147427

# 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 23, 1995**
**REV. NO. 0**

**VOLUME 2 OF 3**

**REFERENCE NO. 19**

| MALCOLM PIRNIE, INC. | PROJECT NOTES |
|---|---|

| | |
|---|---|
| To:File | Date:December 28, 1994 |
| From:Andrew Cilbanoff | Project #:8003-306 |
| Subject:USEPA Analytical Data - Octaber 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 Electronica (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 List (TCL) organic compounds and Target Analyte List (TAL) inorganic constituents. The analytical data has been analyzed and validated 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 concentratkm greater than 3 times background in the sediment samples collected from the CDEI site during the June 8, 1994 USEPA site inspectkm prioritizatkm 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
SAMPLINQ DATE: 10/13/94
EPA CASE NO.: 22774 LAB: IEA, INC.

| VOLATILES | | | | | |
|---|---|---|---|---|---|
| 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 | 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-Oichloroethene (total) | | | | | |
| Chloroform | | | | | |
| 1,2-Dichloroethane | | | | 4 J | |
| 2-Butanone | | | | | |
| 1,1,1-Trichloroethane | | | | | |
| Carbon Tetrachloride | | | | | |
| Bromodichloromethane | | | | | |
| 1,2-Dichloropropane | | | | | |
| cis-1,3-OlcNoropropene | | | | | |
| Trichloroethene | | | | | |
| Dibromochloromethane | | | | | |
| 1,1,2-Trichloroethane | | | | | |
| Benzene | | | | | |
| trans-1,3-Dichloropropene | | | | | |
| Bromoform | | | | | |
| 4-Methyl-2-Pentanone | | | | | |
| 2-Hexanone | | | | | |
| Tetrachloroethene | | | | | |
| 1,1,2,2-Tetrachloroethane | | | | | |
| Toiuene | | | | | |
| Chiorobenzene | | | | | |
| 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 | | | | | |
| Dimethylphthalate | | | | | |
| 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-butylphthalata | | | | | |
| Fluoranthene | 1300 E | 660 E | 720 E | | |

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

| SEMI-VOLATILES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID No. | SED6 | | SED7 | | SED8 | | RIN I | | 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:
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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 dkl not pass EPA QA/QC
N - Presumptive evkience of the presence of the material
NR - anaiysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

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

| PESTICIDES/PCBs | | | | | |
|---|---|---|---|---|---|
| Sample ID No. | SED6 | SED7 | SED8 | RIN I | 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 | | | | | |
| Dieldrin | 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:
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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 materiai
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

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
TROM: RSCC/ESAT
TO: George Karras,
Toxic and Hazardous Waste Section

REC'D RSCC 11/21/94

*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 |
| | | | Soil | 3 |
| APER/SI | | | | |

## REGION II RSCC DATA TRANSFER LOG

| Relinquished By Signature | Date/Time | Received By Signature | Date/Time |
|---|---|---|---|
| Janet Trotter | 11/21/94 | John Bulin | 11/22/94 |
| John Bulin | 11/22/94 | [illegible] | 11/22/94 |
| L. Trotter | 11/30/94 | [illegible] | [illegible] |
| [illegible] | 12/9/94 | [illegible] | [illegible] |
| W. Tucker | 12/12/94 9:00am | [illegible] | [illegible] |
| L. Trotter | 12/12/94 | DCC | [illegible] |
| [illegible] | | [illegible] | |

(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 has 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)

AR124802 (11/16/94 @ 0477)
AR125402 ( ↓ @ 0602)

Request is :

✓ Approved

_____ Disapproved

George Karras — Task Monitor

12/8/94 — Date

Comments:

In Reference to Case No(s): 22774

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 12/8/94

Laboratory Name: IEANJ

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 to~~ 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 12/8/94
Signature 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. Goeman

Location: IEA/NJ

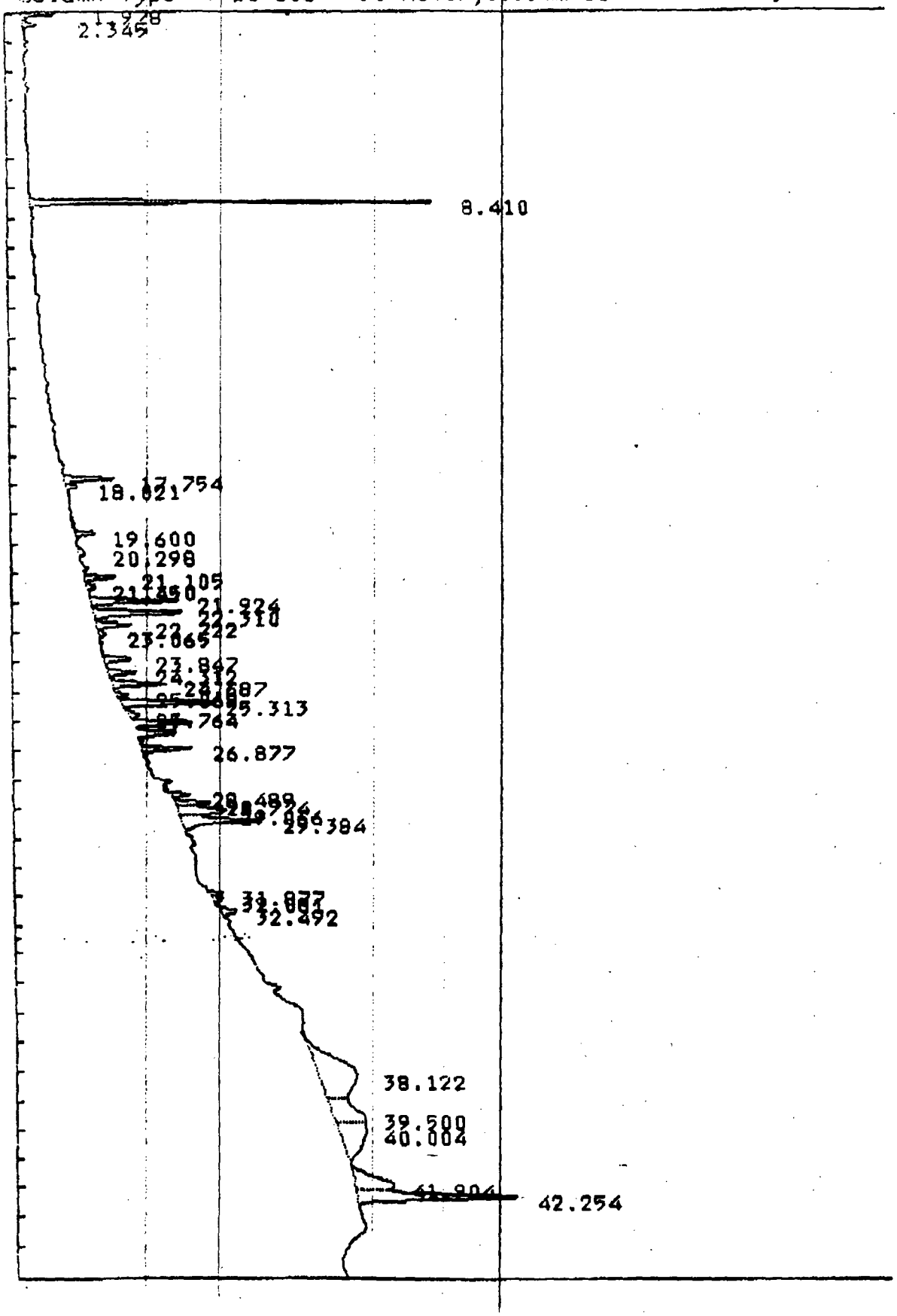
Telephone No.: 201-428-8181 Fax No.: 201-428-5222

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

IEA Pesticide Standard Report

Sample Name : AR12540B
Result File : /DATA/LOOP/RESULT/D4BCLP069E_015.
Column Type : D8-608 30-Meter,0.53mm ID

Inj on 0511 16Nov1994
INSTRUMENT : HP589048
Inj. Vol. : 1 ul



# IEA Pesticide Standard Report

Sample Name : AR12540B Report No :252.00
Result File : /DATA/LQDP/RESULT/D4BCLP069E_015.RES
Column Type : DB-608 30 Meter 0.53mm ID Inj. Vol. : 1 ul
Instrument : HP589048
Calculation : External STD
Run Time : 45.00 Mins. Injected on 0511 16Nov1994
Sequence File : /DATA/LQDP/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 | 193419 | BV | .0186 | TCX |
| 10 | 17.75 | | .118027 | 32782 | PV | 0.0000 | |
| 11 | 18.02 | | .142379 | 9106 | VB | 0.0000 | |
| 12 | 19.60 | | .093071 | 18715 | 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 | 86443 | 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

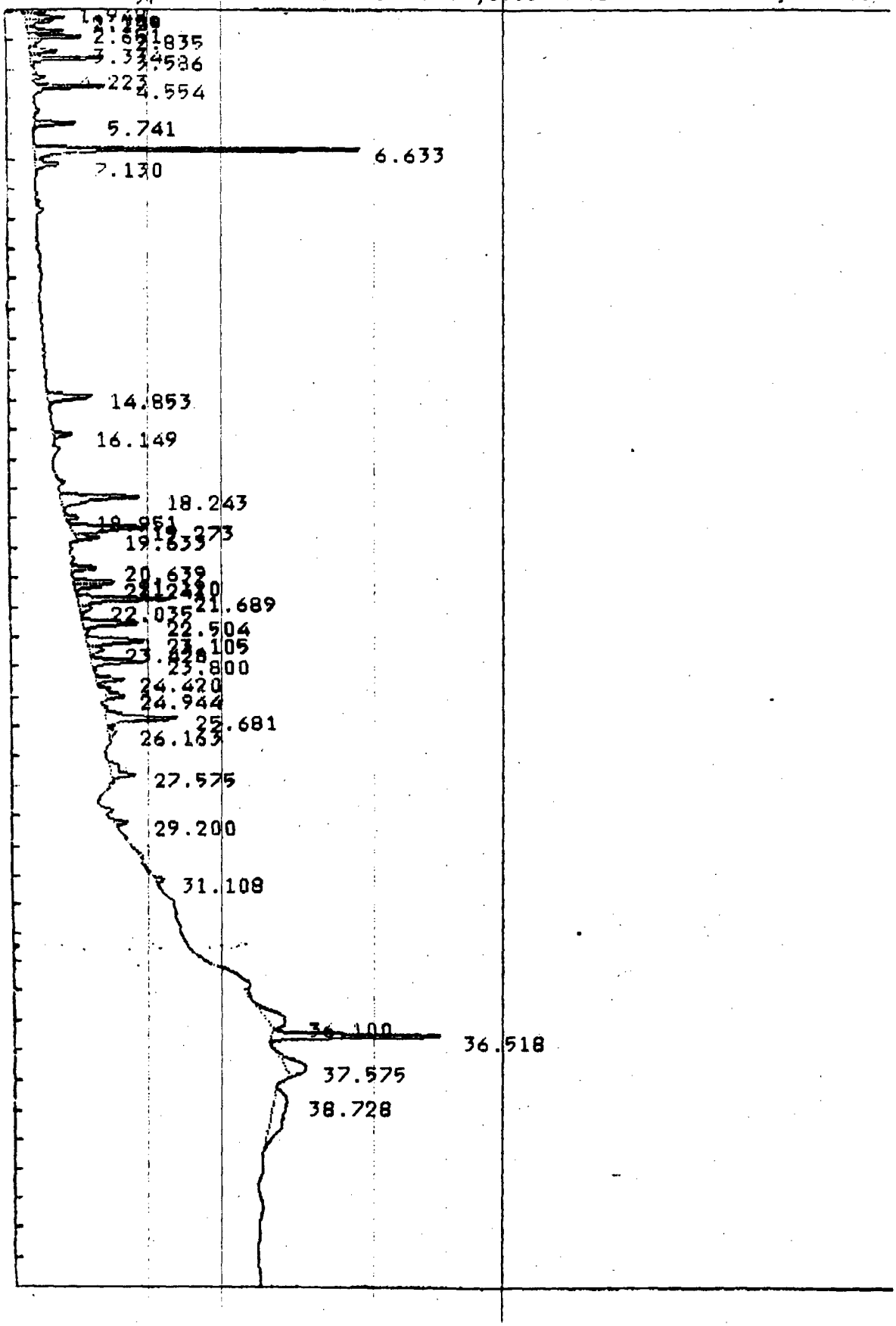
| Pk# | RT | ID-tm | Peak Width | Area | Code | ng inj | Name |
|---|---|---|---|---|---|---|---|
| 38 | 42.25 | #42.22 | .206866 | 179850 | VV | .0109 | DCB |

Total Area : 1804479 Total ng inj : .047

Report Time : 0602 16Nov1994
Method : /DATA/LOOP/METHOD/HP58904BCLP69.MTH
Result File : /DATA/LOOP/RESULT/04BCLP069E_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 Pesticide 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-Fact
10.00

Run Status : RunStatusOK
EndOffBaseline

| Pk# | RT | 10-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 | | .116043 | 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 | 4.95 | | .078760 | 20242 | PV | 0.0000 | |
| 13 | 5.74 | | .102646 | 15678 | BB | 0.0000 | |
| 14 | 6.63 | 6.61 | .089409 | 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 | 52627 | VV | 0.0000 | |
| 26 | 22.03 | 21.98 | .177856 | 9661 | VV | .0017 | DIELDRIN |
| 27 | 22.90 | | .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 | V6 | 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 | 36.92 | #36.53 | .135107 | 87824 | BV | .0089 | DCB |
| 40 | 37.58 | | .489489 | 37710 | PB | 0.0000 | |
| 41 | 38.73 | | 1.394166 | 64253 | BB | 0.0000 | |

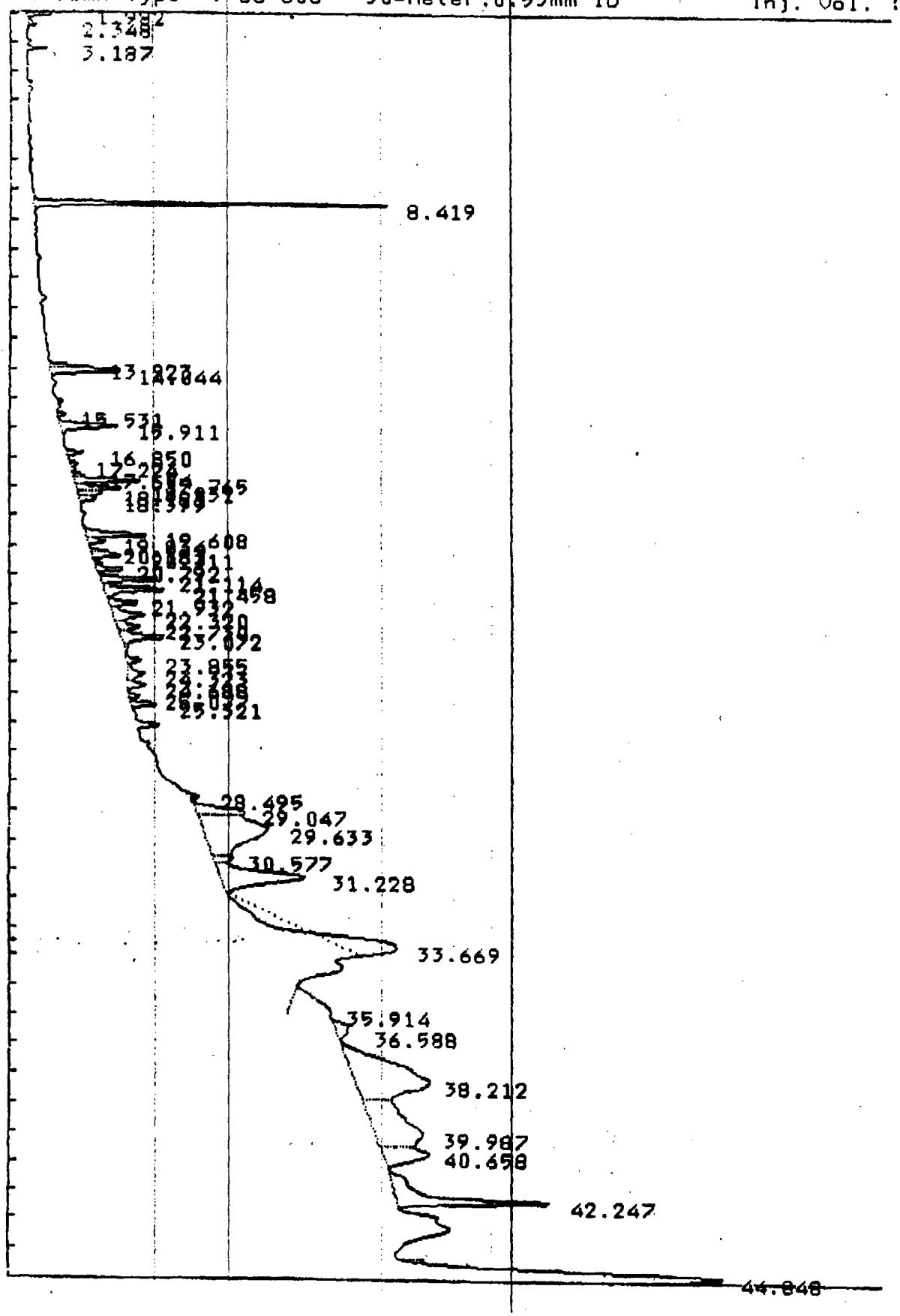
Total Area : 1169831 Total ng inj : .061

Report Time : 0690 16Nov1994
Method : /DATA/LOOP/METHOD/HP58904ACLP69.MTH
Result File : /DATA/LOOP/RESULT/04ACLP069E_016.RES

IEA Pesticide Standard Report

Sample Name : AR12480B
Result File : /DATA/LOOP/RESULT/D48CLP069E_013.
Column Type : DB-608 30-Meter,0.53mm ID

Inj on 0326 16Nov1994
INSTRUMENT : HP589048
Inj. Vol. : 1 ul



# IEA Pesticide Standard Report

Sample Name : AR12480S
Report No :250.00
Result File : /DATA/LOOP/RESULT/04BCLP069E_013.RES
Column Type : DB-608 30 Meter,0.53mm ID
Inj. Vol. : 1 ul
Instrument : HP589040
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 | 18769 | 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 | QB | 0.0000 | |
| 15 | 17.22 | | .12A209 | 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 | |
| 29 | 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 | .149788 | 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 | 52074 | BV | 0.0000 | |
| 45 | 38.21 | | 1.150099 | 451614 | VV | 0.0000 | |
| 46 | 39.99 | | 1.214477 | 386498 | 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 | |

