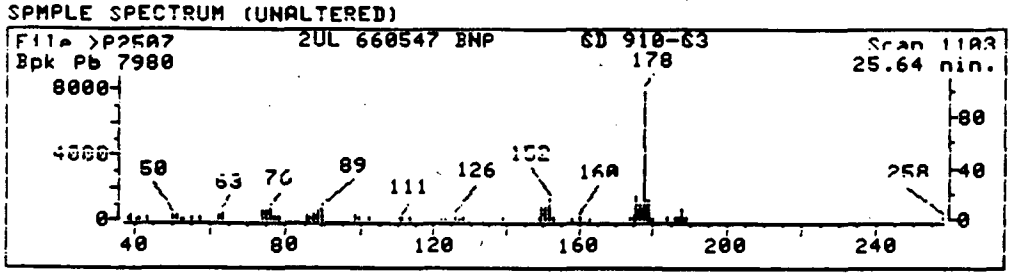
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

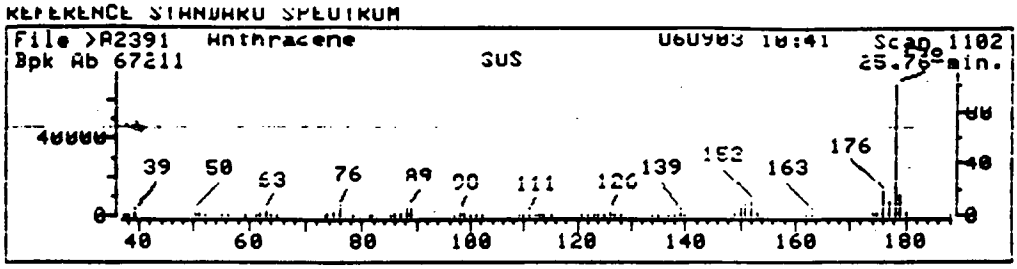


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

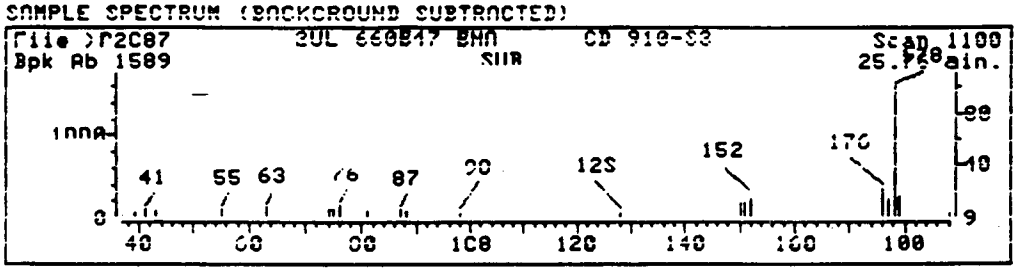
BTL#97

Compound No: 50
Compound Name: Phenanthrene
Scan Number: 1103
Retention Time: 25.64 min.
Area: 20882
Concentration: 7.46 NG
q-value: 49

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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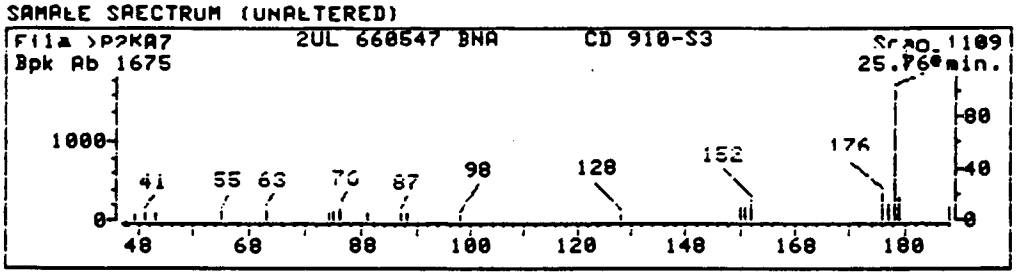
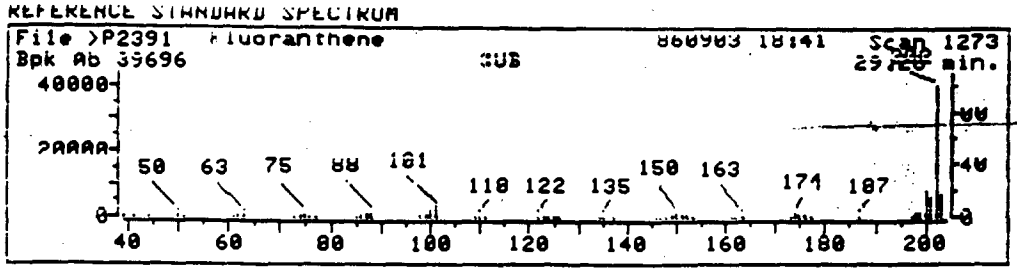


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

BTL#97

Compound No: 51
Compound Name: Anthracene
Scan Number: 1109
Retention Time: 25.76 min.
Area: 4130
Concentration: 1.46 NG
q-value: 49

REFERENCE STANDARD SPECTRUM



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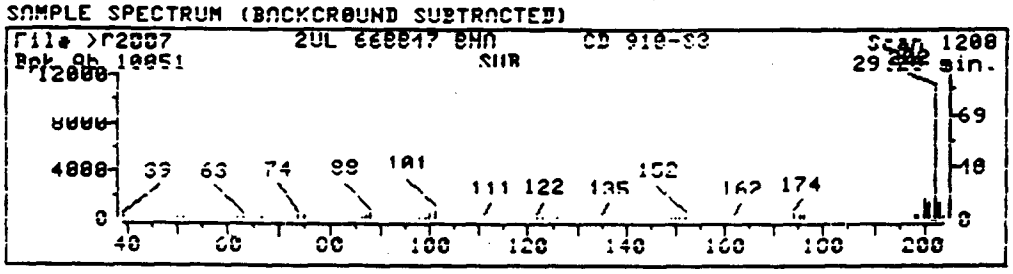

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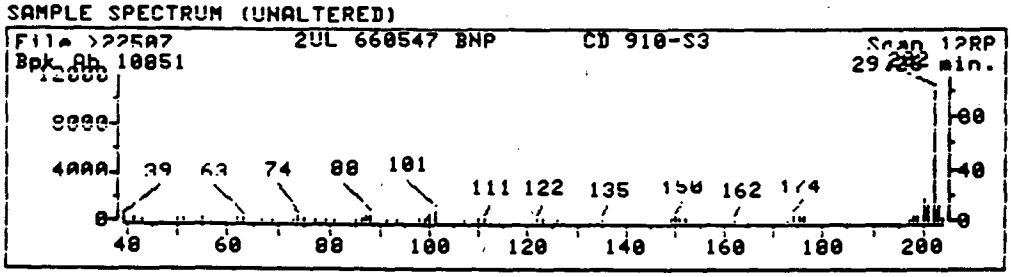
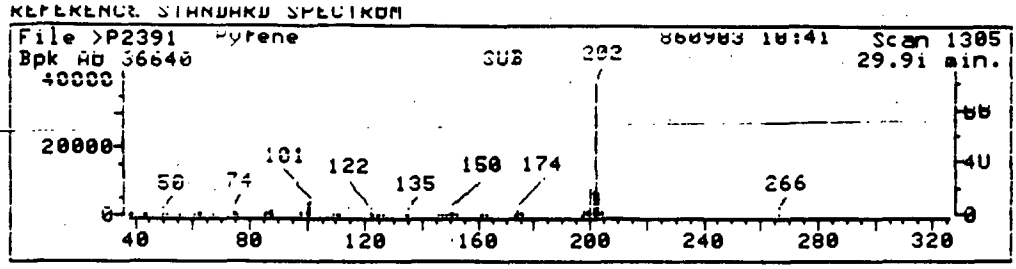


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

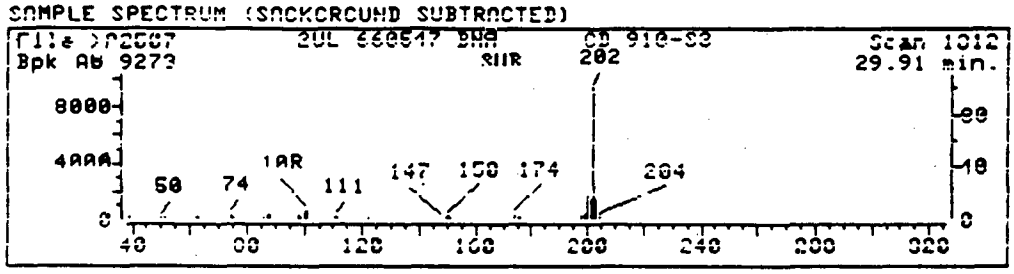
8TL#97

Compound No: 53
Compound Name: Fluoranthene
Scan Number: 1280
Retention Time: 29.26 min.
Area: 30702
Concentration: 19.78 NG
q-value: 58

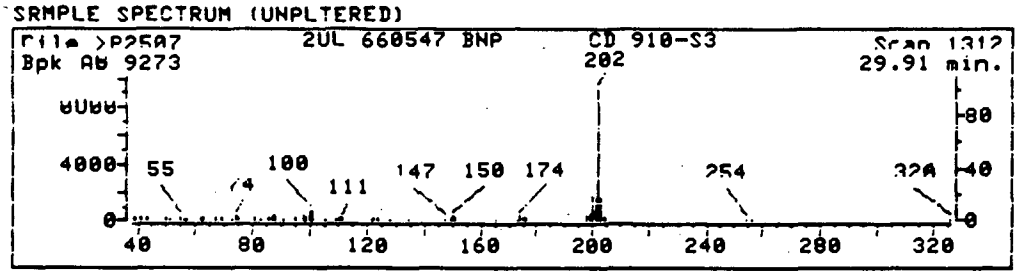
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

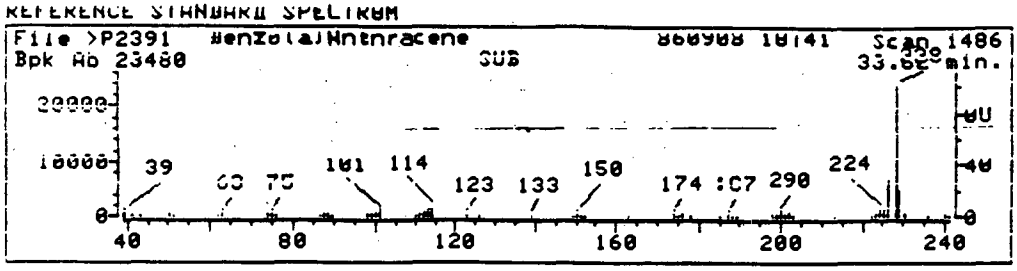


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

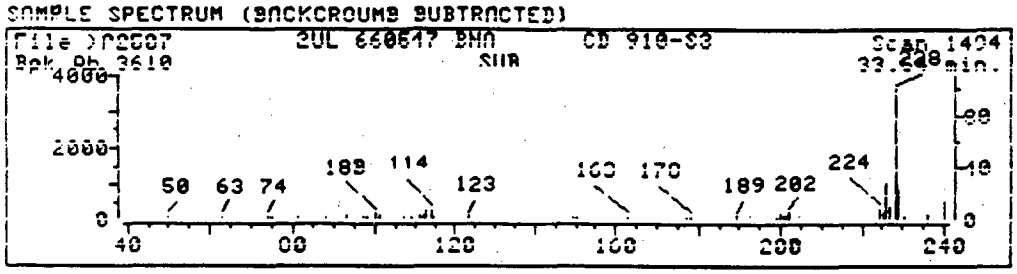
BTL#97

Compound No: 57
Compound Name: Pyrene
Scan Number: 1312
Retention Time: 29.91 min.
Area: 27863
Concentration: 12.41 NG
q-value: 36

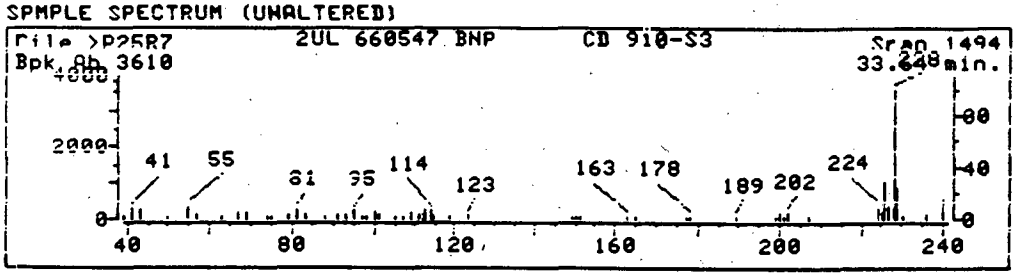
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

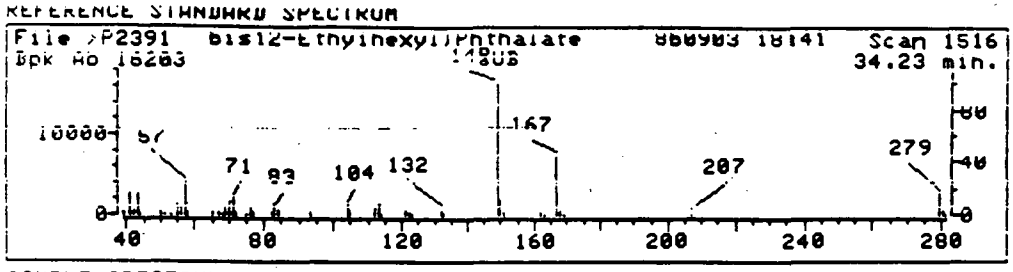


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

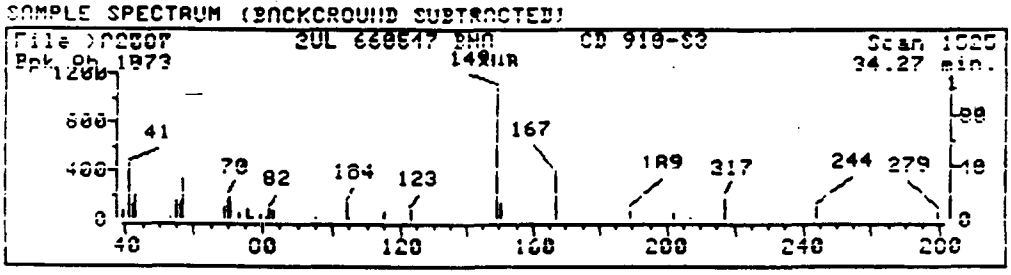
BTL#97

Compound No: 60
Compound Name: Benzo(a)Anthracene
Scan Number: 1494
Retention Time: 33.64 min.
Area: 12775
Concentration: 6.18 NG
q-value: 76

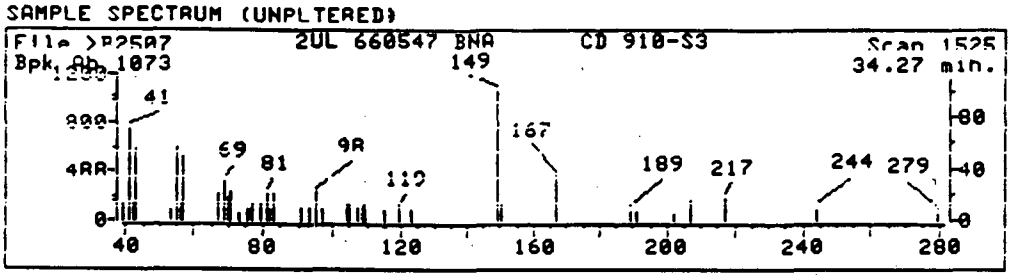
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)