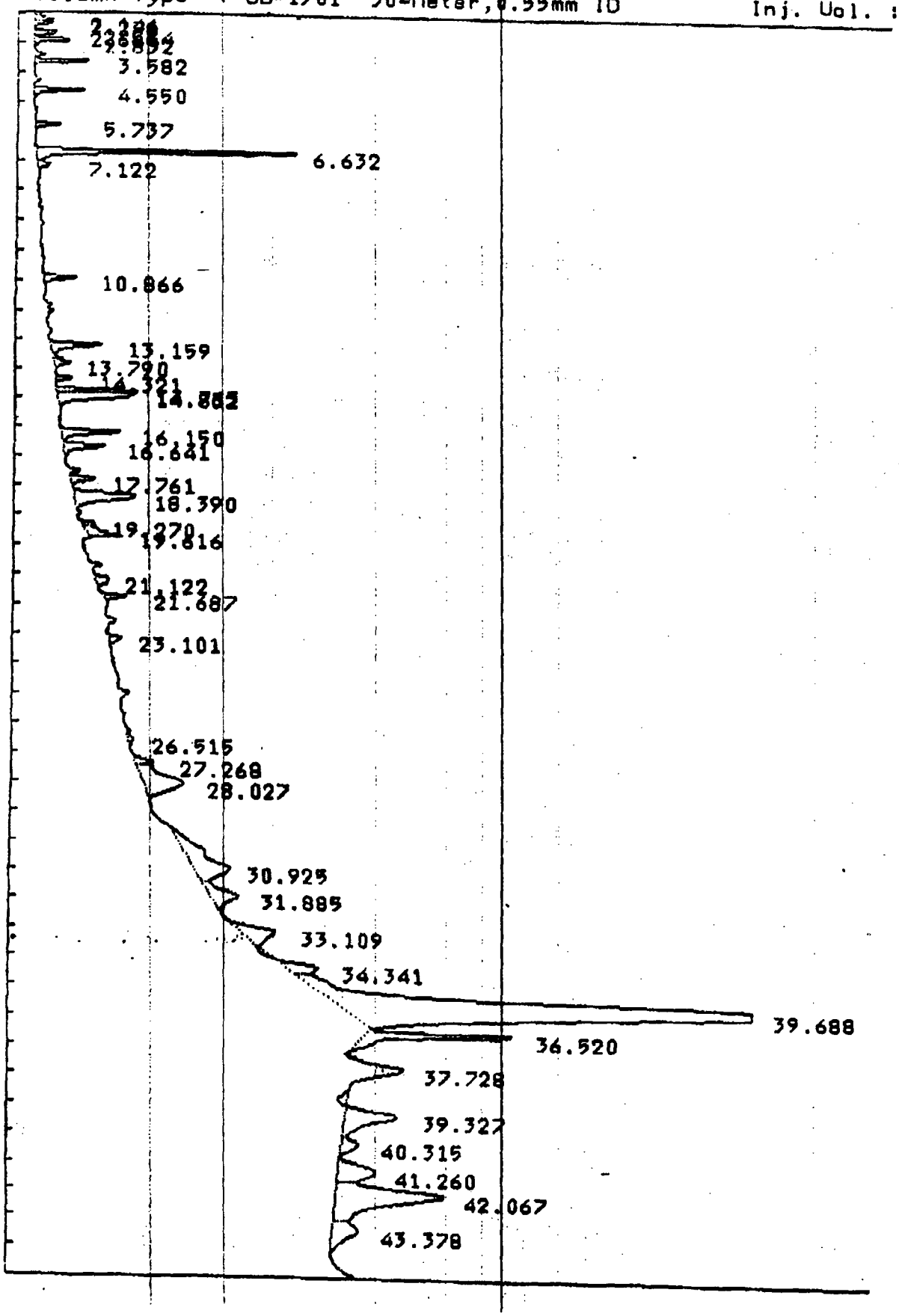
Total Area : 3519244 Total ng inj : .046

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

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



# IEA Pesticide Standard Report

Sample Name : AR124802 Report No :252.00
Result File : /DATA/LOOP/RESULT/D4ACLP069E_014.RES
Column Type : DB-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/LOOP/SEQUENCE/S4ACLP069E.SEQ
Subseq/Sample : 1/ 14 Bottle no. : 14

% Dil-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 | 1.59 | | .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 | 16.64 | | .172017 | 26068 | VB | 0.0000 | |
| 23 | 17.76 | | .155908 | 13640 | VB | 0.0000 | |
| 24 | 18.39 | | .308961 | 65651 | 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

# CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 22774 SDG No.: BPL49, 52 LABORATORY: IEANJ

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. Vaughn 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 blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples 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 analytes 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 51 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 dally 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 BPLS0, 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 tban 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.

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 ODT OF SPECIFICATION:

VGA, 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 VI

# 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 OTEER

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(P = 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 = No 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.

# DATA REJECTION SUMMARY

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

Site Name: Cornell Dubilier Electronics  Lab Name: IEANJ

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 Tima | Calibra-tion | Contamina-tion "U" | ID "U" | Intarnal Standards | Other | Total # of Samples | Total # Rejected/Total # in All Sanples |
|---|---|---|---|---|---|---|---|---|---|
| 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 % |

NOTE: ASTERISK (*) INDICATES ADDITIONAL EXCEEDANCES OF REVTEW CRITERIA.

## Analytes Estimated Due to Exceeding Review Criteria For:

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

| | Surrogates | Holding Time | Calibra-tion | Contanina-tion | ID J/JN | Internal Standards | Other | Total # of Ssmples | Total # Estiaated/Total # in All Samples |
|---|---|---|---|---|---|---|---|---|---|
| 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 CRITERIA.

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, agueous 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 must 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.<br><br>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. Oo 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 conc > CRQL but < 10x blank value | Sample conc < CRQL & < 10x blank value | Sample conc > 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 conc > CRQL but < 5x blank value | Sample conc < CRQL & is < 5x blank value | Sample conc > CRQL value & > 5x 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 associated 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 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 Check (Form V)

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



4D

| | 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 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.

| | | | |
|---|---|---|---|
| 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 criteria 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 significant 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 associated 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) | [✓] | ___ | ___ |
| c. 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 criteria 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)** | | | |
| 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. | | | |
| 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. | | | |
| 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? Check 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 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 |
|---|---|---|---|
| **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 action 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 <u>GC/MS Continuing Calibration (Form VII)</u>

| | 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."

| | 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, check 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 <u>Internal Standard (Form VIII)</u>

| | | | |
|---|---|---|---|
| 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 performance exhibits a major abrupt 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 acid 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. Check 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 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: | | | |
| 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.

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 associated 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.

| | YES | NO | N/A |
|---|---|---|---|
| 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 hot 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 conc. > CRQL, but < 10x blank result | Sample conc. > CRQL, but < 5x blank result | Flag sample result with a "U" |
| Sample conc. < CRQL & < 10x blank result | Sample conc. < CRQL & < 5x blank result | Report CRQL and qualify with a "U" |
| Sample conc. > CRQL & > 10x blank result | Sample conc. > 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 associated blank, flag the sample data "R," unusable.

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 GC/MS Instrument Performance Check

7.1 Are the GC/MS Instrument Performance Check 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 performance 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).

| | | | |
|---|---|---|---|
| 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 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 significant figures (two) been reported? | ✓ | | |

ACTION: If large errors exist, call lab 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

8.1 Are the Organic Analysis Data Sheets (Form I BNA) present with required header information on each page, for each of the following:

| | YES | NO | N/A |
|---|---|---|---|
| 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".

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?

| | YES | NO | N/A |
|---|---|---|---|
| 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 "Contract 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? | [✓] | ___ | ___ |
| 6.9 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.

| | 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 action 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? Check 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? [✓] ___ ___

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 criteria 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 contaminatlon are still considered as "hits" when qualifying for calibration criteria.

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 which 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 associated 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 performance exhibits a major abrupt 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.

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? [Y] ___ ___

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, analytical problems or special circumstances affecting the quality of the data? ___ [U] ___

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? ___ [N] ___

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 but. If recovery for both 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 both 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 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 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 conc > CRQL but < 5x blank | Sample conc < CRQL & is < 5x blank value | Sample conc > 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 associated 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, Porm VI - PEST - 1). | [✓] | ___ | ___ |

ACTION: If no, all samples in the entire analytical sequence are potentially affected. 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 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 pattern.

| | YES | NO | N/A |
|---|---|---|---|
| 7.5 Are the linearity criteria 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).

| | YES | NO | N/A |
|---|---|---|---|
| 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 presumptlve evidence of presence or unusable (R).

| | YES | NO | N/A |
|---|---|---|---|
| 7.7 Is Form VII - Pest-1 present and complete for each Performance 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 analytical 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-control</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 DDB 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 percent 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 pattern 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 associated 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 analytical 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 check the efficiency of the cleanup procedures within QC limits:

| | YES | NO | N/A |
|---|---|---|---|
| 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 Check 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 pattern similarity with previously run Aroclor standards.

## 10.0 Pesticide/PCB Identification

| | YES | NO | N/A |
|---|---|---|---|
| 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.

| | YES | NO | N/A |
|---|---|---|---|
| 10.2 Are there any transcription/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 which 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 percent 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 checked 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 Aquanon 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

80

"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)
# TRAFFIC REPORT (TR) COVER SHEET

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

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

Full Sample Analysis Price in Contract: _____

SDG No/First sample in SDG: BPL52 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: BPL53 Sample Receipt Date: 10/14/94
(Highest EPA Sample Nuaber in last shipment of samples received under SDG) (MM/DD/YY)

EPA Sample Nnmhers 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., the order listed on this form).

Sample Custodian _____ Oate 10/14/94

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 21 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 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."

Brian W. Wood
Brian Wood, Organic Laboratory Manager

11/17/94
Date

# SAMPLE DELIVERY GROUP (SDG)
# TRAFFIC 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: 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 alphanuneric 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: 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)

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 | 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

EPA SAMPLE NO.

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

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. | | | | |
| 08. | | | | |
| 09. | | | | |
| 10. | | | | |
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000017

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL53

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: 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)

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

| CAS NO. | COMPOUND | | 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 |
| 75-36-4 | 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 |
| 108-50-7 | 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. | | | | |
| 08. | | | | |
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IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000054

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 |
|---|---|---|---|
| 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: 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: ____

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 |
| 4. | | | | |
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IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL53-CG

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-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

00065

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 | 3.25 | 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 | 9.64 | 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 | 5.67 | 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 |
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ID

# 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 |
| 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 |
| 959-96-8 | Endosulfan I | 0.05 | U |
| 60-57-1 | Dieldrin | 0.10 | U |
| 72-55-9 | 4,4'-DDE | 0.10 | U |
| 72-20-6 | 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 |
| 72-43-8 | 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 |
| 76-44-6 | Heptachlor | 0.05 | U |
| 309-00-2 | Aldrin | 0.05 | U |
| 1024-57-3 | Heptachlor Epoxide | 0.05 | U |
| 959-96-8 | 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 |
| 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 |

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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 |



10

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. | | | | |
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IA
VOLATILE 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: 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)

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

| CAS NO. | COMPOUND | | 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 |
| 07. | | | | |
| 06. | | | | |
| 09. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
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| 29. | | | | |
| 30. | | | | |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

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: 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 | Chlorotorm | 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 | Chiorobenzene | 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: lEA-NJ Contract: 68D20022

Lab Code: lEANJ 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. | | | | |
| 07. | | | | |
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| 28. | | | | |
| 29. | | | | |
| 30. | | | | |
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IB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: 1EANJ 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 | Hexachlorocyclopentadiene | 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 |

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BPL49

Lab Name: IEA-NJ Contract: 68D20022

Lab Code: lEANJ 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 J |
| 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 ~~300~~ | U ~~B~~ |
| 206-44-0 | Fluoranthene | 1300 | |
| 129-00-0 | Pyrene | 1600 | |
| 85-68-7 | Butylbenzylphthalate | *8400 ~~8300~~ | ~~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~~ | ~~E~~ |
| 117-84-0 | Di-n-octylphthalate | *17000 ~~18000~~ | ~~E~~ |
| 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 | 2600 | 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 acid | 22.46 | ~~1900~~ | ~~JNBR~~ |
| 11. | Unknown | 32.66 | 1500 | J |
| 12. | Unknown alkane | 32.15 | 1400 | J |
| 13. | Unknown | 23.47 | 1100 | J |
| 14. | Unknown | 5.12 | ~~720~~ | ~~JBR~~ |
| 15. | Unknown PAH | 22.26 | 620 | J |
| 16. | Unkhown 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. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

IB

SEMIVOLATILE 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: >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 |
| 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: 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 |
|---|---|---|---|
| 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 | UB |
| 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 | ~~J~~ |
| 207-08-9 | Benzo(k)fluoranthene | 220 | ~~J~~ |
| 50-32-8 | Benzo(a)pyrene | 240 | ~~J~~ |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 110 | ~~J~~ |
| 53-70-3 | Dibenz(a,h)anthracene | 560 | ~~U~~ |
| 191-24-2 | Benzo(g,h,i)perylene | 110 | ~~J~~ |

(1) - Cannot be separated from Diphenylamine

* Result from BPL50DL

IF

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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: 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 | 8.38 | 83000 | ~~AJB~~ R |
| 2. | Unknown phthalate ester | 31.00 | 12000 | J N |
| 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 N |
| 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~~ |
| 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 | Acenaphthylene | 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: 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 |
|---|---|---|---|
| 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 | ~~*220000~~ ~~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



116

1F

SEMIVOLATILE 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: 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 | 3600 | 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 | 26.36 | 1700 | J |
| 13. | Unknown phthalate ester | 31.26 | 1600 | J |
| 14. | Unknown phthalate ester | 26.64 | 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 | 26.51 | 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 0000003

# 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 | ~~NP~~ |
| 72-20-6 | 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~~ | ~~NP~~ |
| 5103-74-2 | gamma-Chlordane | * 61 ~~88~~ | ~~P~~ |
| 8001-35-2 | Toxaphene | 450 | U |
| 12674-11-2 | Aroclor-1016 | 67 | U |
| 11104-28-2 | Aroclor-1221 | 180 | U |
| 11141-16-5 | Aroclor-1232 | 87 | U |
| 53469-21-9 | Aroclor-1242 | 67 | 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 | ~~J~~ U |
| 959-98-8 | Endosulfan I | 2.9 | U |
| 60-57-1 | Dieldrin | 5.6 | U |
| 72-55-9 | 4,4'-DDE | 3.3 | ~~J~~ U |
| 72-20-8 | Endrin | 5.6 | U |
| 33213-65-9 | Endosulfan II | 21 | ~~J~~ JN |
| 72-54-6 | 4,4'-DDD | *160 ~~150~~ | ~~J~~ 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 | ~~J~~ J |
| 7421-36-3 | Endrin Aldehyde | 5.6 | U |
| 5103-71-9 | alpha-Chlordane | *53 ~~61~~ | ~~J~~ J |
| 5103-74-2 | gamma-Chlordane | *51 59 | ~~J~~ |
| 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 | 66 | U |
| 53469-21-9 | Aroclor-1242 | 56 | U |
| 12672-29-6 | Aroclor-1248 | 100 | ~~J~~ JN |
| 11097-69-1 | Aroclor-1254 | 250 | ~~J~~ J |
| 11096-82-5 | Aroclor-1260 | 56 | U |

*Result from BPL50DL

FORM 1 PEST

3/90

ID

PESTICIDE 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: 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 | ~~JP~~ U |
| 959-98-8 | Endosulfan I | 2.7 | U |
| 60-67-1 | Dieldrin | 5.2 | U |
| 72-55-9 | 4,4'-DDE | 3.4 | ~~JP~~ U |
| 72-20-6 | Endrin | 5.2 | U |
| 33213-65-9 | Endosulfan II | 5.2 | U |
| 72-54-8 | 4,4'-DDD | 84 | ~~P~~ JN |
| 1031-07-8 | Endosulfan Sulfate | 5.2 | U |
| 50-29-3 | 4,4'-DDT | 150 | E ~~P~~ JN |
| 72-43-5 | Methoxychlor | 27 | U J |
| 53494-70-5 | Endrin Ketone | 34 | ~~P~~ J |
| 7421-36-3 | Endrin Aldehyde | 5.2 | U |
| 6103-71-9 | alpha-Chlordane | * 57 56 | ~~BP~~ J |
| 5103-74-2 | gamma-Chlordane | * 49 56 | ~~P~~ |
| 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 | 52 | U |
| 12672-29-6 | Aroclor-1248 | 64 | ~~P~~ 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 Clibanoff - 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 | Carol Davis DCR | 11/8/94 2:00pm |
| J. Trutter | 11/15/94 | C-Stanca | 11/15/94 |
| 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 9:25 |
| Hanif Shah | 11/25/94 2:55 | DCR | 11/25/94 2:55 |

(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 the 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 indicates 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 collected at the Cornell Dublier Electronics site on October 17, 1994 for Metals analyses as per EPA SOW ILMO2.1 protocols.