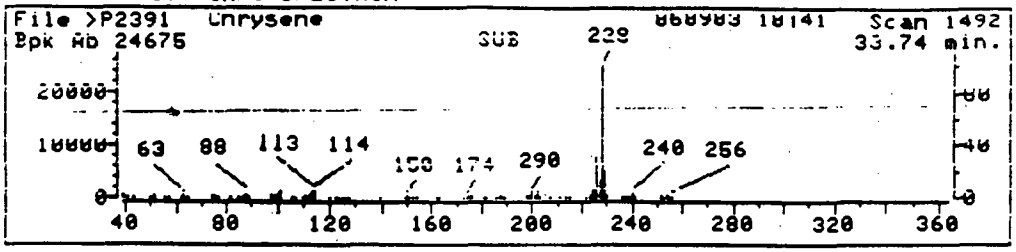


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

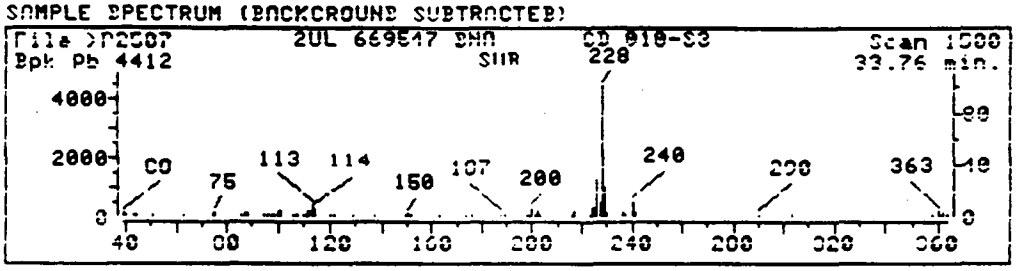
BTL#97

Compound No: 61
Compound Name: bis(2-Ethylhexyl)Phthalate
Scan Number: 1525
Retention Time: 34.27 min.
Area: 2977
Concentration: 1.68 NG
q-value: 87

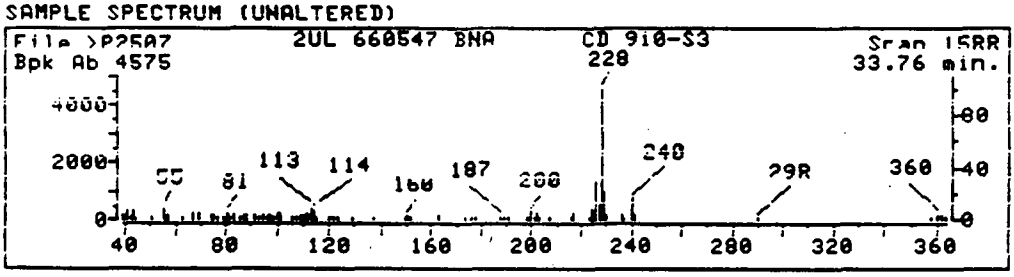
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

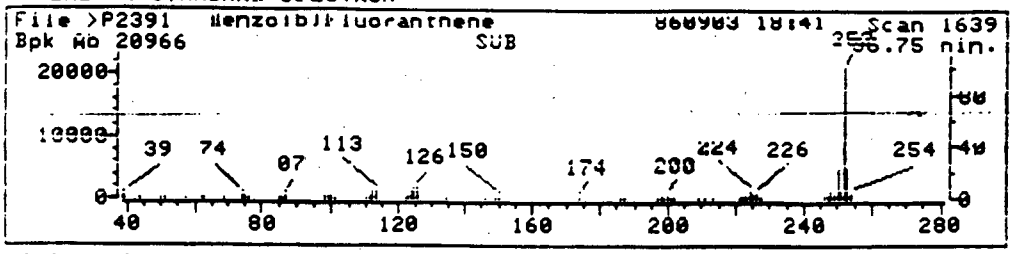


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

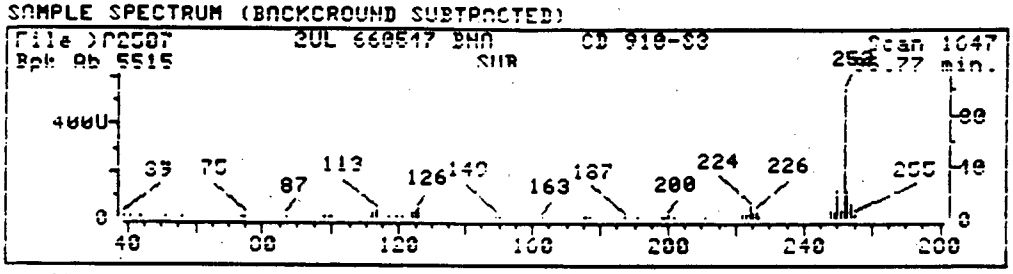
BTL#97

Compound No: 62
Compound Name: Chrysene
Scan Number: 1500
Retention Time: 33.76 min.
Area: 14723
Concentration: 6.99 NG
q-value: 98

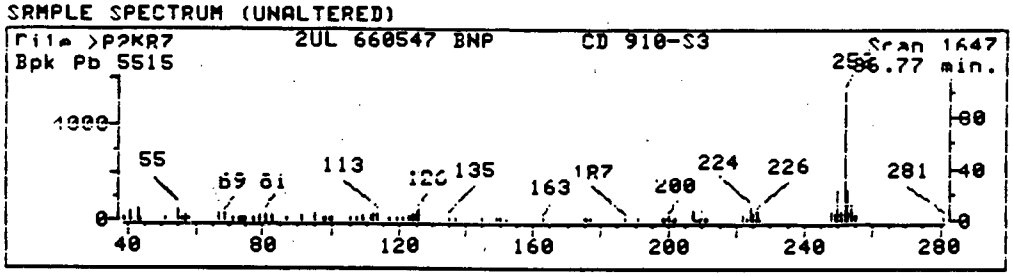
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

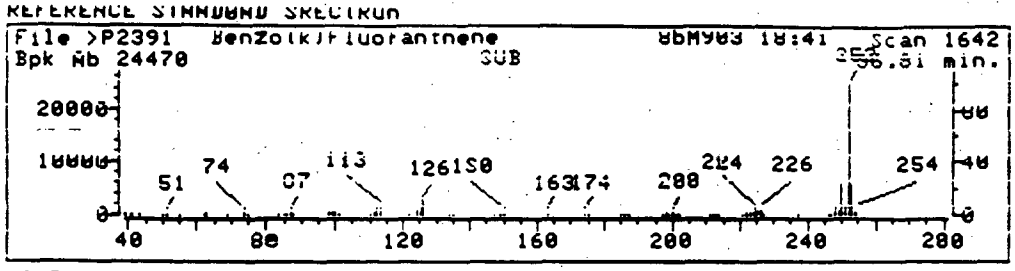


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

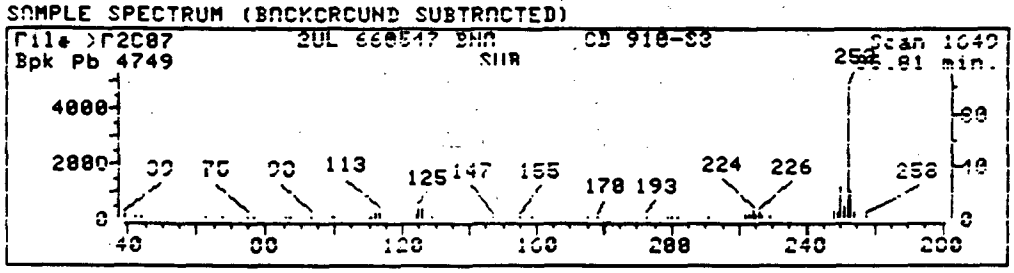
BTL#97

Compound No: 65
Compound Name: Benzo(b)Fluoranthene
Scan Number: 1647
Retention Time: 36.77 min.
Area: 16724
Concentration: 5.93 NG
q-value: 94

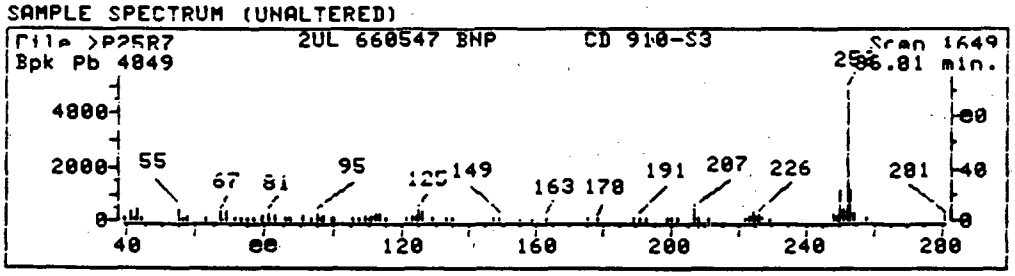
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

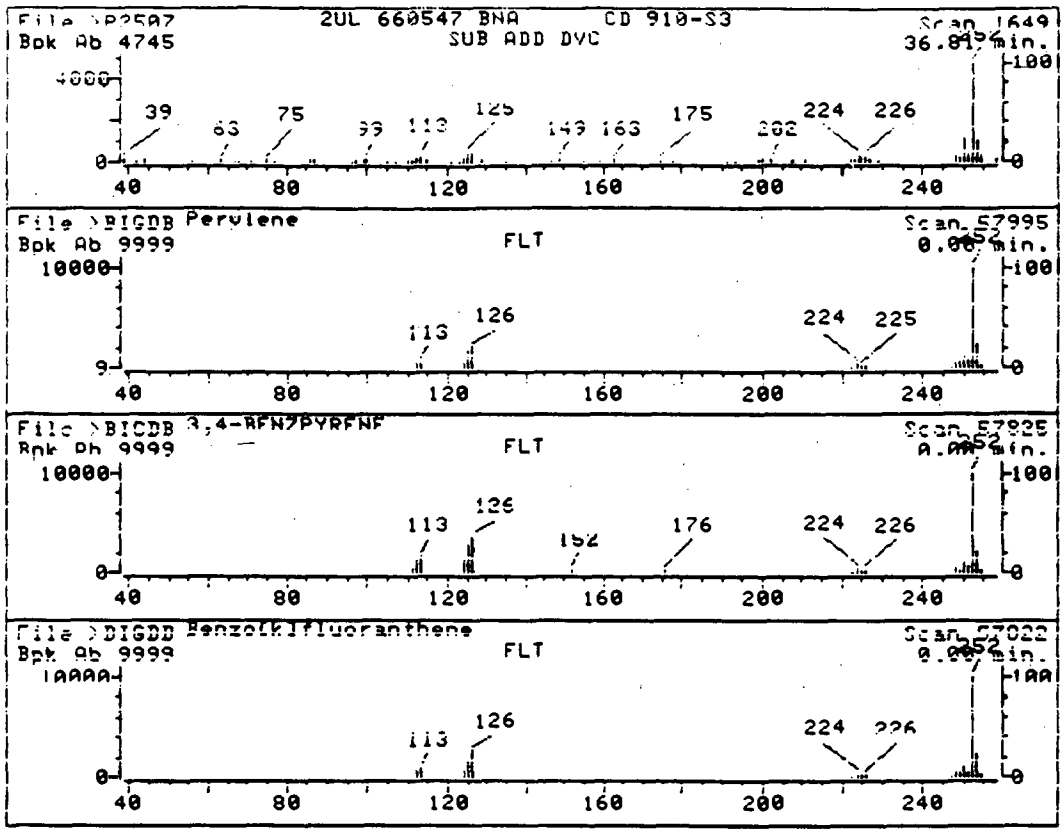


SAMPLE SPECTRUM (UNALTERED)



Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3 BTL#97
Quant Time: 861007 01:25
Injected at: 861007 00:40

Compound No: 66
Compound Name: Benzo(k)Fluoranthene
Scan Number: 1649
Retention Time: 36.81 min.
Area: 15518M
Concentration: 5.89 NG
q-value: 95

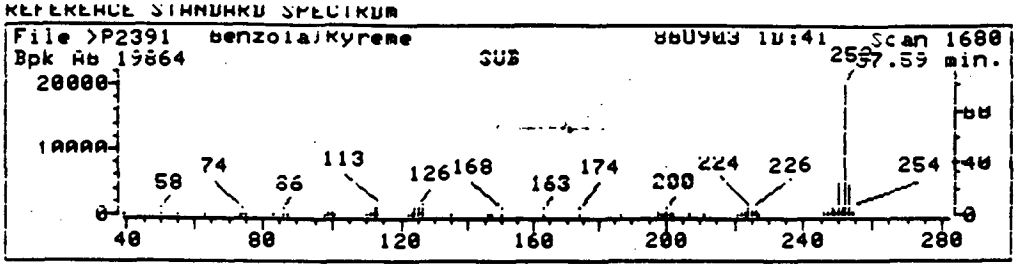


1. Perylene	252	C20H12
2. 3,4-BENZPYRENE	252	C20H12
3. Benzo[k]fluoranthene	252	C20H12
4. Benzo[a]pyrene	252	C20H12
5. Benzo[a]pyrene	252	C20H12

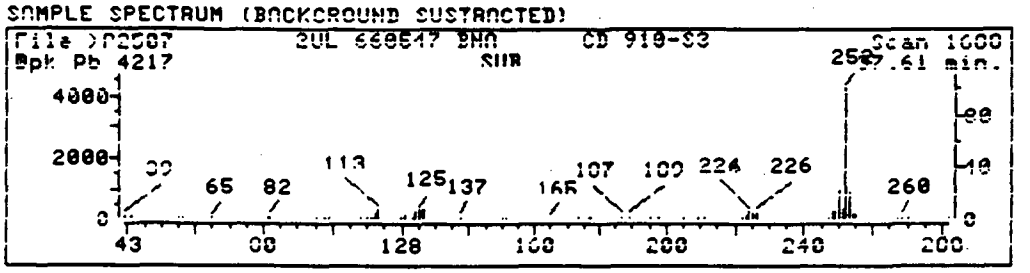
Sample file: >P2507 Spectrum #: 1649
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	83*	198550	57895	"BIGDB	76	62	2	0	91	9	54	59		
2.	81*	0	57825	"BIGDB	67	72	2	0	100	7	53	46		
3.	81*	207089	57822	"BIGDB	63	72	2	0	93	9	53	41		
4.	79*	50328	57894	"BIGDB	62	68	1	0	71	14	43	60		
5.	79*	50328	57819	"BIGDB	60	73	2	0	99	9	48	37		

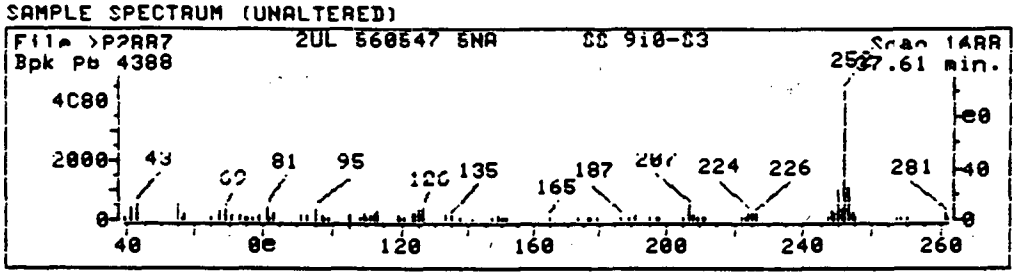
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

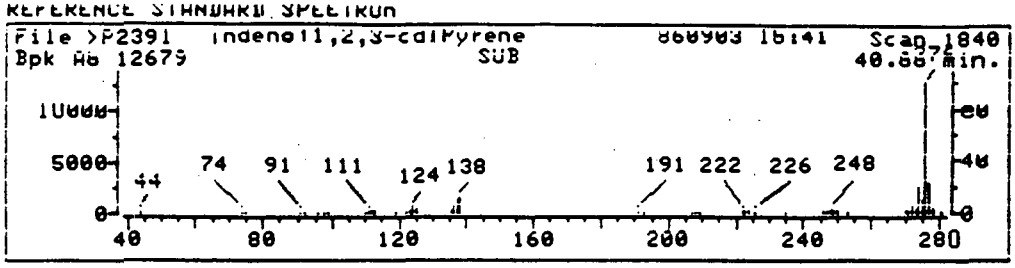


Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

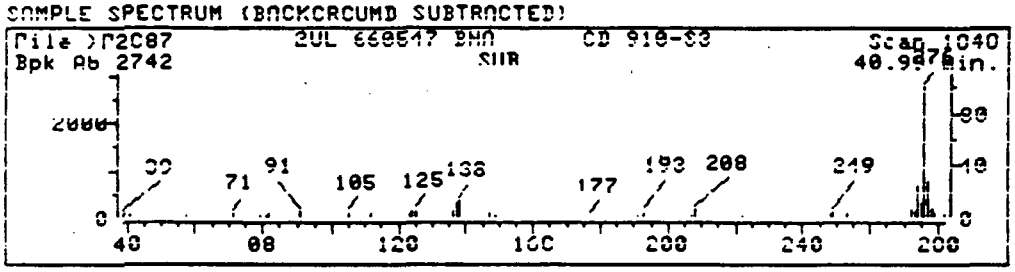
BTL#97

Compound No: 67
Compound Name: Benzo(a)Pyrene
Scan Number: 1688
Retention Time: 37.61 min.
Area: 14765
Concentration: 6.06 NG
q-value: 90