This case 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 associated with the 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 as 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 limits 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 limits of 80-120%: As (initial/final), 124.1%/124.8%; Se (final) 137.9%; Tl (final), 66%.
J-----> As in HBLZ89,90,91.
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 of 75-125%; therefore, all associated samples should be qualified as estimated if 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 be qualified as estimated if % difference is >10% but <100%.
The following % difference were outside the control limits for initial concentrations ≥ 10xIDL:

SDG# HBLZ89

| | | |
|---|---|---|
| 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, all analytes not previously qualified as estimated or rejected should be qualified as estimated: MBLZ89

A.2.2 (continuation)

A.2.2 (continuation)

HS 11/25/94

A.2.3. Contract-Problems/Non-Compliance

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

MMB Reviewer: _____ Date: _____
Signature

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

Verified by: _____ Date: _____
Signature

Title: Evaluation of Metals Data for the Contract Laboratory Program
Appendix A.3: Contract Non-Compliance (SMO Report)

Date: Jan. 1992
Number: HW-2
Revision: 11

CONTRACT NON-COMPLIANCE
(SMO REPORT)

Regional Review of Uncontrolled Hazardous Waste
Site Contract Laboratory Data Package

CASE NO. 22774

The handcopied (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:
SMO 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

MAILING LIST FOR DATA REVIEWERS

1. USEPA Region I (ESD)
60 Westview Street
Lexington, MA 02173
Dan Stamo
(617) 861-4312
CT, ME, MA, NH, RI, VT
CAA Resource Analysts York,
Ellis, Skinner, DPG

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

(201) 321-6656
NJ, NY, PR, VI
Century, Chemical, US Test, Nance,
ESC, Cadmus, DPC, Galson, IDC

3. USEPA Region III (CRL)
839 Bestgate Road
Annapolis, MD 21401
Chuck Sands
(301) 266-9180
DE, MD, PA, VA, WV, DC
Carlyle, Mitchell, STC, MAD, VERSAR,
JTAS, Weston, NCS, EA Engineering
Science Tech., Ney, PA

4. USEPA Region IV (ESD)
Analytical Support Branch
College Station Road
Athens, GA 30613
Joe Bennett, Jr.
(404) 546-3118
AL, KY, GA, FL, MS, NC, SC, TN
Computer, EPS, EST, PRC,
Triangle Labs

5. USEPA Region V (ESD)
536 South Clark Street
Terry Fisher, CRL
Chicago, IL 60605
Phil Ehrlinia
312-353-9387
IL, IN, MI, MN, OH, WI
NEI, TAI, TDC

6. USEPA Region VI (ESD)
Northwest Park Plaza Bldg. C
6626 Northwest Drive
Houston, TX 77074
David Stockton
(713) 983-3425
AR, LA, NM, TX, OK
ANALCHEM, RECIAN, SPECS, ECS, Chemical
Research, Inc., STL Inc., IRSC,
Allied, Key, TX, ECRA

7. USEPA Region VII Laboratory
25 Funston Road
Kansas City, KS 66115
Debra Moore
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IA, KS, NE, MO
Walker, Kansas City Scientific
Enterprises, Eagle Picher

8. USEPA Region VIII Laboratory
BOX 25366
Denver Federal Center
Lakewood, CO 80225
Eva Hofman
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9. USEPA Region IX (ESD)
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AZ, CA, HI, NV, American Samoa,
Guam, Trust Territories of Pacific
Islands, Wake Island
ALS, CAL Western, S-Cubed, JT-CA,
Vegas

10. USEPA Region X Laboratory
P.O. BOX 848
Manchester, WA 98353
Gerald Murph
(206) 442-0970
AK, ID, OR, WA
Laucks Testing Labs, Century Testing
Labs (For VOA Only), Weyerhauser CO.
Columbia Testing, Silver Valley

11. Carlo Dempsey - (OS-230)
USEPA
401 "M" Street, S.W.
Washington, DC 20460
FTS 382-5766

12. Edward Kantor
USEPA
DSI-LV
944 E. Harmon Avenue
BOX 93478
Las Vegas NV 89119

13. Sample Management Office
Viking Center,
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 Reported Due to Exceeding Review Criteria:*

| | Holding Times | Calibration | Prep Blank | Field Blank | Inter-ferences | Spike Recovery | Duplicates Lab | Duplicates Field | Detection Limits | LCS | Serial Dilution | MSA | Total Analytes | Rejection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CN | | | | | | | | | | | | | | |
| Low AA | | | | | | | | | | | | | | |
| Graphite AA | | | | | | | | | | | | | | |
| Mercury | | | | | | | | | | | | | | |
| Site: | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | |

Analytes Flagged as Estimated (J) Due to Exceeding Criteria Ref:*

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CN | | 10 | | | | 3 | | | | 17 | 4 | | 110 | 34 |
| Low AA | | | | | | | | | | | | | | |
| Graphite AA | | | | | | | | | | | | | | |
| Mercury | | | | | | | 2 | | | | | | 5 | 2 |
| Site: | | 10 | | | | 3 | 2 | | | 17 | 4 | | 115 | 36. |
| Other CN | | | | | | | | | | | | | | |

Site:
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: 194-2
Revision: 11

Inorganic Analysis

INORGANIC REGIONAL DATA ASSESSMENT

Region II

ASI NO. 22774

SITE Cornell & Dublier

LABORATORY ITPA

NO. OF SAMPLES/ MATRIX 2 water & 3 Soil.

CASE MBL2891/ MBL2892

REVIEWER (IF NOT ESD) Nikuya Nagalu

DATE 3/90

REVIEWER'S NAME NITHYA NAGALING

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 | O | | | |
| 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.
U = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

AREAS OF CONCERN:

POOR PERFORMANCE:

U.S. EPA – CLP

6
FIELD DUPUCATES

| EPA SAMPLE NO. | |
|---|---|
| MBLZ90 | MBLZ9 |

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 | 1.6500 | 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 | 10 | 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: Hanif Sheikh
Hanif Sheikh, Quality Assurance Chemist
Toxic and Hazardous Waste Section
DATE: 1-30-92

APPROVED BY: Kevin Kubik
Kevin Kubik, Chief
Toxic and Hazardous Waste Section
DATE: 1-30-92

APPROVED BY: Robert Runyon
Robert Runyon, Chief
Monitoring Management Branch
DATE: 1/30/92

Title: Evaluation of Metals Data for the Contract Laboratory Program

Date: Jan. 1992
Number: HW-2
Revision: 11

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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 TPO, 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 encer 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 appcopciate 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, SMD 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.

| | 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 Plane? | [ ] | | ✓ |
| | (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 voltsmes used to obtain values. | | | |
| | Percent solids calculation present for soils/sediments? | [✓] | | |
| | Are preparation dates present on sample preparation logs/bench sheets? | [✓] | | |
| A.1.7.2 | Measurement 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 ng/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 Form II B (CRDL Standards for AA and ICP) - | | | |
| A.1.12.1 Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)? | [✓] | | |
| Was a mid-range calib. verification standard distilled and analyzed for cyanide analysis? | [ ] | | ✓ |
| Was a 2xCRDL ( or 2xIEL 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 fat CRDL when IEL > 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 |
|---|---|---|---|---|
| | ACTION: 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 (CRDLs)? | [✓] | ___ | ___ |
| | Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)? | [✓] | ___ | ___ |
| | ACTION: 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 | FORM 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? | [✓] | ___ | ___ |
| | ACTION: 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 EDL, 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 estinated (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 specified 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%? | | [✓] | |
| (b) between 30-74%? | ✓ | [ ] | |
| (c) between 126-150%? | | [✓] | |
| (d) greater than 150%? | | [✓] | |

Not needed since no S are blank!

**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 - Problem/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 duplinafe 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 calcalate 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 to be 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 "U") 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 to 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 the 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 | NO | 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 on 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 LCS 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 IDL > CRDL). | | | |
| | Is field blank concentration less than CRDL (or 2 x IDL when IDL > 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 IDL. | [✓] | | |

| | 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 to obtain the result on Form 1? | [✓] | ___ | ___ |
| **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 results of a sample that has per cent solids between 10%-50% (i.e. moisture content between 50%-90%). Reject all the results of a sample that has per cent solids less than 10% (i.e. moisture content greater than 90%).

**NOTE**: Reject or flag(J) only the sample results that were not previously rejected or flaged due to 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

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5103 Old William Penn Highway • Export, Pennsylvania 15632 • 412-731-8806

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# CASE NARRATIVE

| | |
|---|---|
| Laboratory Name: | ITAS Pittsburgh, Pemsylvania |
| 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.

U.S. EPA - CLP

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. Dunlop Name: David A. Dunlop

Date: 11/3/94 Title: Project Manager



REVIEWED BY: MTW
DATE: 11/2/94

# 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 SDS.) (MM/DD/YY

Last Sample in 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 overnight shipment.

Very truly yours,

David A. Dunlap
Project Manager

DAD:ds

cc: USEPA Contract Laboratory Program - SMO

ITAS PT/11-94/0157/NEIC2

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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" quadifier.

The serial dilution percent difference exceeded the control limit for lead and zinc. All associated results were flagged with an "E" qualifier.

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044 **000002**

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: MTM
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.: 22774_ 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/KG

| 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

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INORGANIC ANALYSES DATA SHEET

001004

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): MS/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 5370 | | | P |
| 7440-36-0 | Antimony | 3.9 | U | N J | 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 | 6 | | P |
| 7440-50-8 | Copper | 42.3 | | | P |
| 7439-89-6 | Iron | 10900 | | | P |
| 7439-92-1 | Lead | 115 | | E J | 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

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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.: MBLZ69

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 | Beryliium | 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

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000003

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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 | 3SI | 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:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBLZ93

FIELD BLANK

Lab Name: ITAS_PITTSBURGH_____ Contract: 68-D2-0044

Lao 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:

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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: MBLZ92 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: MBLZ93 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 | MBLZ92 | 11 | |
| 2 | MBLZ93 | 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., the order listed on this form).

J Smith
Signature

10/20/94
Date

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REFERENCE NO. 20

SOUTH PLAINFIELD HEALTH DEPARTMENT

FAX# (201) 754-1179

# FAX COVER

TO: Andy Chibanoff

ATTENTION: Malcom Lirvie

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, contamlAated 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 sedlaent,

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 Onit 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-Dubllier 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 samples. 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 culverts. 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 pg/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 (190,000J - 680,000J µg/kg), silver (2,400 - 12,400 µg/kg), trichloroethene (3SJ - 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

| LOCATION & SOLIDS | SOIL SAMPLES (ppb) | | | SEDIMENT SAMPLES (ppb) | | SURFACE WATER SAMPLES (ppb) | |
|---|---|---|---|---|---|---|---|
| | 81 | S2 | S3 | SED1 | SE02 | SW1 | SW2 |
| | on-site | on-site | background | upstream | downstream | upstream | downstream |
| | 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 | B8 J | 38 J | 61 J | | | | |
| Trichloroethene | 35 J | 79 J | | | | | |
| Chloroform | | 19 J | | | | | |
| Methylene Chloride | | 8000 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/PCS'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

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

MEMORANDUM

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 C0910-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. This 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 | methylene 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 | - | 1500J | 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 dichloroethene | - | 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 | 18700J | 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 | 900000J | confirm |
| | phenanthrene | - | 2800J | 2800J | confirm |
| | anthracene | - | 700J | 700J | confirm |
| | fluoranthene | - | 4600J | 4600J | confirm |
| | pyrene | - | 3400J | 3400J | confirm |
| | benzo(a)anthracene | - | 1800J | 1800J | confirm |
| | bis(2-ethylhexyl) phthalate | - | 5100J | 5100J | confirm |
| | chrysene | - | 1500J | 1800J | 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 | - | 6J | 6J | confirm |
| | toluene | - | 3J | 3J | confirm |
| | All BNAs rejected for this sample. | | | | |
| | Arochlor 1254 | - | 410000 | 410000 | tent. 6. |
| 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 OAS 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 detectec 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-028

TRENTON, NEW JERSEY 08625

| Case Name | Field Sample # | Laboratory Sample # | Sample Location | Time and Date of Sample Collection |
|---|---|---|---|---|
| CORNELL DUBILIER | CD910-SEDI | | | 9/11/86 |
| | -SEDS | | | 9/11/86 |
| | -S1 | | | 9/11/86 |
| | -S2 | | | 9/11/86 |
| | -S3 | | | 9/11/86 |
| | -SWI | | | 9/11/86 |
| | -SWS/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.

II. Instrumentation Set-up

1. Volatils Fraction

A. GC/MS Tune

Tune check of 9/24/86 08:E9 acceptable.
Tune check of 9/E6/86 11:40 acceptable.

B. Calibration

1. Initial Standard Calibration - The initial calibration o 8/87/86 is acceptable.

2. Continuing Standard Calibration - HEM has combined more one standard run to generate a continuing calibration ch This is not standard laboratory practice, reflects poorl upon HSMs capabilities and leaves all analytical data fo the volatile organics quantitatively suspect.

2. Base Neutral / Acid Extractable Fraction

A. GC/MS Tune

Tune of 8/21/86 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 of 8/22/86 is fully acceptable.

2. Continuing Standard Calibration - The continuing calibrat checks were acceptable with the exception of some compoun

Calibration check of 9/22/86 08:47

| Compound | % Diffsrence (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 | 22 |
| 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 a runs were acceptable.

2. Continuing Standard Calibration - The DDT/Endrin breakdo were found to be acceptable. However, when recalculated s samples did not yield ths same percent breakdowns that ws 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 |
| CD910-2W1 | 2301 | 2 |
| CD910-2W2/2W2Q | 2802 | 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 rejectsd. As standards are included amo the rejected runs and as there are a large number of standa involved the entire confirmatory analysis is rejected.

D. DDT Minumim Retsntion 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 | 9/15/86 | 9/24/86 | 5 | 7 |
| FB | 9/15/86 | 9/24/86 | 5 | 7 |
| SW2/SW2Q | 9/12/86 | 9/24/86 | 5 | 7 |
| TB | 9/12/86 | 9/24/86 | 5 | 7 |
| S2D1 | 9/12/86 | 9/26/86 | 4 | 10 |
| S2D2 | 9/15/86 | 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 acceptabl 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 5ug/l J

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8. Trip Blank
Methylene Chloride 15 ug/l

3. Field Blank
Methylene Chloride 10ug/l
1,1,1 trichloroethane 1ug/l J

## 2. Base Neutral / Acid Extractable Fraction

A. Holding Times - Five samples were extracted after the seven day holding time. Specifically they are:

| Sample | Date received | Date extracted | Days over |
|---|---|---|---|
| S2D-1 | 9/12/36 | 9/24/86 | 5 |
| S2D-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 | 9/12/86 | 9/24/86 | 5 |

All samples that are over holding time are qualified.

B. Surrogates

For the water samples SWS MS had a recovery for phenol D-5 of [illegible] the limits are 10-94%.

For the soil/sediment samples only one sample with unacceptable surrogate recoveries, S-3, as it had two unacceptable surrogate 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 | Criteria |
|---|---|---|---|---|---|
| | 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/E4/86 | SED-2 |
| 9/84/86 | S-1 |
| 9/24/36 | S-2 |
| 9/E4/36 | S-3 |
| 9/15/86 | SW-1 |
| 9/16/86-9/17/86 | SWE/SWEQ |
| 9/16/36-9/17/86 | TB |
| 9/16/36-9/17/86 | FB |
| 9/84/86 | METHOD BLANK |

All compounds not associated with a method blank are rejecte

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(S-ethylhsxyl)phthalate | 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-S | 857 |
| S-1 | 570 |
| S-S | 303 |
| S-4 | 404 |

C. Matrix Spike and Matrix Spike Duplicate

| Sample | Anaiyte | %Recovery | RPD | Limits |
|---|---|---|---|---|
| SW2/SW2QMS | Lindane | 144 | - | 56-123 |
| SW2/SW2QMSD | Lindane | 155 | - | 56-123 |

| | | | | |
|---|---|---|---|---|
| SW2/SW2Q | Aldrin | - | 44 | 22 |
| SWS/SWSQMS | Dieldrin | 24 | - | 52-126 |
| SWS/SWSQM3D | Disldrin | 28 | - | 52-126 |
| SW2/SW2Q | 2ndrin | - | 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. Dioxin (2,3,7,8 TCDD)

Soil and waste matrix deliverables shall include September 1983 Req VII protocols as modified by NJDEP July 1984. Water and wastew matrix deliverables shall include Method 613, July 198E, E Cincinnati protocols.

EVALUATON

Not Applicable.

V. Metals and Limited Chemistry

A defined deliverables package is currently in development, howe areas of detection limits and quality control are to be submitted 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 rejected data

Comments/Remedies:

_____ Quality Assurance Officer or DHSM designee _____ Date

cc: Project Manager and BEMQA on Data Rejection Review.

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-S3 | 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

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 Street |
| SAMPLE LOCATION | S Creek Bed | | Trenton, NJ 08618 |

## SAMPLE COLLECTOR

| | | | | | |
|---|---|---|---|---|---|
| SAMPLER(S) Name | R Greenwood | Agency | DHWM BSA | Sampler ID # | HS 26 |
| Name | D Morrow | Agency | DHWM BSA | Sampler ID # | HS 143 |

## SAMPLE IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| NJDEP SAMPLE NO. | CD 910 - Sed 1 | SAMPLING DATE | 9-10-86 | ABSCISSA (Longitude) | |
| SAMPLE POINT ID | Sed 1 | TIME (MIL) SAMPLING BEGAN | 1104 | ORDDIATE (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 (digit/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 HZM 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 |

2

SAMPLE ANALYSIS REQUEST 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 # | HS 76 |
| Name | D Mazur | Agency | DHWM/BSA | Sampler ID # | HS 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 Compounds) | 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 | K 402, K 403 | 660536 Pest/PCB | | |
| Purgeable Organics | F 402, F 403 | 660537 P.P. metals Cn Phen | | |

ANALYSIS(ES) AUTHORIZED BY A. Pierce TITLE HSMS I

## ANALYZING LABORATORY

| | | | | | |
|---|---|---|---|---|---|
| CONTRACT LAB NAME | H2M 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 |

24

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 | DHWM/BSA | Sampler ID # | HS 160 |
| Name | D Mazur | Agency | DHWM/BSA | Sampler ID # | HS 143 |

## SAMPLE IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| NIDEP SAMPLE NO. | CD91C-S1 | SAMPLING DATE | 9-10-86 | 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 Compounds) | CONTAINER NUMBER | DETECTION LIMIT (digits/unit) | PRECISION & ACCURACY LIMITS | REQUESTED TURNOVER (days) |
|---|---|---|---|---|
| PP + 40 | F406+F407 | 660538 | Purge. Orgs. | |
| BN/AE, Pest/PCB's TCyanide Total Phenols, PP metals | K406, K407 | 660539 | BN/AE | |
| | | 660540 | P.P. | |
| Purgeable Organics | F406, F407 | 660541 | P.P. Metals CN Phen | |

ANALYSIS(ES) AUTHORIZED BY Al Plenn TITLE HSMS I

## ANALYZING LABORATORY

| | | | | | |
|---|---|---|---|---|---|
| CONTRACT LAB NAME | HAM LAB | PERSON ACCEPTING SAMPLE | Stuart W. Murnell | TITLE | LAB Svc Mgr. |
| LAB ID # | | LAB CONTROL # | See Above | DATE 9/12/86 | TIME (MILI 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 | | | Trenton NJ 08618 |

## SAMPLE COLLECTOR

| | | | | | |
|---|---|---|---|---|---|
| SAMPLER(S) Name | R Gervasio | Agency | Dawn / BSA | Sampler ID # | HS76 |
| Name | D Mazur | Agency | Dawn / BSA | Sampler ID # | HS143 |

## 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. 70°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 | K404, K405 | 660542 | Purg. Org. | |
| Total Phenols, PP Metals | | 660543 | BN/AE | |
| Purgeable Organics | F-404, F-405 | 660544 | PP | |
| | | 660545 | P.P. Metals CN Phen | |

ANALYSIS(ES) AUTHORIZED BY Al Plena 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 |

2

# 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 Gerusso | Agency: DHWM / BSA | Sampler ID #: HS 26 |
| Name: D Morse | Agency: 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 (MIL) 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 (digit/units) | PRECISION & 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 Pleva

TITLE: HSMS I

## ANALYZING LABORATORY

| | | | |
|---|---|---|---|
| CONTRACT LAB NAME: H2M LAB | PERSON ACCEPTING SAMPLE: Stuart W. Munell | TITLE: LAB Svce. Mgr. | |
| LAB ID # | LAB CONTROL #: See Above | DATE: 9/12/86 | TIME (MIL): 1100 HRS |

2

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 Gervasio | Agency | Dittum / BSA | Sampler ID # | HSms 26 |
| Name | D Mezur | 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 (MIL) 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 A ACCURACY LIMITS | REQUESTED TURNOVER (days) |
|---|---|---|---|---|
| PP +40 | | | | |
| Priority Pollutant Metals | B 402 | 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 | Stuart W. Murrell | TITLE | LAB Supv. Mgr. |
| LAB ID # | | LAB CONTROL # See Above | DATE 9/12/86 | TIME (MIL) | 1100 HRS |

6

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 | Agency | 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 Glass 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 A 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 (MILI | 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 Cervello | Agency | DHWM/BSA | Sampler ID # | HS 76 |
| Name | D Mazur | Agency | DHWM/BSA | Sampler ID # | HS 143 |

## SAMPLE IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| NJDEP SAMPLE NO. | QD910-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 102 | 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 | 660554 | Purg 026.5 | |
| 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 | Phen |
| | | | | |
| Purgeable Organics | I 404, 405 | | | |

ANALYSIS(ES) AUTHORIZED BY Al Plevra TITLE Hms I

## ANALYZING LABORATORY

| | | | | | |
|---|---|---|---|---|---|
| CONTRACT LAB NAME | HZM LAB | PERSON ACCEPTING SAMPLE | Stuart N. Munell | TITLE | LAB Svc Mgr. |
| LAB ID # | | LAB CONTROL # | See Above | DATE 9/12/86 | TIME (MIL) 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 | | | 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. | CD91D-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 A ACCURACY LIMITS | REQUESTED TURNOVER (dtys) |
|---|---|---|---|---|
| PP + 40 | | | | |
| PP metals | B-400 | 660558 – | Purge Orgs | |
| Total Cyanide | H-407,411 | 660559 – | BN/AE | |
| Total Phenol | P 400, 401 | 660560 – | Pest/PCB | |
| BN/AE, Pesticides/PCBS | I 400-403 | 660561 – | P.P. Metals + CN + Phen | |
| Purgeable Organics | J 400-401 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

ANALYSIS(ES) AUTHORIZED BY Al Pleva TITLE HSMS I

## ANALYZING LABORATORY

| | | | | | |
|---|---|---|---|---|---|
| CONTRACT LAB NAME | H2M LAB | PERSON ACCEPTING SAMPLE | Stuart W. Minnich | 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 Gresuso | Agency | DHLWM / BSA | Sampler ID # | HS 76 |
| Name | D Mazur | Agency | DHLWM / BSA | Sampler ID # | HS 147 |

## SAMPLE IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| NJDEP SAMPLE NO. | CD 910- FB | SAMPLING DATE | 9-10-86 | ABSCISSA (Longitude) | |
| SAMPLE POINT U) | Field Blank | TIME (MIL) SAMPLING BEGAN | 1008 | ORDINATE (Latitude) | |
| SAMPLE SOURCE CODE | 404 | TIME (MIL) SAMPLING FINISHED | 1018 | ELEVATION | |
| REFERENCE POINT | | | | | |

## SAMPLING PROCESS

| | | | | | |
|---|---|---|---|---|---|
| COLLECTION 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 | HRM LAB | PERSON ACCEPTING SAMPLE | Stuart N. Finnell | TITLE | LAB Svc'e Mgr |
| LAB ID # | | LAB CONTROL # See Above | DATE 9/12/86 | TIME (MIL) | 1100 HRS |

3

# III. Laboratory Chronicle

LABORATORY CHRONICLE

660552
CD910-SC01

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 [signature]

INORGANICS

1. Metals 9/22/86 - 10/7/86
2. Cyanides 10/3/86 - 10/16/86
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

CD910-FB

**DATE**

RECEIPT/REFRIGERATION 9/18/86

ORGANICS
EXTRACTION

1. Acids [illegible]
2. Base/Neutrals [illegible]
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 [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 ANALYSIS

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

35

LABORATORY CHRONICLE

DATE

666556B
CD910-SW2/SW2Q

RECEIPT/REFRIGERATION 9/18/86

ORGANICS
EXTRACTION

1. Acids 9/22/86
2. Base/Neutrals 9/22/86
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 samples 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

066560

CD910-TB

DATE

RECEIPT/REFRIGERATION 9/12/86

ORGANICS
EXTRACTION

1. Acids 9/15/86
2. Base/Neutrals 9/16/86
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/22/86
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 [signature]

INORGANICS

1. Metals 9/22/86 – 10/7/86
2. Cyanides 10/3/86 – 10/8/86
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

66532
CD910-SED1

DATE

RECEIPT/REFRIGERATION 9/[illegible]/86

ORGANICS
EXTRACTION

1. Acids 9/5/86 9/12/86
2. Base/Neutrals 9/6/86 9/12/86
3. Pesticides/PCBs 9/9/86
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 — 10/6/86
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

DATE

666536
CD910-SED2

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 [signature]

INORGANICS

1. Metals 9/22/86 — 10/2/86
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

66654/
CD910-S2

DATE

RECEIPT/REFRIGERATION _____

ORGANICS
EXTRACTION

1. Acids 9/[illegible]/86
2. Base/Neutrals 9/[illegible]/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
5. ~~Dioxin~~ _____

Section Supervisor Review & Approval Middel

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 [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

660540
CD910-S1

LABORATORY CHRONICLE

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 9/24/86
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/REPRICESATION 9/[illegible]/86

ORGANICS
EXTRACTION

1. Acids [illegible]
2. Base/Neutrals [illegible]
3. Pesticides/PCBs 9/18/86
4. ~~Dioxin~~

ANALYSIS

1. Volatiles 9/22/86
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 — 10/3/86
2. Cyanides 10/3/86 — 10/6/86
3. Phenol 09/23/86 — 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

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LABORATORY CHRONICLE

6-6-C556-MSD
CD910-SW2/SW2Q

DATE

RECEIPT/REFRIGERATION 9/2/86

ORGANICS
EXTRACTION

1. Acids 9/18/86 / 9/24/86
2. Base/Neutrals 9/18/86, 9/24/86
3. Pesticides/PCBs 9/10/86
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

60556MS
CD910-902/5020

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 9/24/86
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 — 10/2/86
2. Cyanides 10/3/86 — 10/6/86
2. 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

660532MS
CD910-SED1

DATE

RECEIPT/REFRIGERATION 9/2/86

ORGANICS
EXTRACTION

1. Acids 9/8/86 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~~ 10/6/86
4. Pesticides/PCBs 10/1/86, 10/7/86
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

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LABORATORY CHRONICLE

666532MSD
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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H2M HOLZMACHER, McLENOON & MURRELL, P.C.

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.

Unexplainsd 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 net found in our method blank tut usually is found at low levels. Some samples contained low levels of this ocnpound 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 ocnpoun3s 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 aroclor 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 tine is causing these unusually high recoveries.

As mentioned previously the soil samples had elevated detection limits for several compounds due to interferences.

Samples SEDI, 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 includ 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 SEDI, SE02, 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. In 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.

N - Indicates duplicate injection results exceeded control limits.

COMMENTS: _____



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# Case Narrative for Inorganics

Furnace AA

Selenium- Samples 660541 CD910 SEDI and 660545 CD910 S2 required MSA Procedures. The correlation coefficient for both samples was greater than .995. Results were flagged with "S".

660533 CD910 SEDI 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 showed 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 SWI duplicate injection on furnace were not within 20% RPD, results were flagged with "*".

Mercury- Samples 660541 C0910-S1 duplicate analysis were not within 20% RPD. The results were averaged and flagged with "*". Spike recovery was less than 75% due to inoonsistancy 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 chromium 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 colcrmetric procedure. Liquids were flagged with "N". Sample 660557 CD910-SW2 was also flagged with "E" to note interference

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 : M2M LABS Contract No. NJDEP

| SMO TRAFFIC NO. | VOLATILE Toluene d-8 (88-110) | Bromofluo-benzene (88-115) | 1,2-Dichlo-roethene-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 | | | | | | | |
| TB | 94 | 91 | 81 | | | | | | | |
| FB | 96 | 96 | 90 | | | | | | | |
| SW2/SW4Q | 93 | 95 | 83 | | | | | | | |
| SWC2/SWQ2 | 92 | 100 | 80 | | | | | | | |
| SW2/SWQ2 | 95 | 115 | 79 | | | | | | | |
| MW-1 | 91 | 99 | 81 | | | | | | | |
| MW-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-Dichlo-roethane-d4 (78-114) | 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) | Dibutylchl-orendate ** (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) | 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) | Dibutylchlorendate ** (24-154) |
| SW-1 | | | | | | | | | | 96 |
| SW2/SWEQ | | | | | | | | | | 92 |
| SW2/SWEQ MS | | | | | | | | | | 120 |
| SW2/SWEQ 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

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. : SEMI-VOL  Contractor : H2M LABS  Contract No. :

Low _____ Medium _____

| | VOLATILE | | | SEMIVOLATILE | | | | | | PEST |
|---|---|---|---|---|---|---|---|---|---|---|
| SMO TRAFFIC NO. | Toluene d-8 (61-117) | Bromofluo-benzene (74-121) | 1,2-Dichloroethane-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 | 38 | 90 | | | | | | | |
| SED-1 | 102 | 95 | 97 | | | | | | | |
| SED-1 MS | 108 | 91 | 81 | | | | | | | |
| SED-1 MSD | 100 | 95 | 111 | | | | | | | |
| SED-2 | 110 | 88 | 84 | | | | | | | |
| S-1 | 98 | 93 | 86 | | | | | | | |
| S-2 | 94 | 96 | 94 | | | | | | | |
| S-3 | 111 | 96 | 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: _____

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. : SEMi-VOL  Contractor : H2M LABS  Contract No. :

Low _____ Medium _____

| | VOLATILE | | | SEMIVOLATILE | | | | | | PEST |
|---|---|---|---|---|---|---|---|---|---|---|
| SMO TRAFFIC NO. | Toluene d-8 (61-117) | Bromofluo-benzene (74-121) | 1,2-Dichlo-reethane-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 | | — | | 39 | 67 | 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.

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. : SEhi-VOL  Contractor : M2M LABS  Contract No. : BML 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 | | | | | | | | 58 | 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 | | | | | | | | 18 | 52-126 |
| | 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
B/N ____ 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 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 | 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 | 51 | 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 | 385 | 40 | 16 | 40 | 27-123 |
| | 4-Chloro-3-Methylphenol | 776 | 0 | 272 | 35 | 303 | 39 | 11 | 42 | 23-97 |
| | 4-Nitrophenol | 1056 | 0 | 760 | 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 | 58-127 |

* - 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. : SENI-VOL  Contractor : M2N 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 |
| | | | | | | | | | | |
| | Lindane | 0.20 | - | 0.28 | 140* | 0.31 | 155* | 11 | 15 | 36-123 |
| PEST | Heptachlor | 0.20 | - | 0.11 | 56 | 0.12 | 60 | 9 | 20 | 40-131 |
| SMO | Aldrin | 0.26 | - | 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:



6L

SOIL MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Case No. : SEM1-UOL  Contractor : M2N 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 | - | 181 | 102 | 158 | 90 | 13 | 21 | 60-133 |
| SED 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 |
| 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 | | | | | | | | | 50 | 46-127 |
| PEST | Methoxychlor | | | | | | | | | 31 | 35-130 |
| SMO | Aldrin | | | | | | | | | 43 | 34-132 |
| SAMPLE NO | Dieldrin | | | | | | | | | 38 | 31-134 |
| | Endrin | | | | | | | | | 45 | 42-139 |
| BNA | 4,4'-DDT | | | | | | | | | 59 | 25-134 |

* - 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: _____

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 |
| SNA | 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 | 59 | 25-102 |
| | 4-Chloro-3-Methylphenol | 46000 | 0 | 12924 | 28 | 14309 | 31 | 10 | 33 | 26-103 |
| BNA | 4-Nitrophenol | 63000 | 0 | 630 | 1* | 1899 | 3* | 100* | 58 | 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 ____ 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 : K2M 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 | 48-133 |
| | Toluene | | | | | | | | 21 | 59-139 |
| BNA | Benzene | | | | | | | | 31 | 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 | | | | | | | | 30 | 25-102 |
| | 4-Chloro-3-Methylphenol | | | | | | | | 33 | 36-103 |
| BNA | 4-Nitrophenol | | | | | | | | 50 | 11-114 |
| | | | | | | | | | | |
| | Lindane | 29.7 | | ** | | ** | | | 58 | 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

Contractor : HZM LAES

Contract No. : NJDEP

| FILE ID | DATE OF ANALYSIS | FRACTION | MATRIX | Scan # | INST. ID | C.A.S. NUMBER | COMPOUND (HSL,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 : HZM LABS

Contract No. : NJDEP X085

| FILE ID | DATE OF ANALYSIS | FRACTION | MATRIX | Conc Level | INST. ID | C.A.S. NUMBER | COMPOUND (HSL,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 (HSL,TIC,OR UNKNOWN) | CONC | UNITS | CROL |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 :

Organic Form 5

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 |
| CD910-SW2 SW2A | 660554 | PU6397 | " | 14:22 |
| | 660554 MS | PU6398 | " | 15:16 |
| | 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 Date Release Authorized By: [signature]

| m/z | 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 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

WARNING: FAP -6 on ::
.....

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. SEMI-VOL  Contractor M2N LABS  Contract No. BML 8/86

Instrument 10 HP#1  Date / Time 8/21/86 16:21

Lab ID >DFT29::02  Data Release Authorized By: _____

| a/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 - 60.0K 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.
42 - 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. SEN1-UOL Contractor H2M LABS Contract No. 814 8/86

Instruaent ID HP#1 Date / Tiae 8/22/86 9:17

Lab ID >DFT30::D2 Data Release Authorized By: _____

| a/z | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE | |
|---|---|---|---|
| 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 | asss 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 pea%, 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 aass 442 | 10.04 OK | (20.09) #2 |

THIS PERFORHANCE 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 | P2J23 | " | 10:57 |

WARNING: FNP -6 on ::
.....

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. SEMI-VOL Contractor M2M LABS Contract No. BNL 8/86

Instrument ID MP#1 Date / Time 10/06/86 13:47

Lab ID >DFT59::01 Data Release Authorized By: [signature]

| 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 | 0.05 OK ( 0.00) #1 |
| 69 | mass 69 relative abundance | 52.46 |
| 70 | 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.
#2 - 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 | 660547 BNA P2507 | " | 00:40 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

WARNING: FMP -6 on ::
.....

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. SEMI-VOL  Contractor M2N LABS  Contract No. BNL 8/86

Instrument ID HP#1  Date / Time 9/22/86 8:27

Lab ID >DFT50::D1  Data Release Authorized By: _____

| a/z | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 51.11 OK |
| 68 | less than 2.0% of mass 69 | 0.00 OK ( 0.00) #1 |
| 69 | mass 69 relative abundance | 57.74 |
| 70 | less than 2.0% of mass 69 | 0.00 OK ( 0.00) #1 |
| 127 | 40.0 - 60.0% of mass 198 | 46.02 OK |
| 197 | less than 1.0% of mass 198 | 0.08 OK |
| 198 | base peak, 100% relative abundance | 100.00 OK |
| 199 | 5.0 - 9.0% of mass 198 | 8.63 OK |
| 275 | 10.0 - 30.0% of mass 198 | 23.78 OK |
| 365 | greater than 1.00% of mass 198 | 3.65 OK |
| 441 | present, but less than mass 443 | 6.31 OK |
| 442 | greater than 40.0% of mass 198 | 65.15 OK |
| 443 | 17.0 - 23.0% of mass 442 | 13.50 OK (20.71) #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 |
|---|---|---|---|
| 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

O.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 | 163 | 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 + 42M

[2] Continuing Calibration Source EPA EMSL + 42M

[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 | | | | | | |
| 8. Chromium | <10 | <10 | <10 | <10 | | <10 | <10 |
| 9. Cobalt | NR | | | | | | |
| 10. Copper | ~~Pb~~ <25 | <25 | <25 | <25 | | <25 | <15 |
| 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 2.0. _____

Check Sample Source Inorganic Ventures

Units ug/l

| Compound | Control Limits[1] Mean | Control Limits[1] Std. Dev. | True[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] True value of EPA ICP Interferences Check Sample or laboratory standard.

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/L

Matrix Soil

| Compound | Control Limit %R | Spiked Sample Result (SSR) | Sample Result (SR) | Spiked Added (SA) | %R | |
|---|---|---|---|---|---|---|
| Metals: | | | | | | |
| 1. Aluminum | 75-125 | — | — | — | — | |
| 2. Antimony | 1 | 464 | 93 | 500 | 74.2 | R |
| 3. Arsenic | 1 | 105 | 90 | 20 | 75 | |
| 4. Barium | NR | — | — | — | — | |
| 5. Beryllium | 1 | 56 | 12 | 50 | 88 | |
| 6. Cadmium | 1 | 102 | 62 | 50 | 80 | |
| 7. Calcium | NR | — | — | — | — | |
| 8. Chromium | 1 | 438 | 245 | 200 | | |
| 9. Cobalt | NR | — | — | — | — | |
| 10. Copper | 1 | 924 | 699 | 250 | 90 | |
| 11. Iron | NR | — | — | — | — | |
| 12. Lead | 1 | 1700 | 1300 | 500 | 80 | |
| 13. Magnesium | NR | — | — | — | — | |
| 14. Manganese | NR | — | — | — | — | |
| 15. Mercury | 1 | See case narrative | | | | R |
| 16. Nickel | 1 | 561 | 182 | 400 | 95 | |
| 17. Potassium | NR | — | — | — | — | |
| 18. Selenium | 1 | 27 | 12.5 | 14.5 | 72 | R |
| 19. Silver | 1 | 57 | 36 | 50 | 42 | R |
| 20. Sodium | NR | — | — | — | — | |
| 21. Thallium | 1 | 36 | <10 | 56 | 72 | R |
| 22. Vanadium | NR | — | — | — | — | |
| 23. Zinc | ↓ | 1466 | 1340 | 200 | 63 | R |
| Other _____ | | | | | | |
| | | | | | | |
| Cyanide | | | | | | |

[1] %R = [(SSR - SR)/SA] x 100

*R - out of control

Comments: _____



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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. ~~56~~ SW2/SW2Q

Lab Sample ID No. 060357

Units ug/L

Matrix WATER

| Compound | Control Limit %R | 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] %A = ((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. SW2-1/SW2D

Lab Sample ID No. 160 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 |
| 13. 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] TO 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 VI

Q.C. Report No. _____

DUPLICATES

LAB NAME H2M

DATE 9-30-86

CASE NO. _____

NYSDEC Sample No. CD-910-31

Lab Sample ID No. 660541

Units * mg/kg

Matrix Soil

| Compound | Control Limit[2] | Sample (S) | Duplicate (D) | RPD[2] |
|---|---|---|---|---|
| Metals: | | | | |
| 1. Aluminum | NR | | | |
| 2. Antimony | ± 60 * | 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 | 53 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] To be added at a later date.