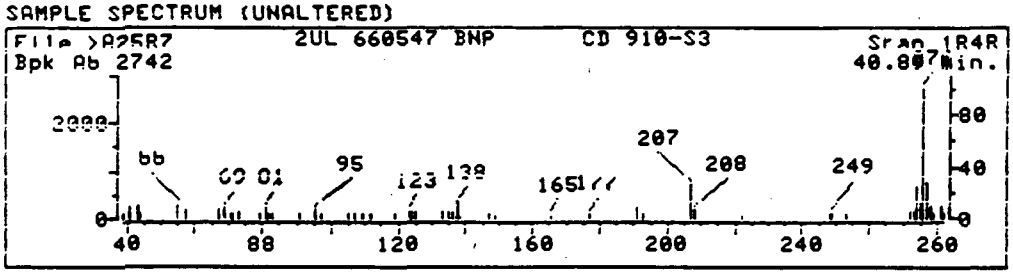
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



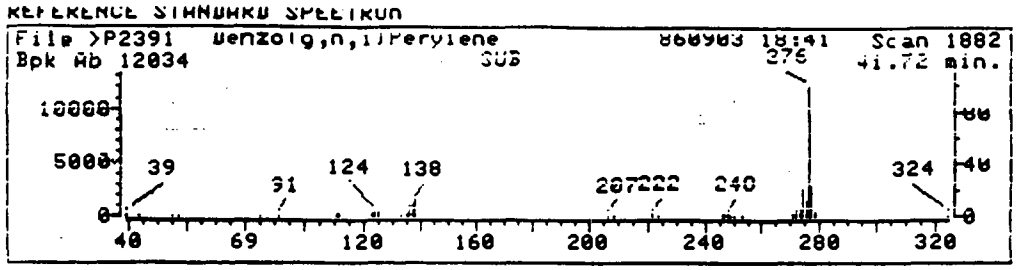
SAMPLE SPECTRUM (UNALTERED)



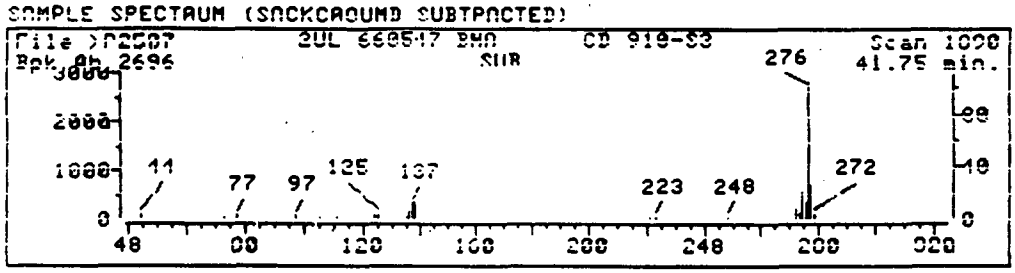
Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3 BTL#97
Quant Time: 861007 01:25
Injected at: 861007 00:40

Compound No: 68
Compound Name: Indeno(1,2,3-cd)Pyrene
Scan Number: 1848
Retention Time: 40.89 min.
Area: 13917
Concentration: 4.77 NG
q-value: 84

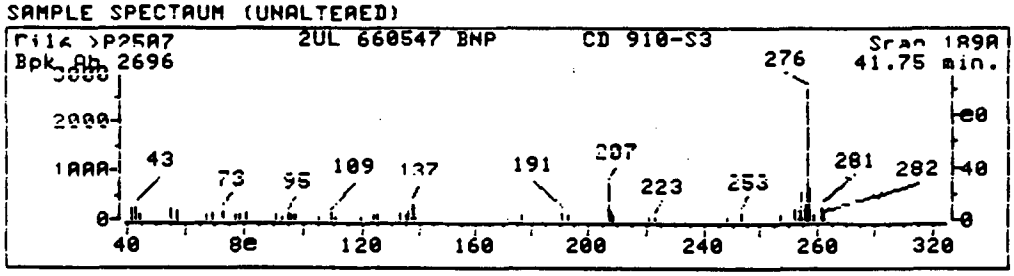
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



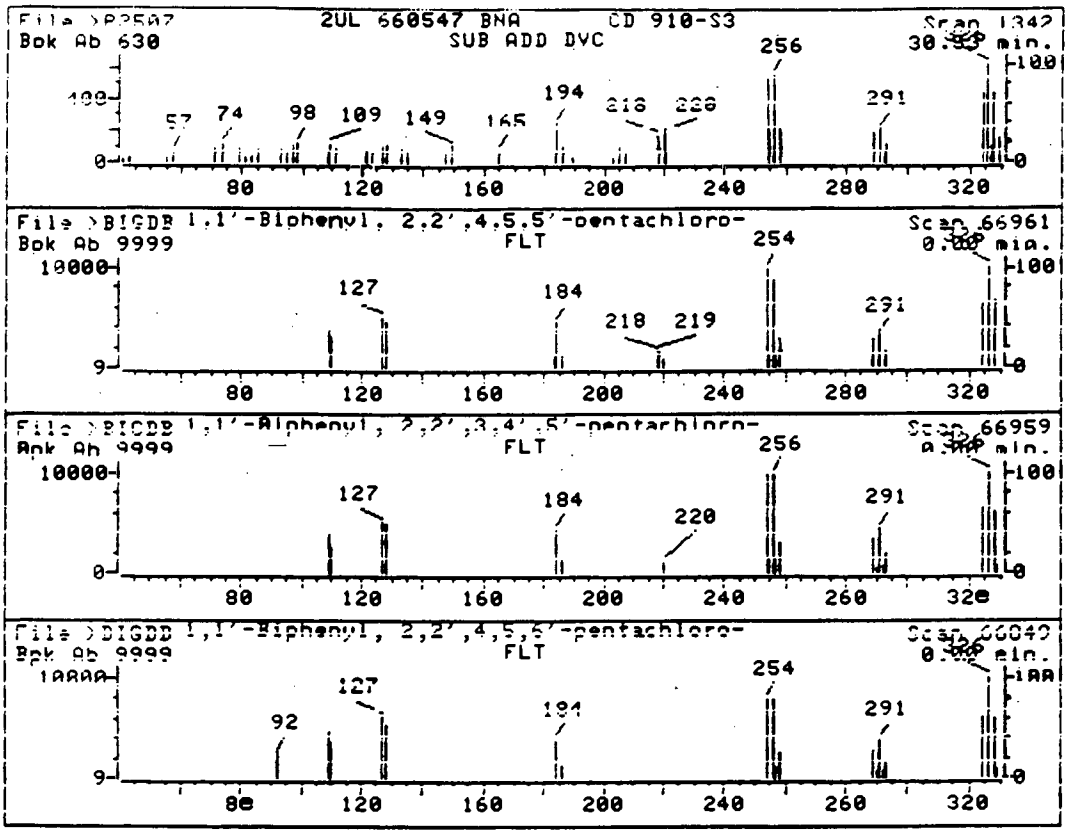
SAMPLE SPECTRUM (UNALTERED)



Data File: >P2507::D3
Name: 2UL 660547 BNA
Misc: CD 910-S3
Quant Time: 861007 01:25
Injected at: 861007 00:40