[2] RPD = (|S - D|/((S + D)/2) x 100

NC = Not calculable RPD due to value(s) less than CRQL.



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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 ICS NO. _____

| Compound | Required Detection Limits (CRDL)-ug/L | Instrument Detection Limits (IDL)-ug/L ICP/AA | Furnace | Lab Control Sample (circle one) ug/L mg/kg True | 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 | |

MR - 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. _____ DATE 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 Hazlu 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 0.995.



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Form IX

Q.C. Report No. _____

ICP SERIAL DILUTIONS

LAB NAME H2M

CASE NO. _____

Sample No. CD910S1

DATE 9/30/86

Lab Sample ID No. 665541

Units ug/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

(HZM)

LAB NAME 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. Cobalt | 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 IOL 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 the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms XI-XIII for each instrument.

COMMENTS: _____

Lab Manager _____



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Form XII (Quarterly)

ICP Interelement Correction Factors / None Needed

LABORATORY HZM ICP Model Number ARI 3410

DATE 9/16/86

| Analyte | Analyte Wavelength (nm) | Interelement 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 INTERFERENCE STANDARD. EPA WP681 EQ.

Lab Manager



89

Form XIII (Quarterly)
ICP Linear Ranges

LAB NAME H2M ICP Model Number ARL 3410

DATE 9/16/86

| Analyte | Integration Time (Seconds) | Concen-tration (ug/L) | Analyte | Integration Time (Seconds) | Concen-tration (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. Potassium | | 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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VII. 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.)

C - 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

HOLZMACHER, McLENOON 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. 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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*  *
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S.C. McLendon, P.E.
Laboratory Director

NJ DEP # SED-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 | 510B |
| 2. | | Unknown | - | | 30 | 97 |
| 3. | 75-18-3 | Thiobismethane | 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-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 * | 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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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

Sampie 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 | 80U |
| 11104-28-2 | Aroclor 1221 | S0U |
| 11141-16-5 | Aroclor 1232 | 80U |
| 53469-21-9 | Aroclor 1242 | S0U |
| 12672-29-6 | Aroclor 1248 | S0U |
| 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

Lab Name : H2M LABS

ORGANICS ANALYSIS DATA SHEET

Sample Number
660532

NJDEP #CD910-SED1
Run 2262

Tentatively Identified Compounds

| | C.A.S. Number | Compound Name | % Probability Fit | % Probability Est | 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

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 O.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 (MB/L) EXCEPT AS NOTED BY # (UG/L) OR % (PERCENT) AND
T.COLI BACT. I EECAL 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

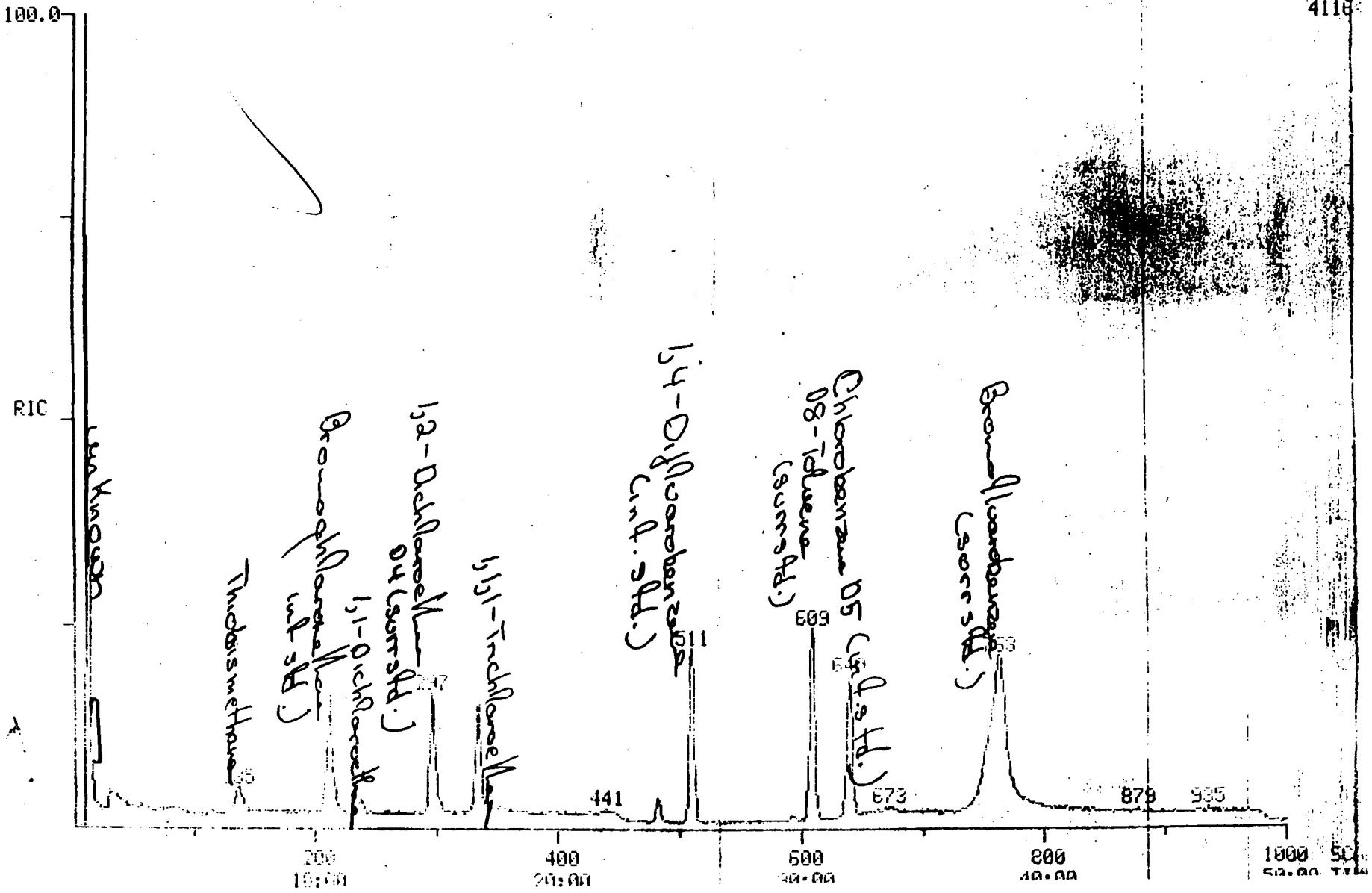
S. G. McLENDON, P.E., LABORATORY DIRECTOR

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
COMPS.:
RANGE: G 1,1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: PU6428 #1
CALI: PU6428 #2

SCANS 1 TO 1000




TCA FINISHED FOUND
FINISHED 3/24/86 17 55:23

101

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 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 (E) |
| 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-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) |

| No | M/Z | SCAN | TIME | REF | RRT | METH | AREA(HGHT) | AMOUNT | %TOT |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 16:48 | 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 | 28:18 | 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. | 2.388 | 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: PU6428

DATA: PU64 TI
9/26/86 14:40:00
SAMPLE: 660530
UNITS:
QUANTITATED BY: DEP ANALYST: CC

AMOUNT=AREA * REF AMMT/(REF AREA * RESP FACT)
RESPONSE FACTORS FROM LIBRARY ENTRY

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-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 BROMOFLUORBENZENE(SURR. STD)

104

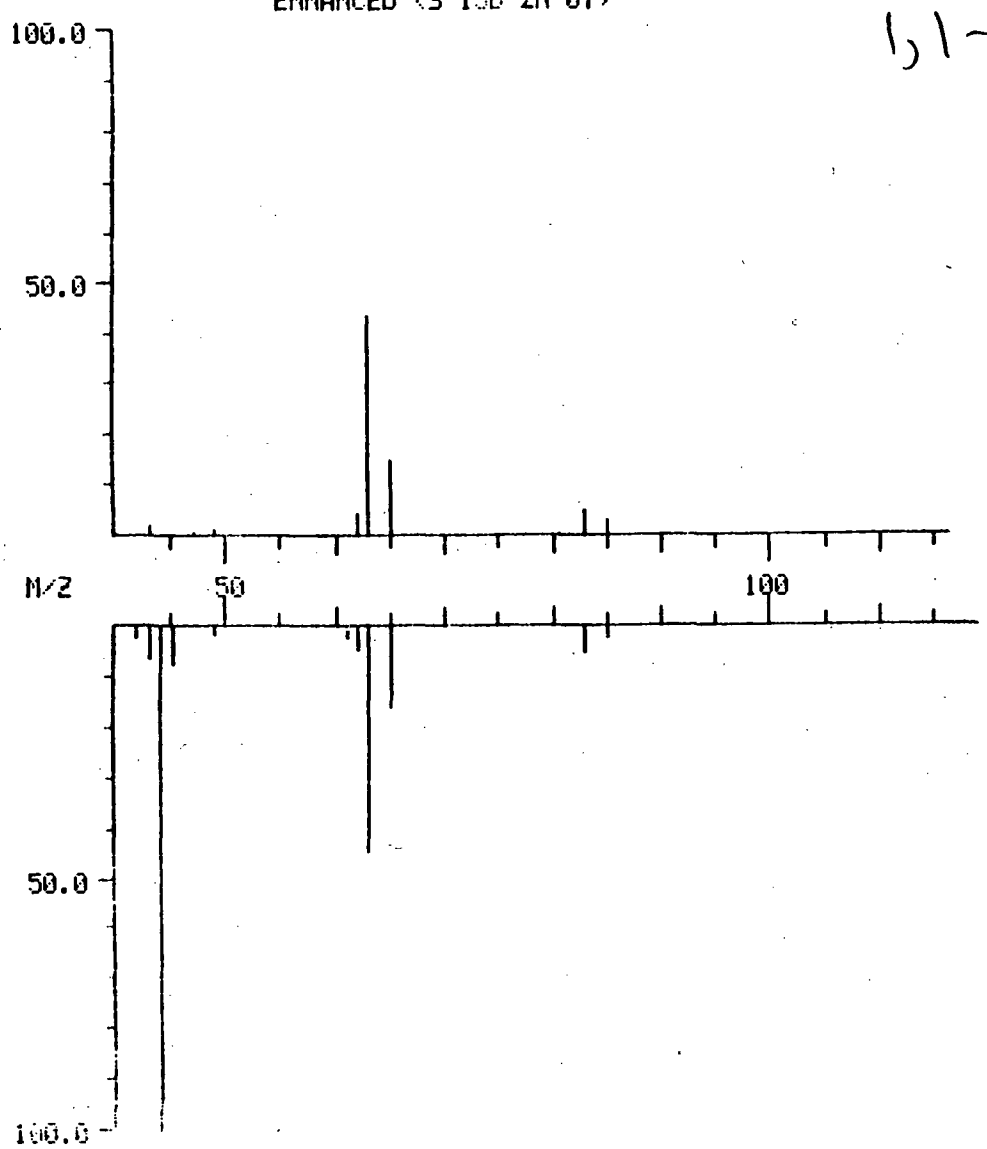
| No | M/Z | Scan | Time | Ref | RRT | Meth | Area(Hght) | Amount | %Tot |
|---|---|---|---|---|---|---|---|---|---|

DUAL MASS SPECTRUM
03/26/86 14:40:00 + 11:54
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 #238
CALI: PU6423 #2

BASE M/Z: 63/ 44
RIC: 5599./ 14703.

1,1-Dichloroethane

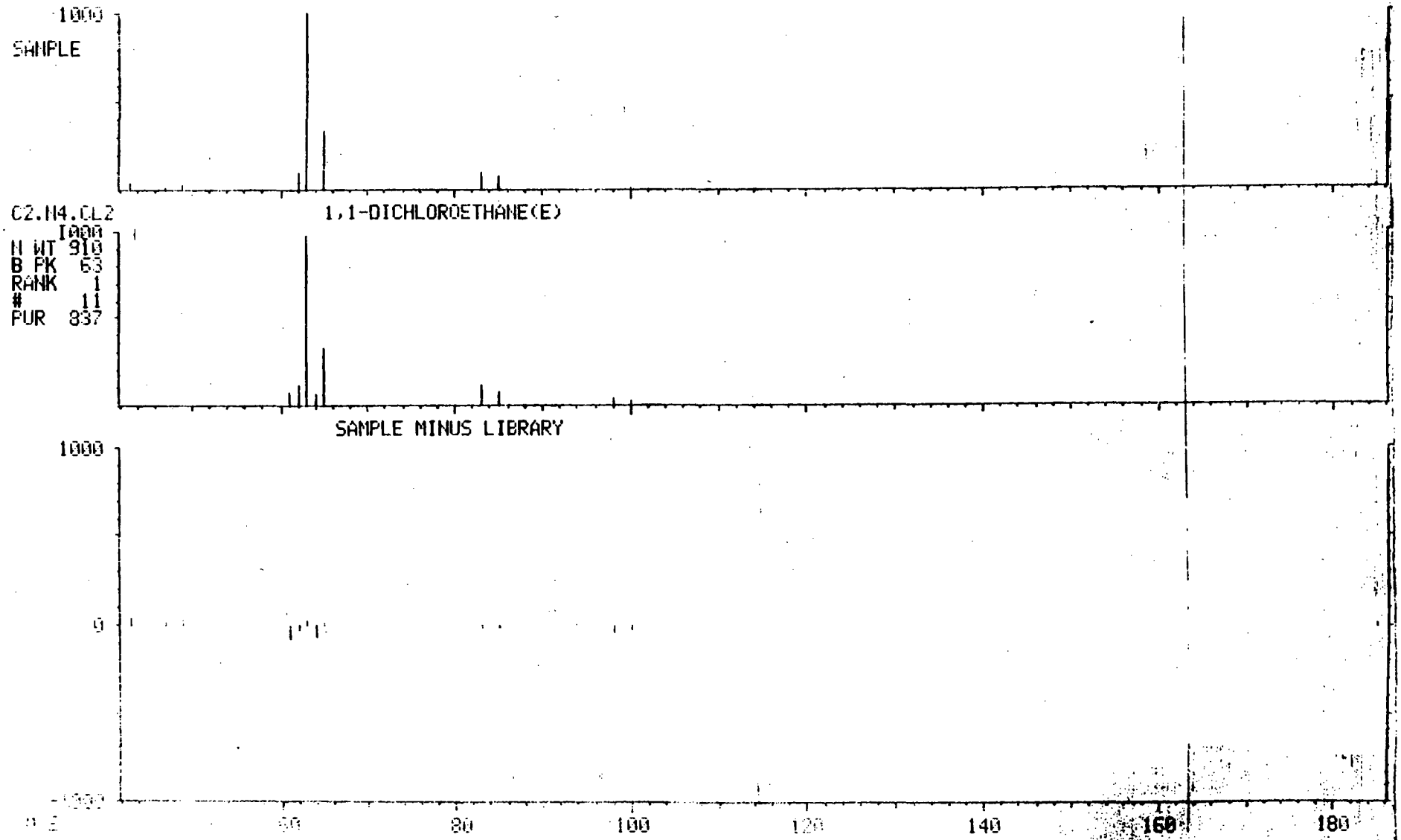



7536.

LIBRARY SEARCH
09/26/85 14:40:00 + 11:54
SAMPLE: 860530
CONDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6428 # 238
CALI: PU6428 # 2

BASE M/Z: 63
RIC: 5599.



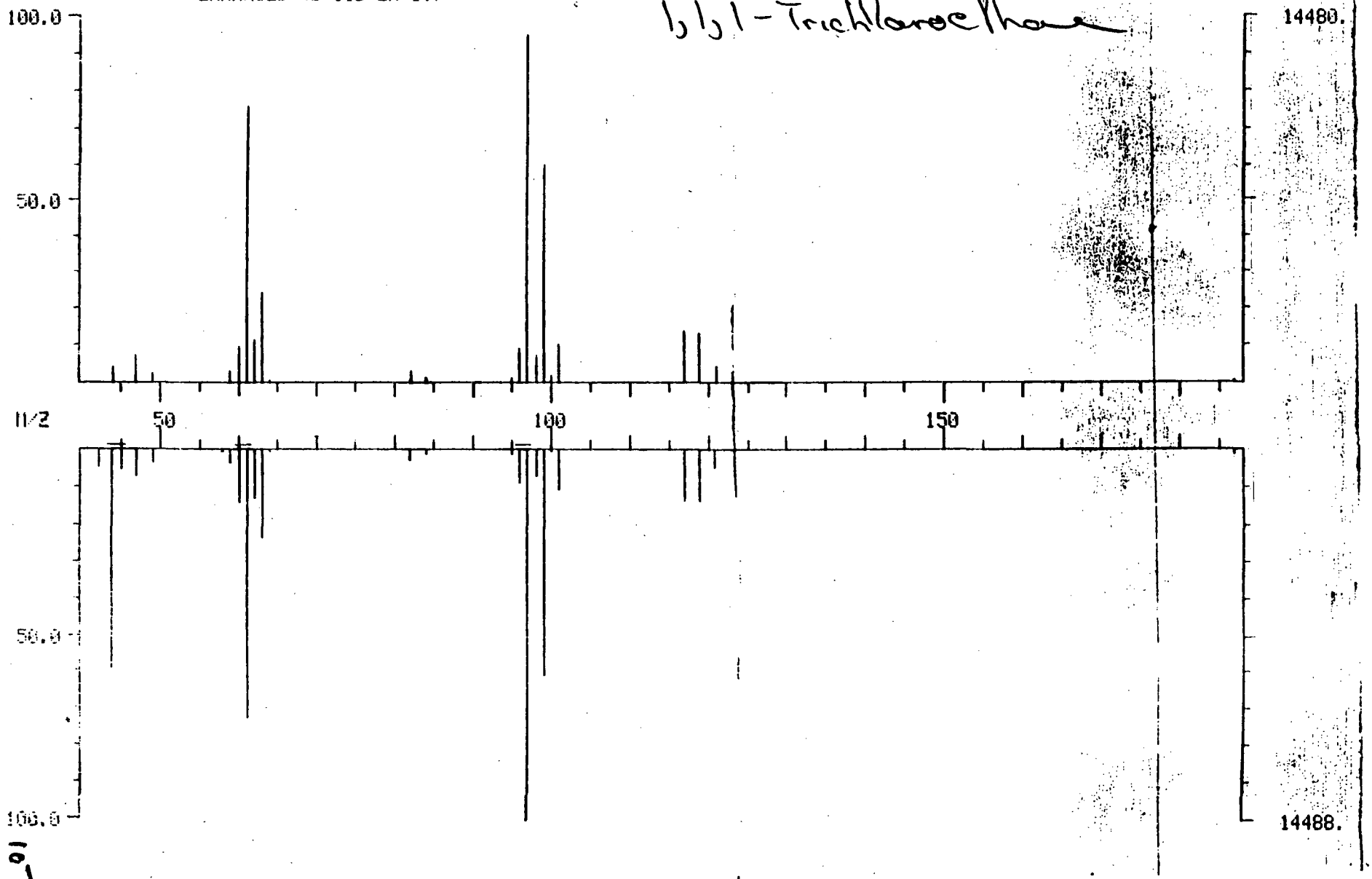

106

FUAL MASS SPECTRUM
05 25 '05 14:40:00 + 16:48
SAMPLE: 680530
CONDS.:
ENHANCED (S 15B 2H 0T)

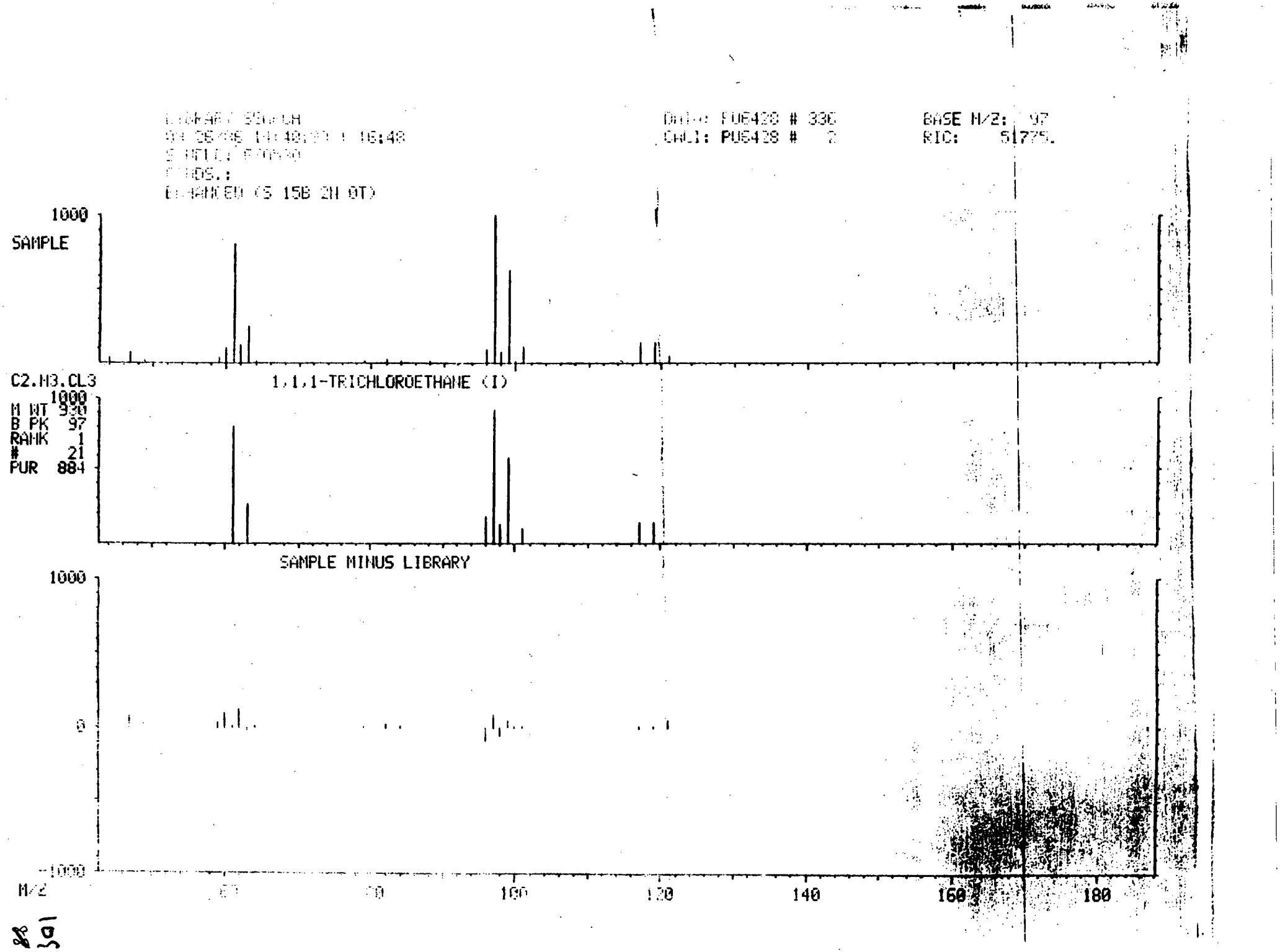
DATA: PU6428 #336
CALI: PU6428 #2

BASE M/Z: 97/ 97
RIC: 52031./ 62733.

1,1,1-Trichloroethane




107

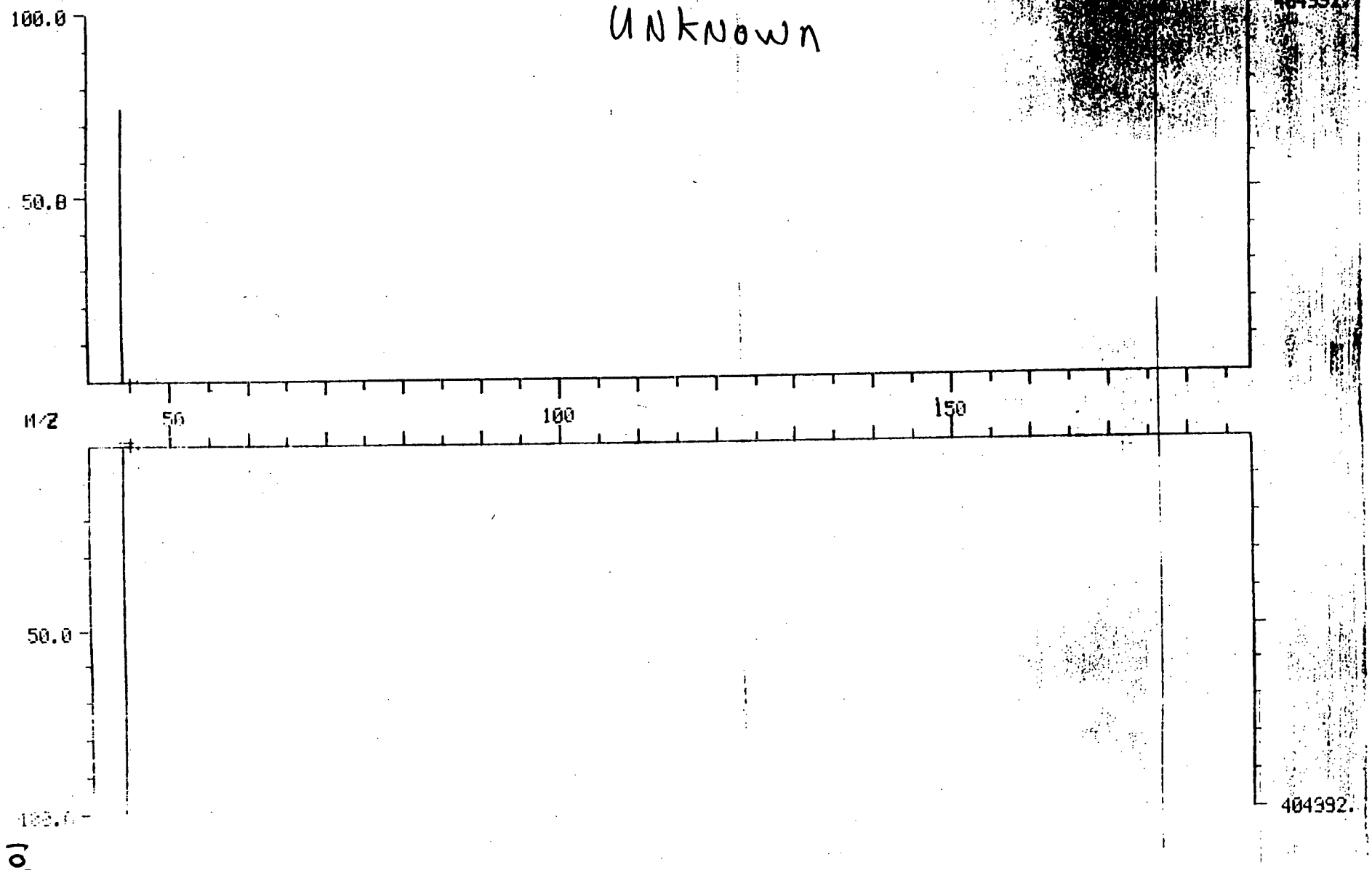

Data: PU6428 # 336
CWLI: PU6428 # 2
BASE M/Z: 97
RIC: 51775.
1000
SAMPLE
C2.H3.CL3
1,1,1-TRICHLOROETHANE (I)
1000
M WT 130
B PK 97
RANK 1
# 21
PUR 884
SAMPLE MINUS LIBRARY
1000
0
-1000
M/Z
60
80
100
120
140
160
180

DUAL MASS SPECTRUM
09/26/86 14:10:09 + 0:35
SAMPLE: 860530
CONDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6428 #12
BALI: PU6428 #2

BASE M/Z: 44/ 44
RIC: 307711./ 411647.

UNKNOWN

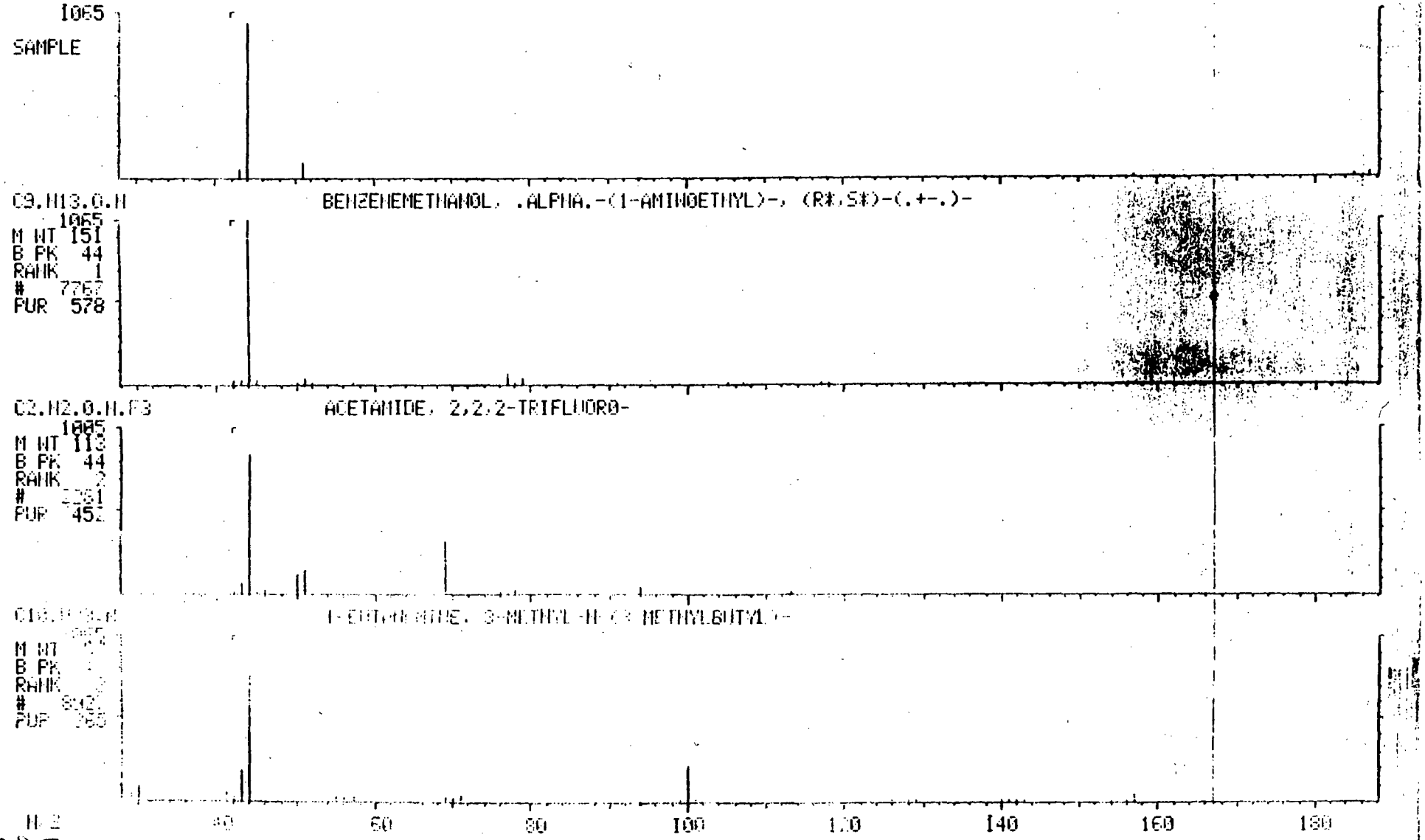


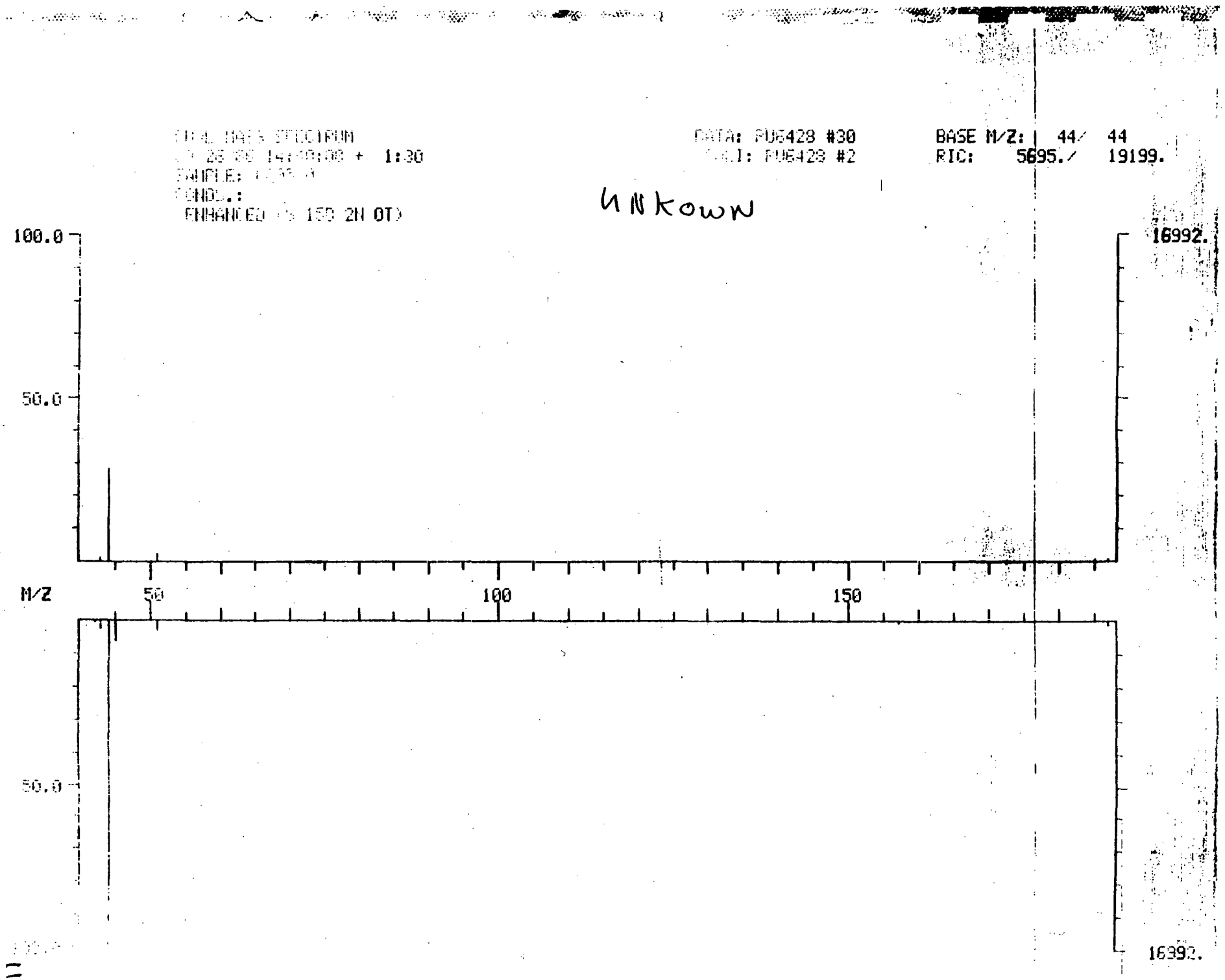

101

LIBRARY SEARCH
DATE: 26-SEP 14:40:08 + 1:30
SAMPLE: [illegible]
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 # 30
CALI: PU6428 # 2

BASE M/Z: 44
RIC: 5695.