8TL#97

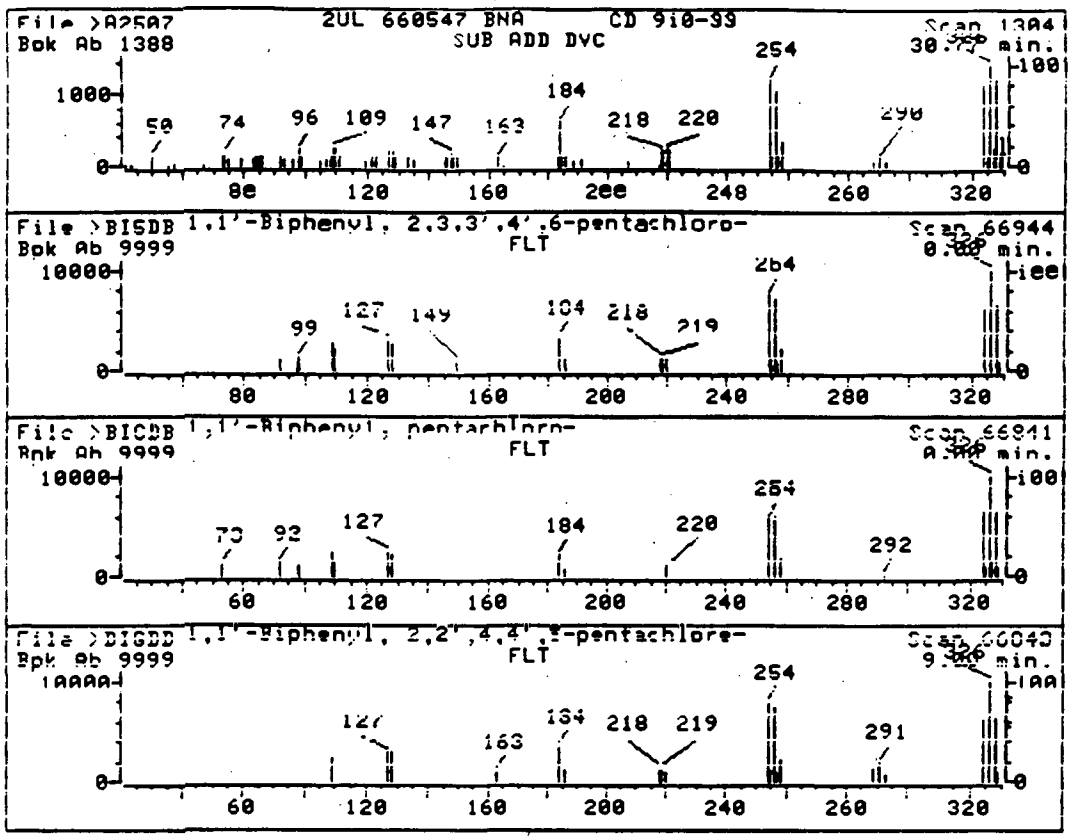
Compound No: 70
Compound Name: Benzo(g,h,i)Perylene
Scan Number: 1890
Retention Time: 41.75 min.
Area: 14003
Concentration: 5.87 NG
o-value: 65



1. 1,1'-Biphenyl, 2,2',4,5,5'-pentachloro- 324 C12H5Cl5
2. 1,1'-Biphenyl, 2,2',3,4',5'-pentachloro- 324 C12H5Cl5
3. 1,1'-Biphenyl, 2,2',4,5,6'-pentachloro- 324 C12H5Cl5
4. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
5. 1,1'-Biphenyl, 2,2',3,3',4-pentachloro- 324 C12H5Cl5

Sample file: >P2507 Spectrum #: 1342
Search speed: 1 Tilting option: N No. of ion ranges searched: 46

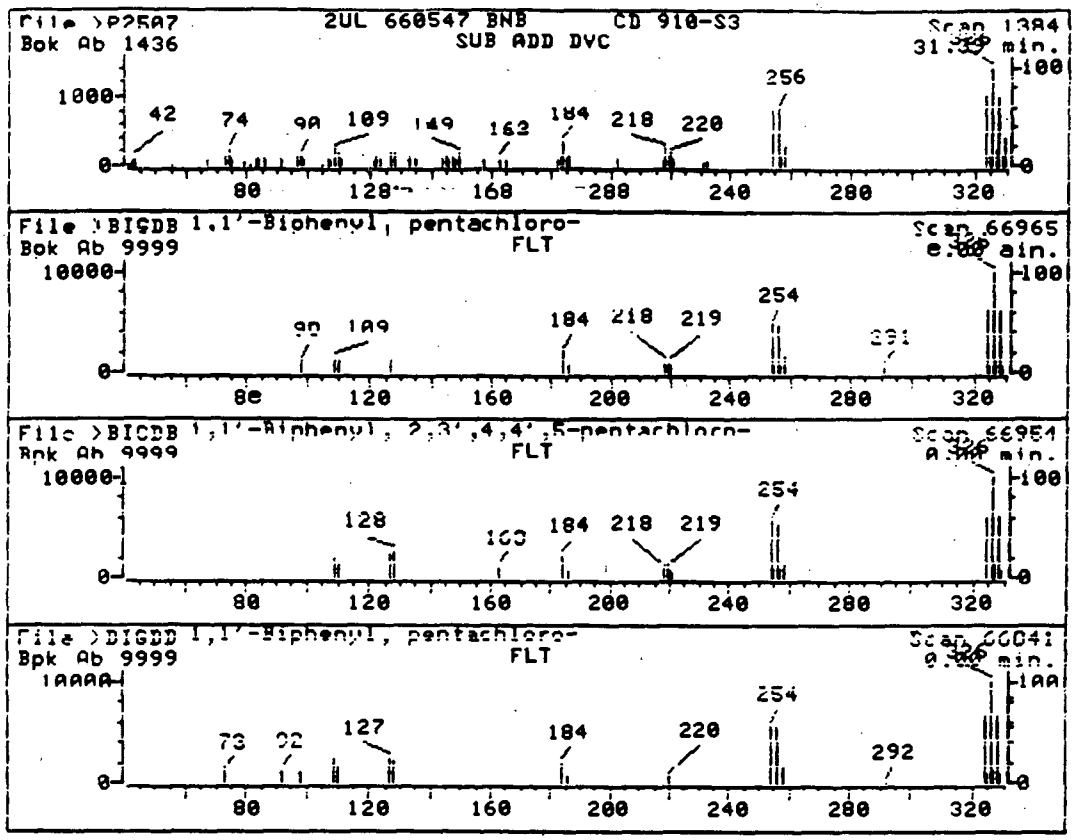
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	96*	37680732	66961	"BIGDB	146	65	3	0	85	0	72		96	
2.	95*	41464511	66959	"BIGDB	129	81	3	0	86	0	72		93	
3.	93*	68194069	66849	"BIGDB	120	87	3	0	100	0	68		86	
4.	93*	25429292	66962	"BIGDB	118	86	3	0	97	2	68		80	
5.	89*	52663624	66847	"BIGDB	99	111	3	0	83	2	66		63	



1. 1,1'-Biphenyl, 2,3,3',4',6-pentachloro- 324 C12H5Cl5
2. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
3. 1,1'-Biphenyl, 2,2',4,4',5-pentachloro- 324 C12H5Cl5
4. 1,1'-Biphenyl, 2,3,3',4,4'-pentachloro- 324 C12H5Cl5
5. 1,1'-Biphenyl, 2,2',4,5,6'-pentachloro- 324 C12H5Cl5

Sample file: >P2507 Spectrum #: 1354
Search speed: 1 Tilting option: N No. of ion ranges searched: 46

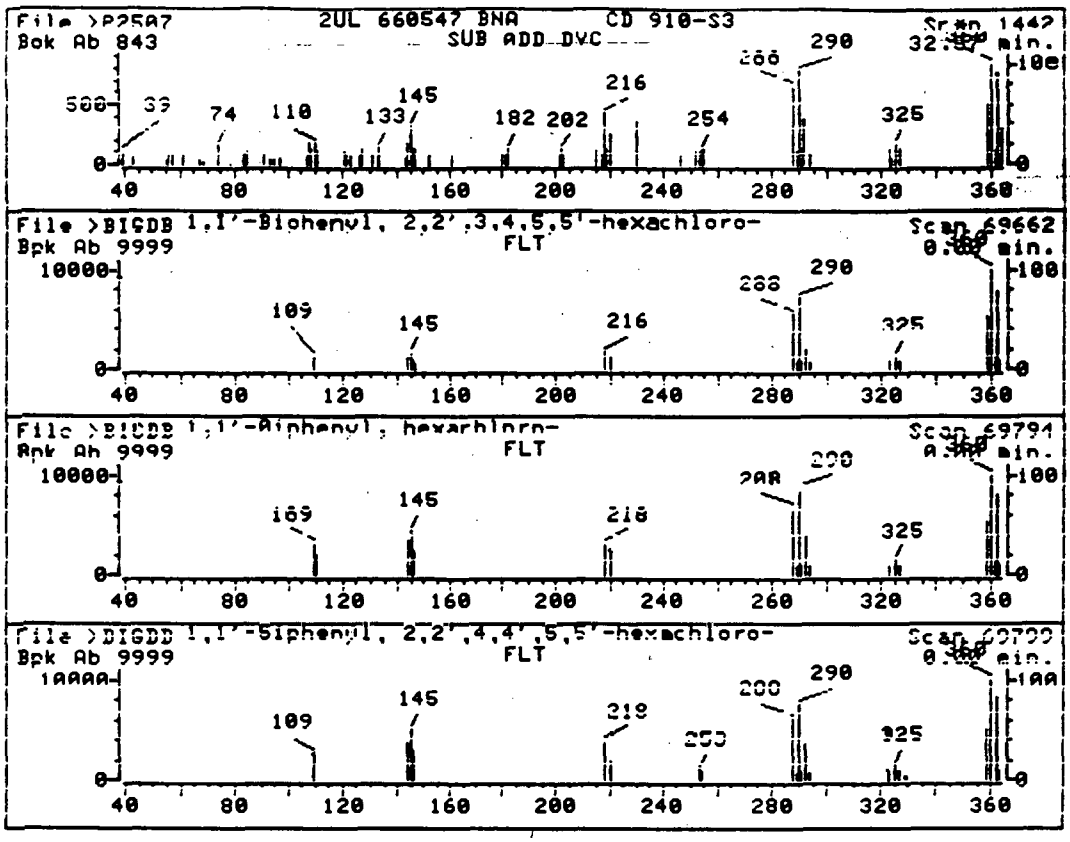
	Prob.	CAS #	CON #	ROOT	K	OK	#FLG	TILT	%	CON	C	I	R	IV
1.	96*	38380039	66844	"BIGDB	141	61	3	0	100	2	72		96	
2.	93*	25429292	66841	"BIGDB	118	73	3	0	100	4	68		80	
3.	89*	38380017	66843	"BIGDB	97	104	3	0	100	2	66		61	
4.	89*	32598144	66842	"BIGDB	123	73	3	0	100	10	62		89	
5.	87*	68194069	66849	"BIGDB	79	128	3	0	95	2	63		44	



1. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
2. 1,1'-Biphenyl, 2,3',4,4',5-pentachloro- 324 C12H5Cl5
3. 1,1'-Biphenyl, pentachloro- 324 C12H5Cl5
4. 1,1'-Biphenyl, 2,3,3',4',6-pentachloro- 324 C12H5Cl5
5. 1,1'-Biphenyl, 2,3,3',4,4'-pentachloro- 324 C12H5Cl5

Samole file: >P2507 Spectrum #: 1384
Search speed: 1 Tiltina ootion: N No. of ion ranges searched: 45

	Prob.	CAS #	CON #	ROOT	K	OK	#FLG	TILT	%	CON	C	I	R	IV
1.	96*	25429292	66965	"BIGDB	144	40	3	0	100	6	68	96		
2.	96*	31508006	66954	"BIGDB	135	47	3	0	100	3	72	94		
3.	94*	25429292	66841	"BIGDB	127	64	3	0	100	0	72	92		
4.	89*	38380039	66844	"BIGDB	124	78	3	0	77	6	62	89		
5.	89*	32598144	66842	"BIGDB	101	95	3	0	100	3	66	66		



1. 1,1'-Biphenyl, 2,2',3,4,5,5'-hexachloro- 358 C12H4Cl6
2. 1,1'-Biphenyl, hexachloro- 358 C12H4Cl6
3. 1,1'-Biphenyl, 2,2',4,4',5,5'-hexachloro- 358 C12H4Cl6
4. 1,1'-Biphenyl, 2,2',3,3',5,6'-hexachloro- 358 C12H4Cl6
5. 1,1'-Biphenyl, 2,2',3,3',4,4'-hexachloro- 358 C12H4Cl6

Samole file: >P2507 Spectrum #: 1442
Search soeed: 1 Tiliing option: N No. of ion ranges searched: 43

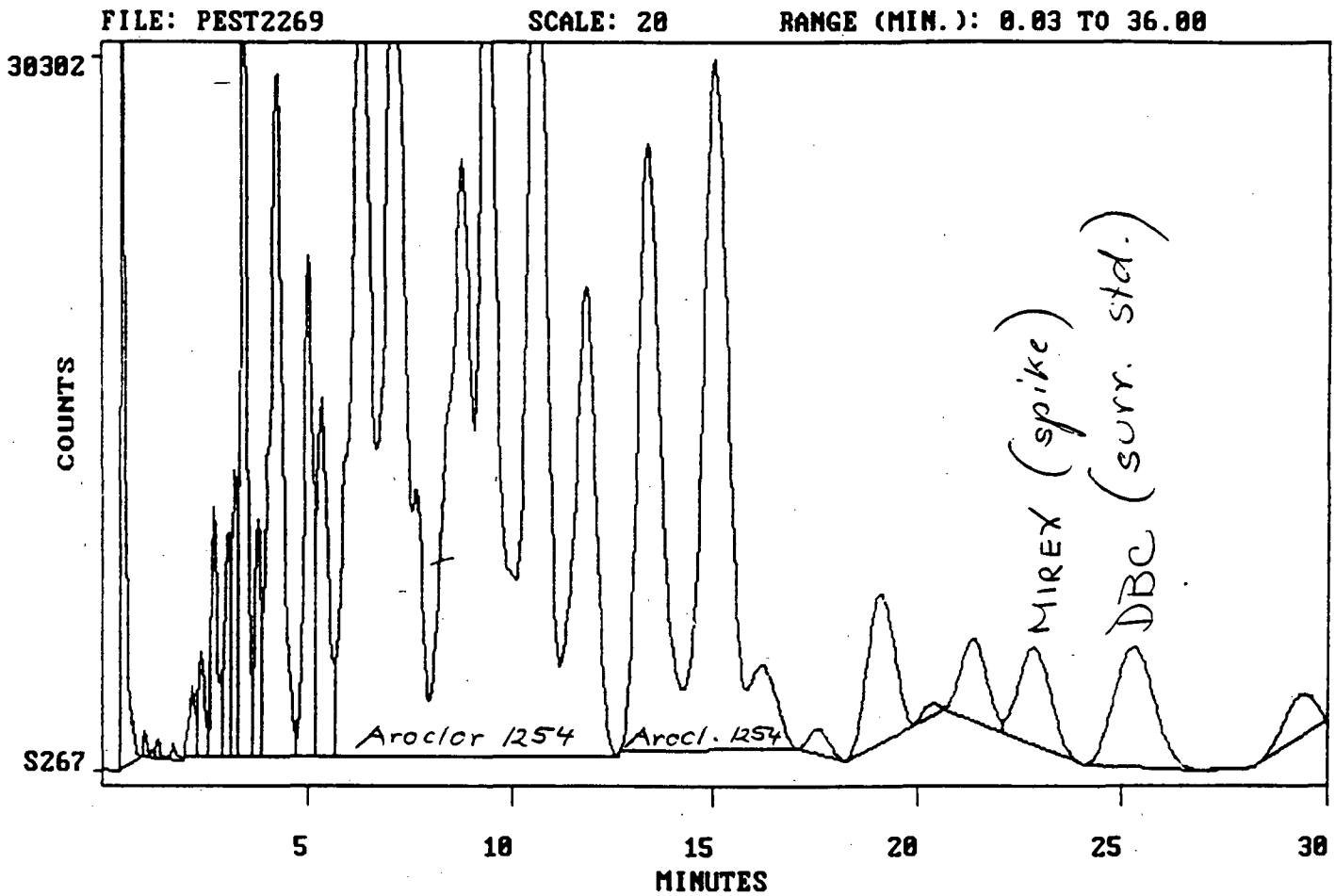
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IU
1.	98*	52712046	69662	"BIGDB	111	92	0	0	100	20	60		99	
2.	96*	26601649	69794	"BIGDB	148	71	3	0	100	8	68		96	
3.	95*	35065271	69793	"BIGDB	135	75	3	0	100	8	68		94	
4.	94*	52744135	69676	"BIGDB	133	95	3	0	89	12	64		94	
5.	89*	38380073	69788	"BIGDB	112	93	0	0	82	46	40		99	

660548
CD910-S3
PRIMARY COLUMN

RECONSTRUCT SCREEM DUMP
Data Acquisition

Time:15:06:55 Date:MON 18 OCT 86

Time:19:46:15 Date:TUE 07 OCT 86
Method:ARO1254C



Channel # REINT Time 15:04:53 Date MON 13 OCT 86

Sample name .....
Data file PEST2269
Method name ARO1254C

Author .....LAL
Instrument.. Tracor 550 - ECD
Column.....1.5% SP-2250/1.95% SP-2401 on 100/120
Notes.....Reintegration of Aroclors

Run time.....30.00 min. Delay time...0.00 min.
Acq. time.....19:46:15 Acq. date....TUE 07 OCT 86
Start PW.....20.00 sec End PW .....150.00 sec.
Actual PW ...140.0
Slope sens.....0.75 uv/sec.