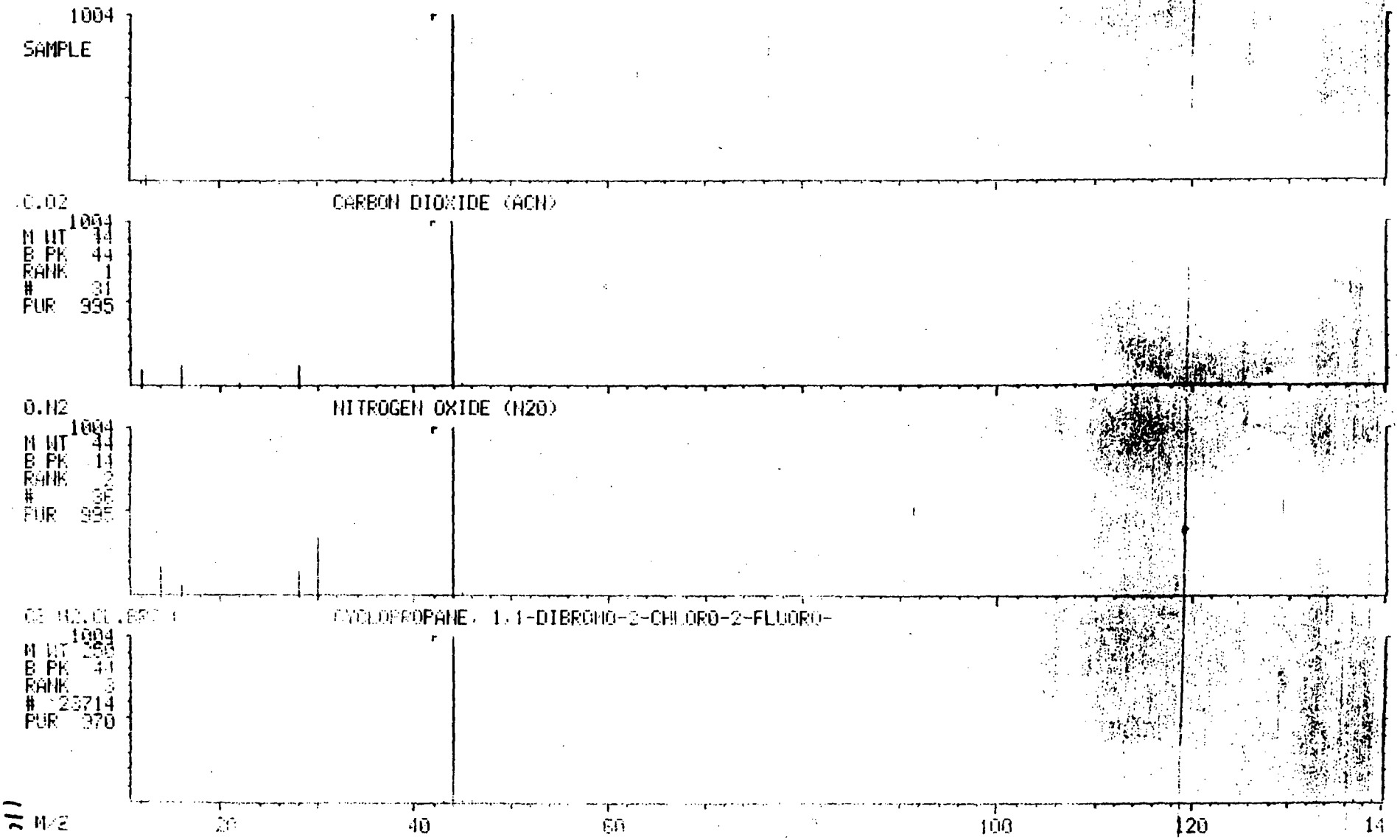



DATA: FU6428 #30
BASE M/Z: 44/ 44
RIC: 5695./ 19199.
Unknown
100.0
50.0
16992.
M/Z
50
100
150
50.0
16392.

LIBRARY SEARCH
09/26/86 14:40:00 + 0:36
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6428 # 12
CALI: PU6428 # 2

BASE M/Z: 44
RIC: 307711.

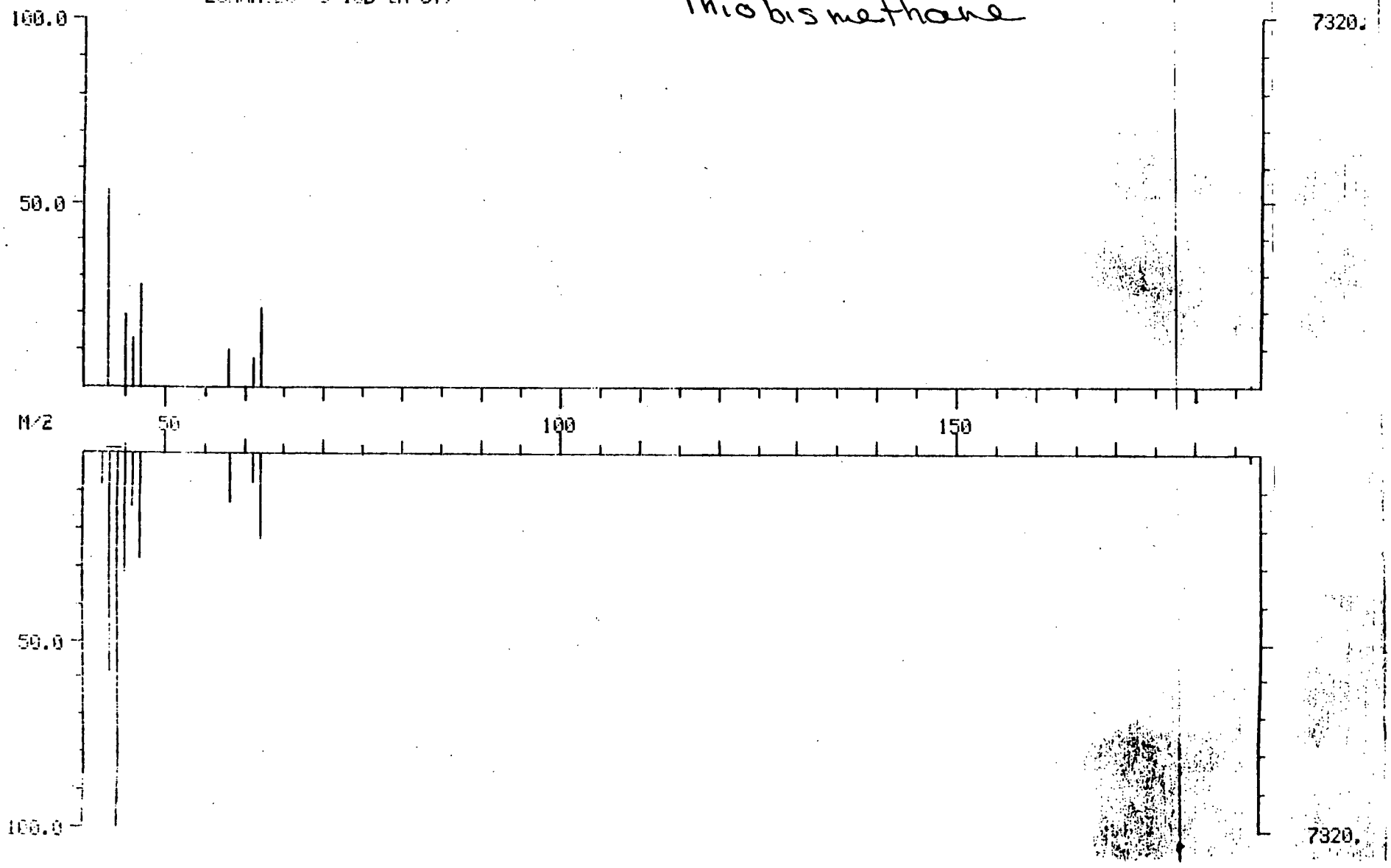


DUAL MASS SPECTRUM
09/25/86 14:40:00 + 6:45
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6423 #135
CALI: PU6423 #2

BASE M/Z: 43/ 44
RIC: 11273./ 20831.

Thiobismethane

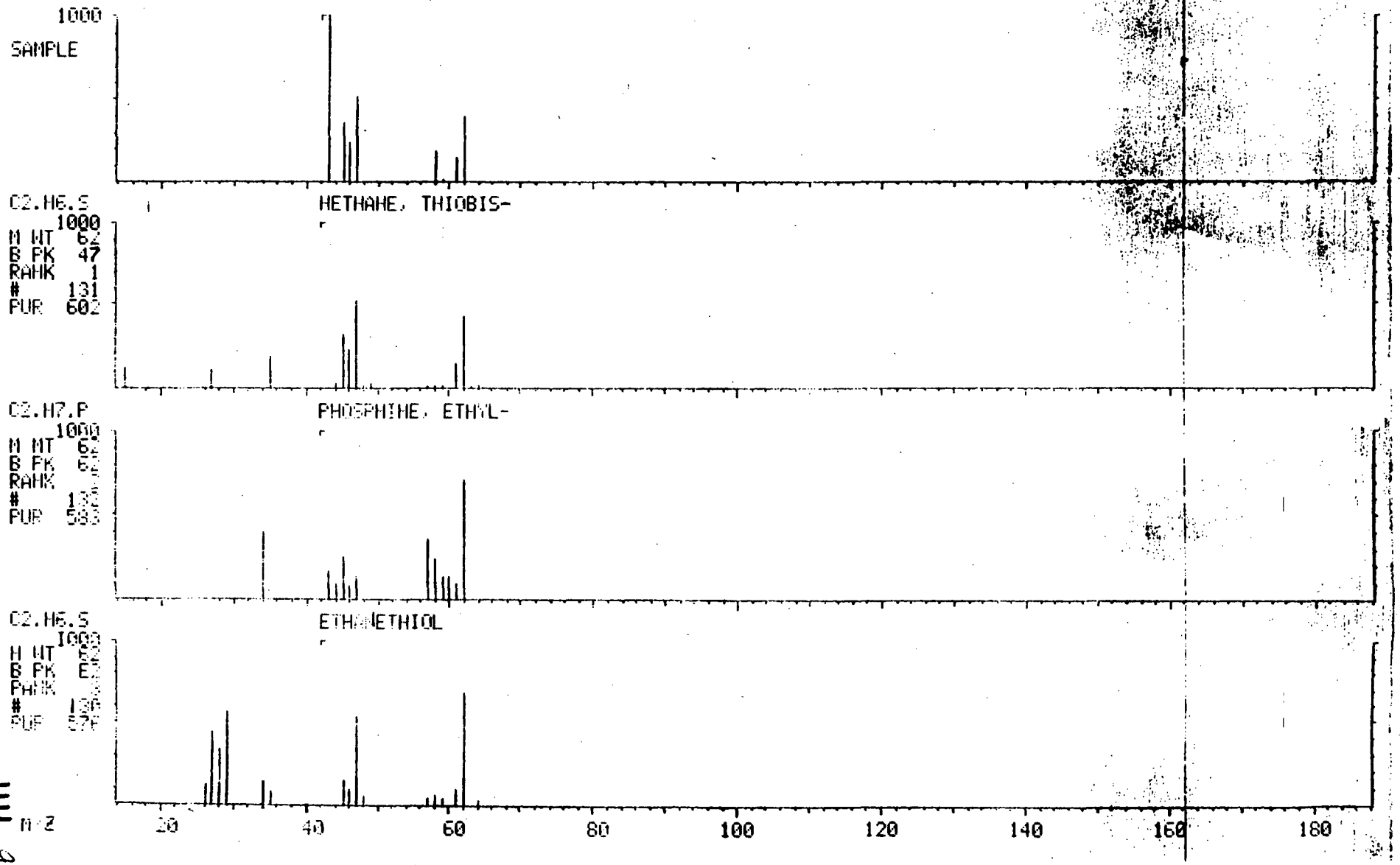



#13

LIBRARY SEARCH
09/26/86 14:40:00 + 6:45
SAMPLE: 660520
CONDS.:
ENHANCED (S I5B 2H OT)

DATA: RU6428 # 135
CALI: RU6428 # 2

BASE M/Z: 43
RIC: 11279.



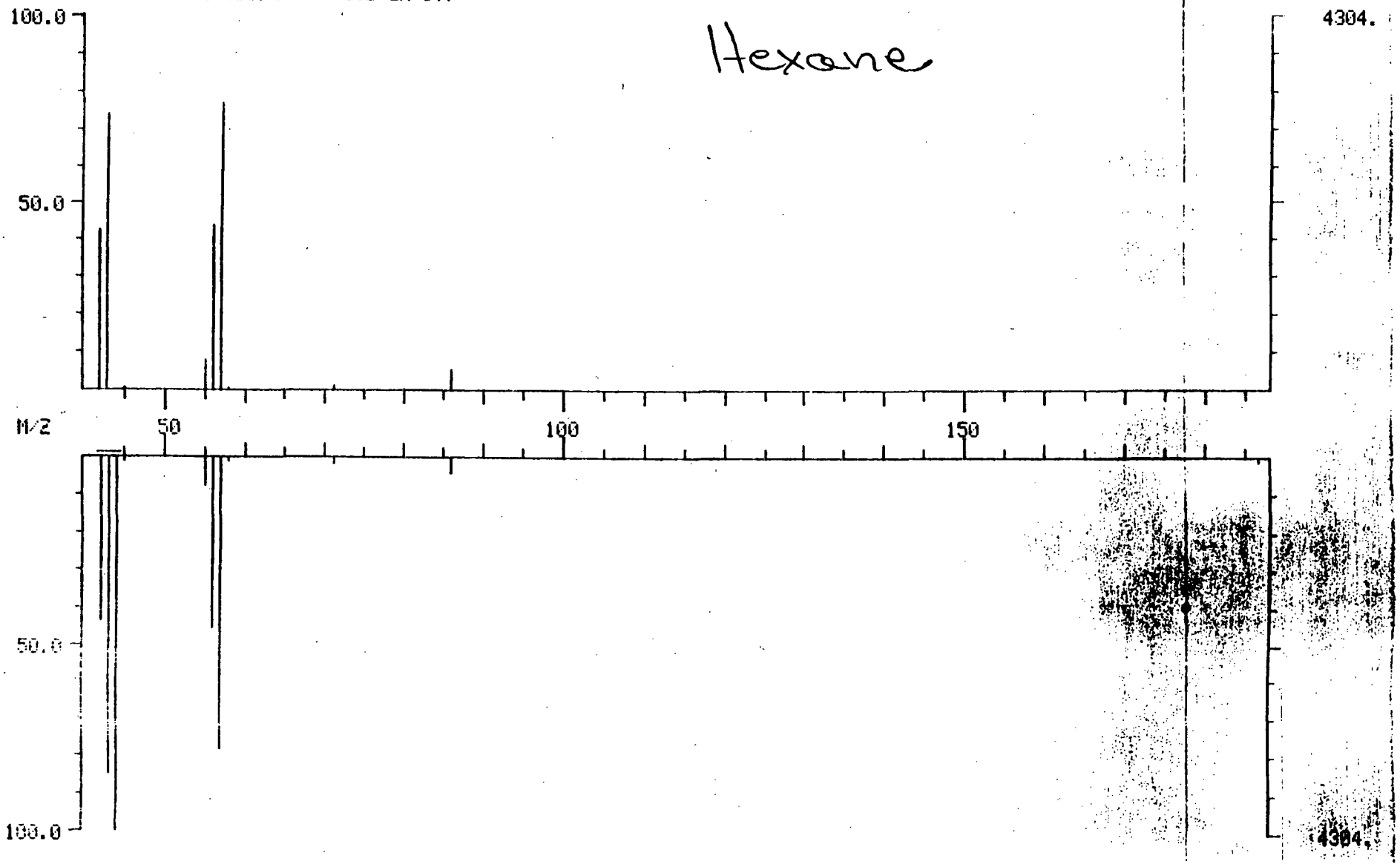

114

DUAL MASS SPECTRUM
03/26/86 14:40:00 + 24:03
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6423 #483
CALI: PU5428 #2

BASE M/Z: 57/ 44
RIC: 10911./ 15935.

Hexane

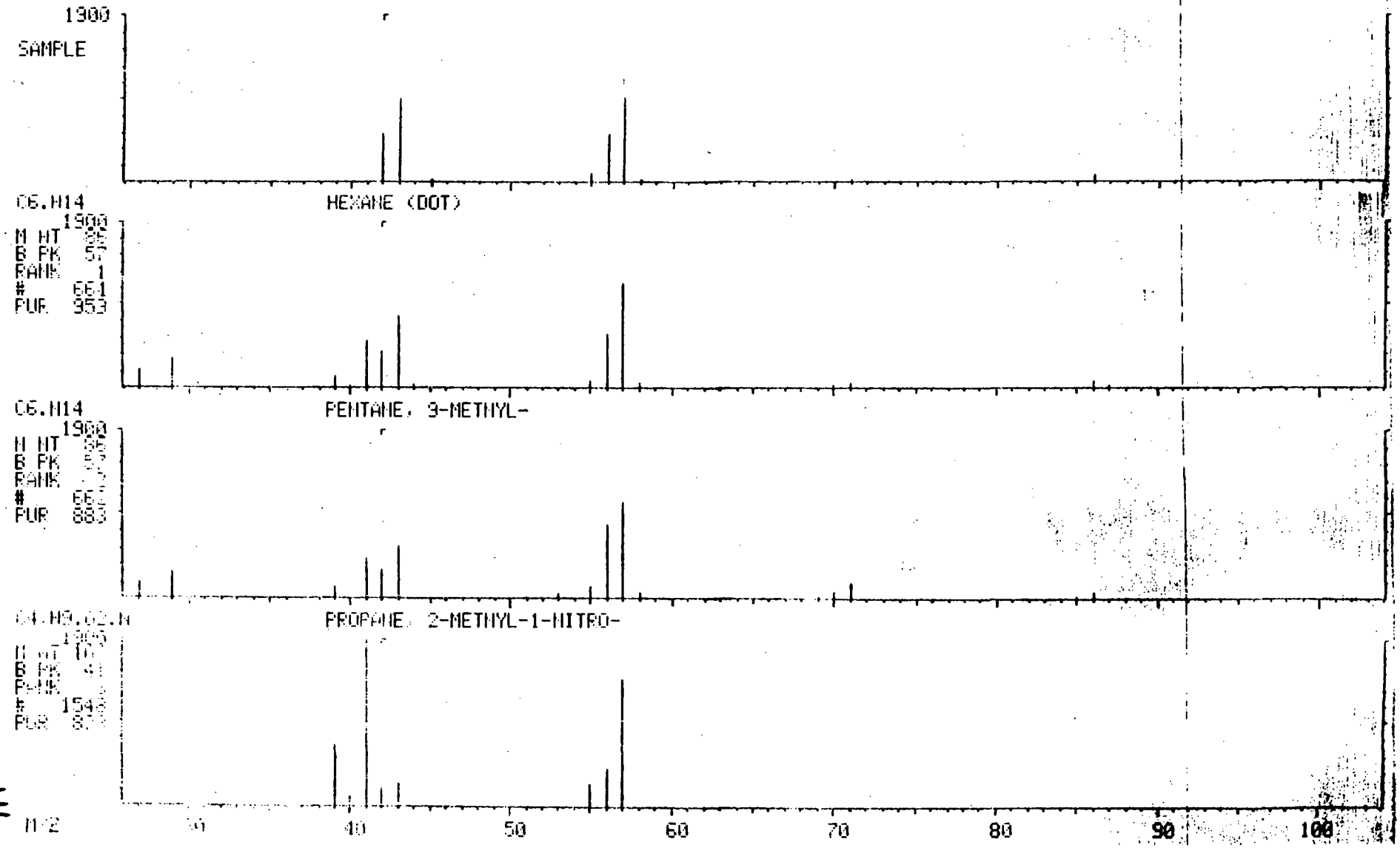


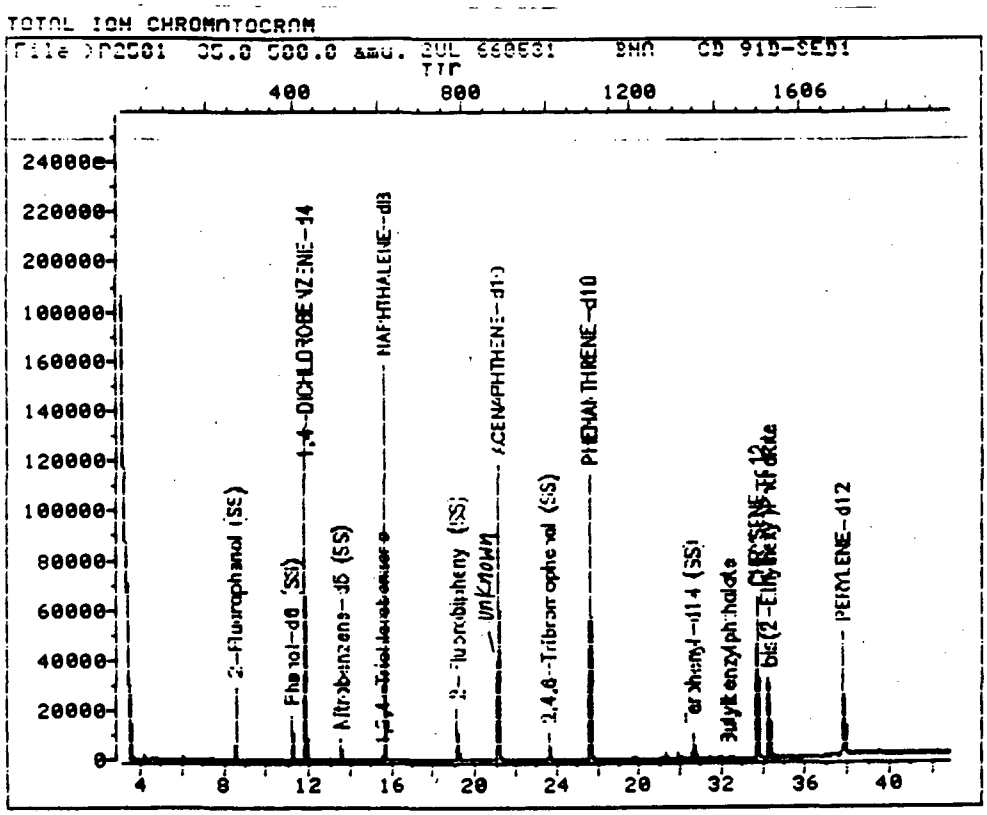

115

LIBRARY SEARCH
09/26/86 14:40:00 + 24:03
SAMPLE: 660530
CONDS.:
ENHANCED (S 15B 2H 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