Area reject ...500
peaks found. 24
Vol Inj.....5.0 ul Sample amount 1.000
Conv factor...1.000

METHOD NOT CALIBRATED!

AREA PERCEMT REPORT

Peak	R.T.(min)	R/S	Peak name	Area %	Area	Peak Ht.	BL
1	0.551			17.742	2990836	731298	EE
2	1.072			0.042	7074	1168	BV
3	1.251			0.010	1626	320	VV
4	1.390			0.068	11490	903	VB
5	2.219	Unkn.		0.216	36422	3376	EV
6	2.436			0.293	49331	4843	VV
7	2.740	Unkn.		0.710	119755	11680	VV
8	3.090			0.585	93653	10431	VV
9	3.273			0.760	123062	13309	VV
10	3.478			2.632	443771	44162	VV
11	3.801			0.715	120598	10987	VV
12	4.251	Unknown		3.883	654531	31867	VV
12	5.008			2.179	367330	23147	VV
14	5.338			1.657	279315	16607	VV
15	9.415			45.270	7634875	46342	VB
16	15.064			15.694	2645616	31825	BB
17	17.541			0.237	39933	1175	BB
18	19.106			1.875	316143	6865	BV
19	20.364			0.085	14363	548	VB
20	21.351			1.006	169547	3747	BV
21	22.858			1.458	245718	4492	VB

Aroclor 1254 100

296

24	22 412	0.612	103248	1909	BB
TOTALS		100.000	16857568		

660548
CD910-53

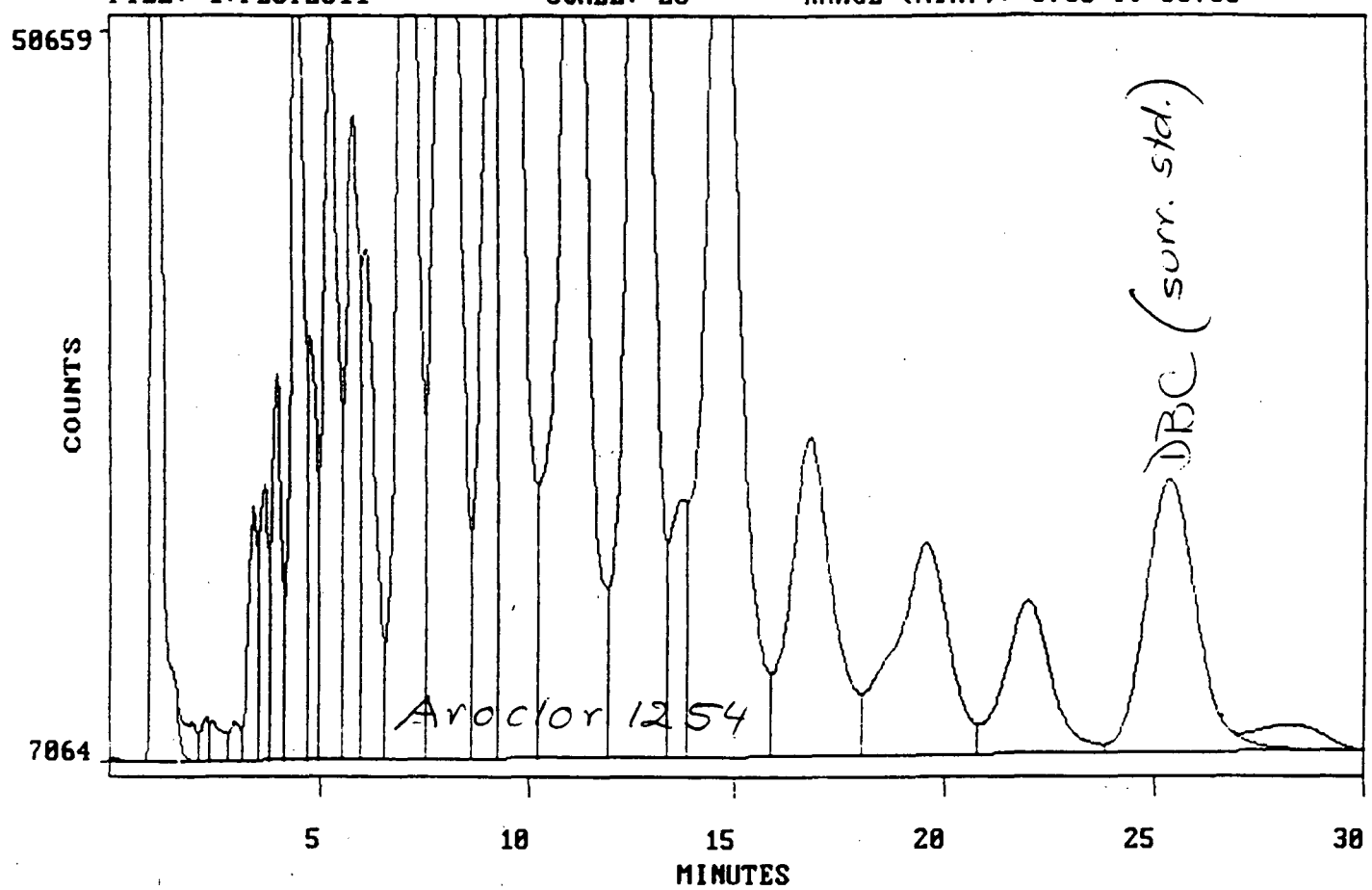
CONFIRMATORY COLUMN

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time [illegible] Date THU [illegible] OCT [illegible]

Time [illegible] Date THU [illegible] OCT [illegible]
Method PEST2

FILE: 1:PEST2311 SCALE: 20 RANGE (MIN.): 0.03 TO 30.00



Channel # 4 Time 20:41:55 Date:THU 09 OCT 86
Run #1 of 100

Sample name.....
Data file..... DAT259:PEST2311
Method name.....PEST2

Author.....LAL
Instrument.....ECD
Column.....G
Notes.....Primary Column Runs

Run time.....30.00 min. Delay time...0.00 min.
Acq. time.....20:11:24 Acq. date....THU 09 OCT 86
Start PW.....20.00 sec. End PW.....150.00 sec.
Actual PW....140.0
Slope sens.....0.75 uv/sec.

Area reject....500
peaks found..27
Vol. Inj.....5.0 ul Sample amount..1.000
Conv. factor...1.000

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METHOD NOT CALIBRATED!

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AREA PERCENT REPORT

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Peak	R.T.(min)	R/S	Peak name	Area %	Area	Peak Ht.	BL
1	0.110			0.009	3999	27.7	BB
2	1.193			30.822	13658293	871921	BE
3	1.974			0.136	60094	2265	EV
4	2.215			0.105	46466	2661	EV
5	2.460			0.119	52929	2325	EV
6	2.996			0.099	43999	2334	EV
7	3.427			0.523	231691	15207	VV
8	3.666			0.500	221442	16532	VV
9	3.962			0.819	363056	23056	VV
10	4.454			2.620	1161109	61312	VV
11	4.763			0.760	336893	25175	VV
12	5.234			2.391	1059317	45196	VV
13	5.756			1.896	840001	38451	VV
14	6.058			1.438	637048	30366	VV
15	7.054			5.824	2580865	86460	VV
16	8.038			6.855	3037737	77063	VV
17	9.185			3.684	1632546	60871	VV
18	9.612			6.797	3012084	84009	VV
19	11.125			8.268	3664020	81978	VV
20	12.714			7.250	3212804	74171	VV
21	13.726			0.942	417597	15364	VV
22	14.686			7.391	3363839	59521	VV