MS data file header from : >P2501

Samole: 2UL 660531 BNA Operator: STEUE MS 10/06/86 19:31
Misc : CD 910-SED1 8TL#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

QUANT REPORT

Operator ID: STEVE
Output File: ^P2501::OP
Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1

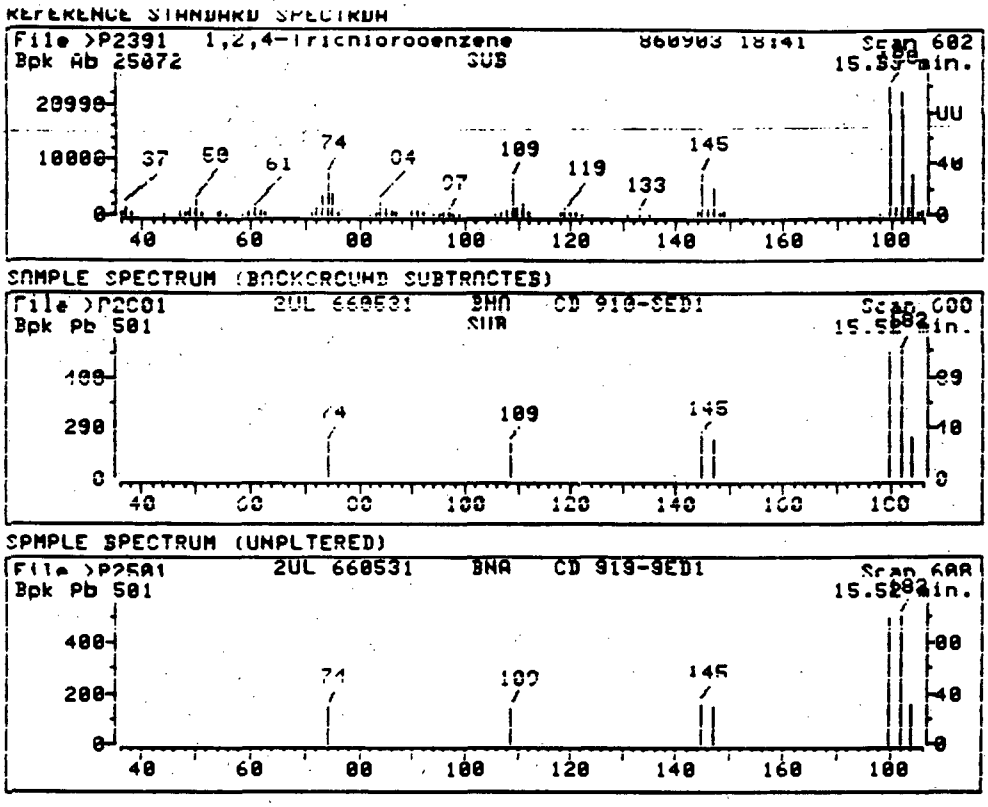
Quant Rev: 4
Quant Time: 861006 20:16
Injected at: 861006 19:31
Dilution Factor: 1.00

BTL#91

ID File: !IDXPP::SC
Title: PRIORITY POLLUTANTS
Last Calibration: 861006 19:44

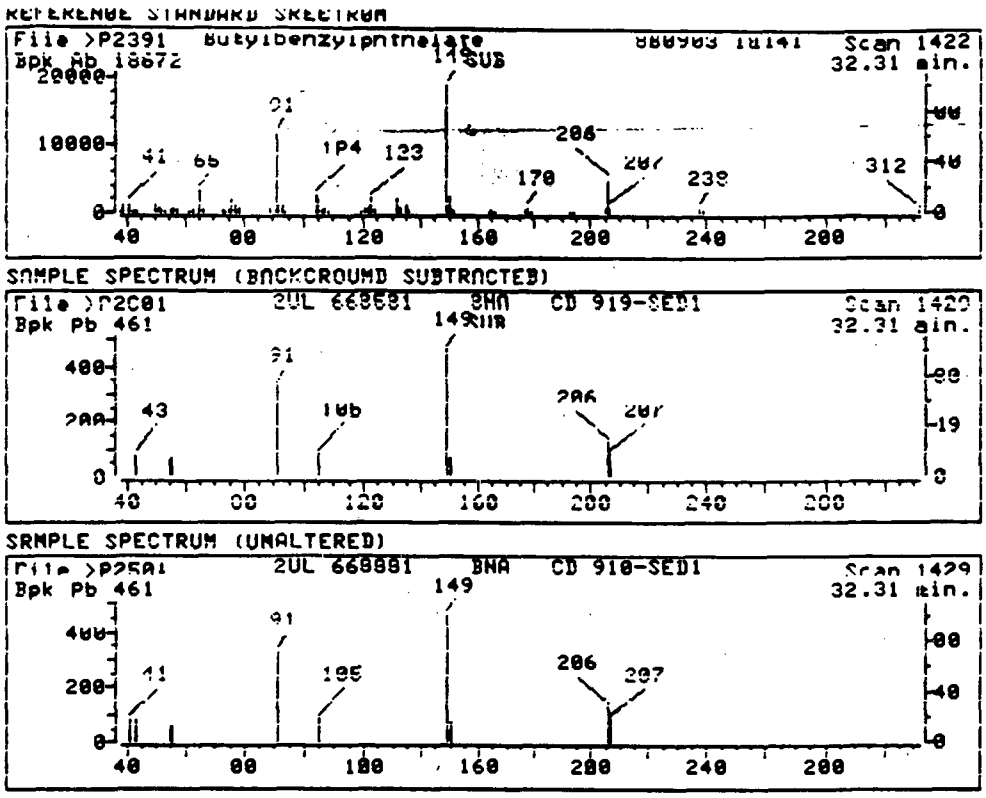
| | Compound | R.T. | Scan# | Area | Conc | Units | q |
|---|---|---|---|---|---|---|---|
| 1) | *1,4-DICHLOROBENZENE-d4 | 11.82 | 427 | 52154 | 40.00 | NG | 92 |
| 3) | 2-Fluorophenol (SS) | 8.51 | 265 | 17091 | 11.71 | NG | 84 |
| 7) | Phenol-d6 (SS) | 11.19 | 396 | 15764 | 9.75 | NG | 74 |
| 15) | *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




Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1 BTL#91
Quant Time: 861006 20:16
Injected at: 861006 19:31

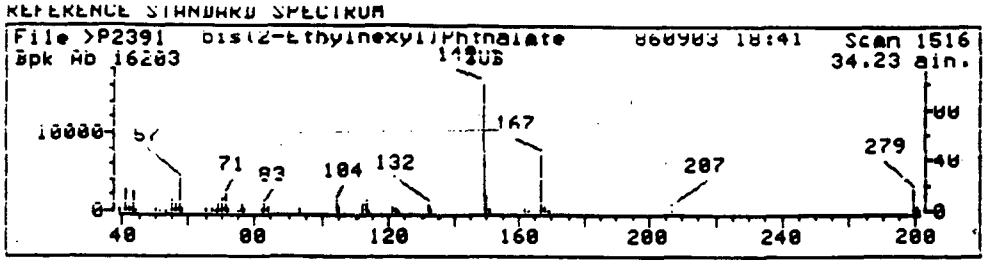
Compound No: 23
Compound Name: 1,2,4-Trichlorobenzene
Scan Number: 608
Retention Time: 15.52 min.
Area: 1256
Concentration: .69 NG
a-value: 92



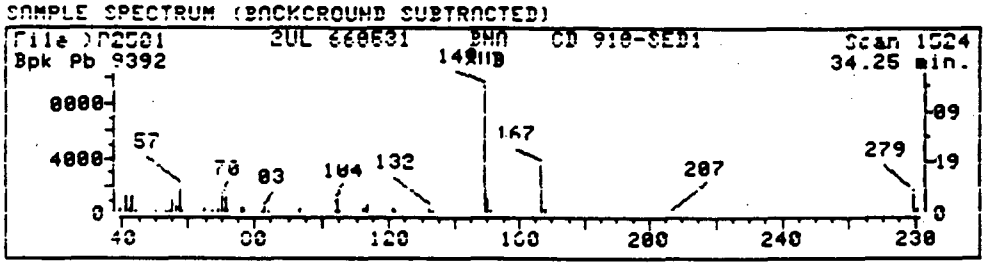

Data File: >P2501::D3
Name: 2UL 660531 BNA
Misc: CD 910-SED1 8TL#91
Quant Time: 861006 20:16
Injected at: 861006 19:31

Compound No: 58
Compound Name: Butylbenzylphthalate
Scan Number: 1429
Retention Time: 32.31 min.
Area: 1151
Concentration: .74 NG
q-value: 93

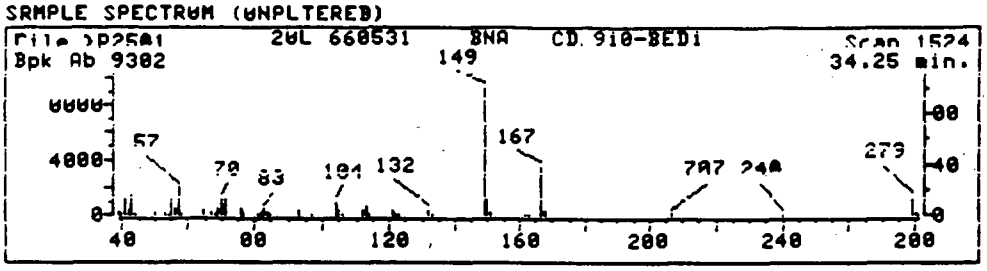
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

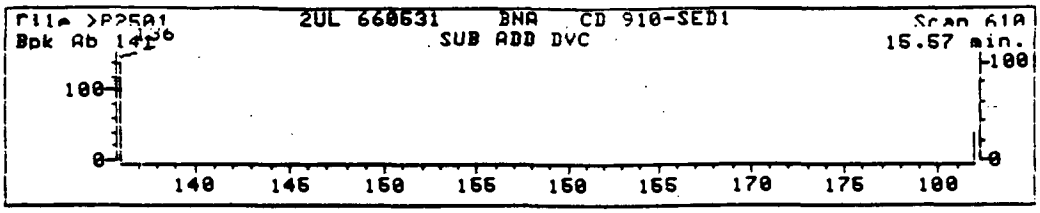



SAMPLE SPECTRUM (UNFILTERED)




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: $\frac{(1256)(80)(10000)}{(169025)(.434)(2.0)(5.2456)\left(\frac{100-19}{100}\right)}$

$= 1590\ \mu g/kg$

$$\mu g/kg = \frac{(A_x)\ (I_s)\ (V_t)}{(A_{IS})\ (RF)\ (V_I)\ (W_s)\ (D)}$$

Example quantitation TIC

CD910SED1 Scan 610

$\frac{(54355)(80)(10000)}{(373407)(1.00)(2.0)(5.2456)\left(\frac{100}{15}\right)}$

$= 13400\ \mu g/kg$

$A_x$ = 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.

$V_I$ = VOLUME OF EXTRACT INJECTED IN $\mu$L.

$V_t$ = TOTAL VOLUME OF EXTRACT (2000 $\mu$L. 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 TTIE SECONDARY ION.

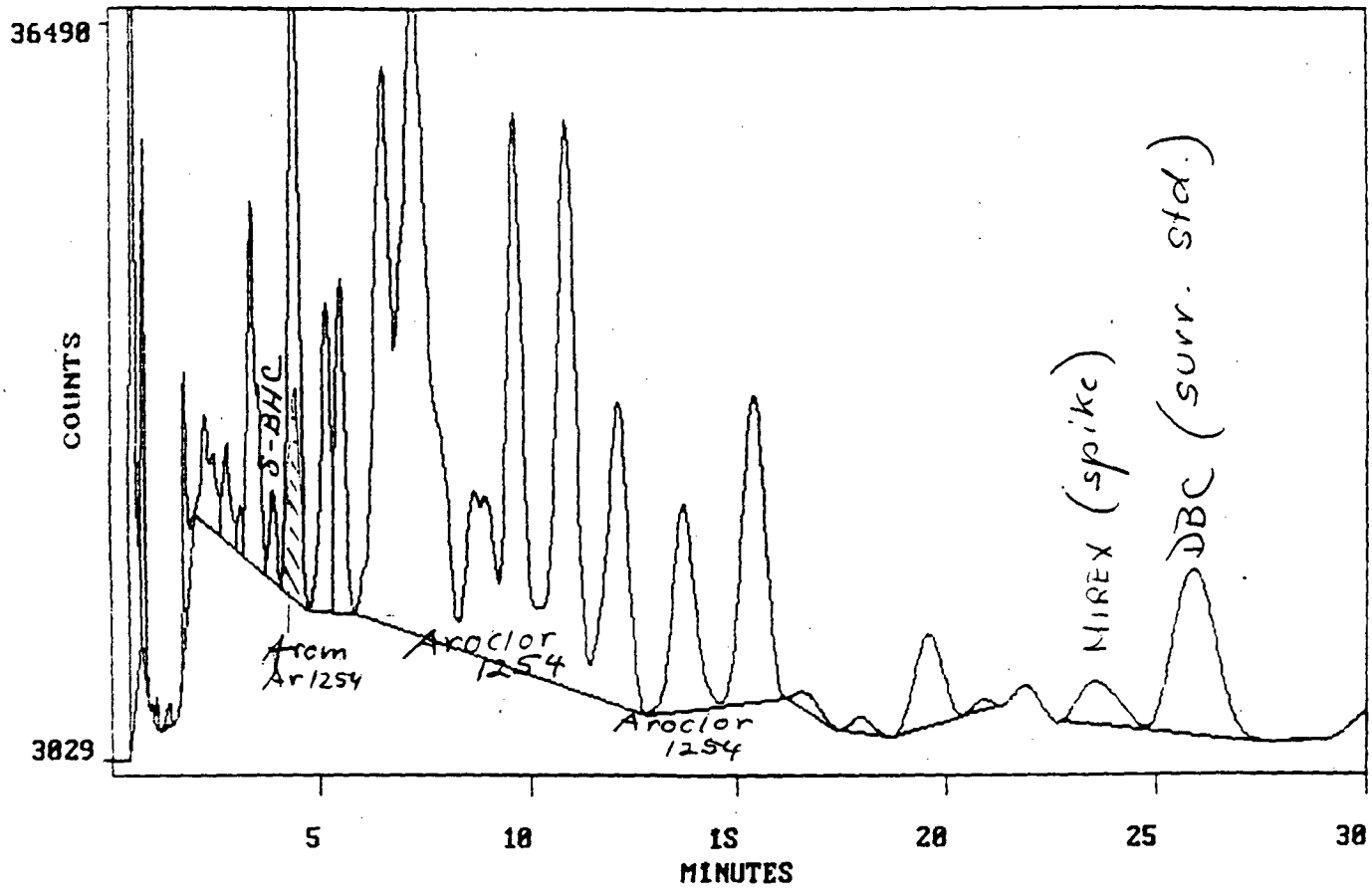
660532
CD910-SED1
PRIMARY COLUMN

RECONSTRUCT SCREEM DUMP
Data Acquisition

Time:13:45:33 Date:MON 13 OCT 86

Time:14:04:02 Date:TUE 07 OCT 86
Method:ARO1254C

FILE: PEST2262 SCALE: 25 RANGE (MIN.): 0.63 TO 30.00



Channel # . . . REINT  Time 13.44.48  Date MON 13 OCT 36

Sample name . .
Data file . . . . . FEST2262
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 . . . . 14:04 02  Acq. date . . TUE 07 OCT 36
Start PW . . . . . 20 00 sec.  End PW . . . . . 150.00 sec.
Actual PW . . 140.0
Slope sans . . . . 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 | 0.567 | | | 32 421 | 3715838 | 814819 | EB |
| 2 | 0 792 | | | 0 815 | 92374 | 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 | 2.279 | | α-BHC | 0 794 | 91020 | 4862 | BV |
| 7 | 2.792 | | | 0.467 | 53503 | 4385 | VV |
| 8 | 3.143 | | | 0.160 | 13391 | 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 | EB |
| 16 | 16.503 | | | 0.254 | 29092 | 714 | BB |
| 17 | 17.969 | | | 0 225 | 25751 | 748 | BB |
| 18 | 19 604 | | | 1.640 | 187969 | 4081 | BB |
| 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 |

-100CC = 5 = 668 pg/ul ⇒ 99 ng

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660532
CD910-SED1

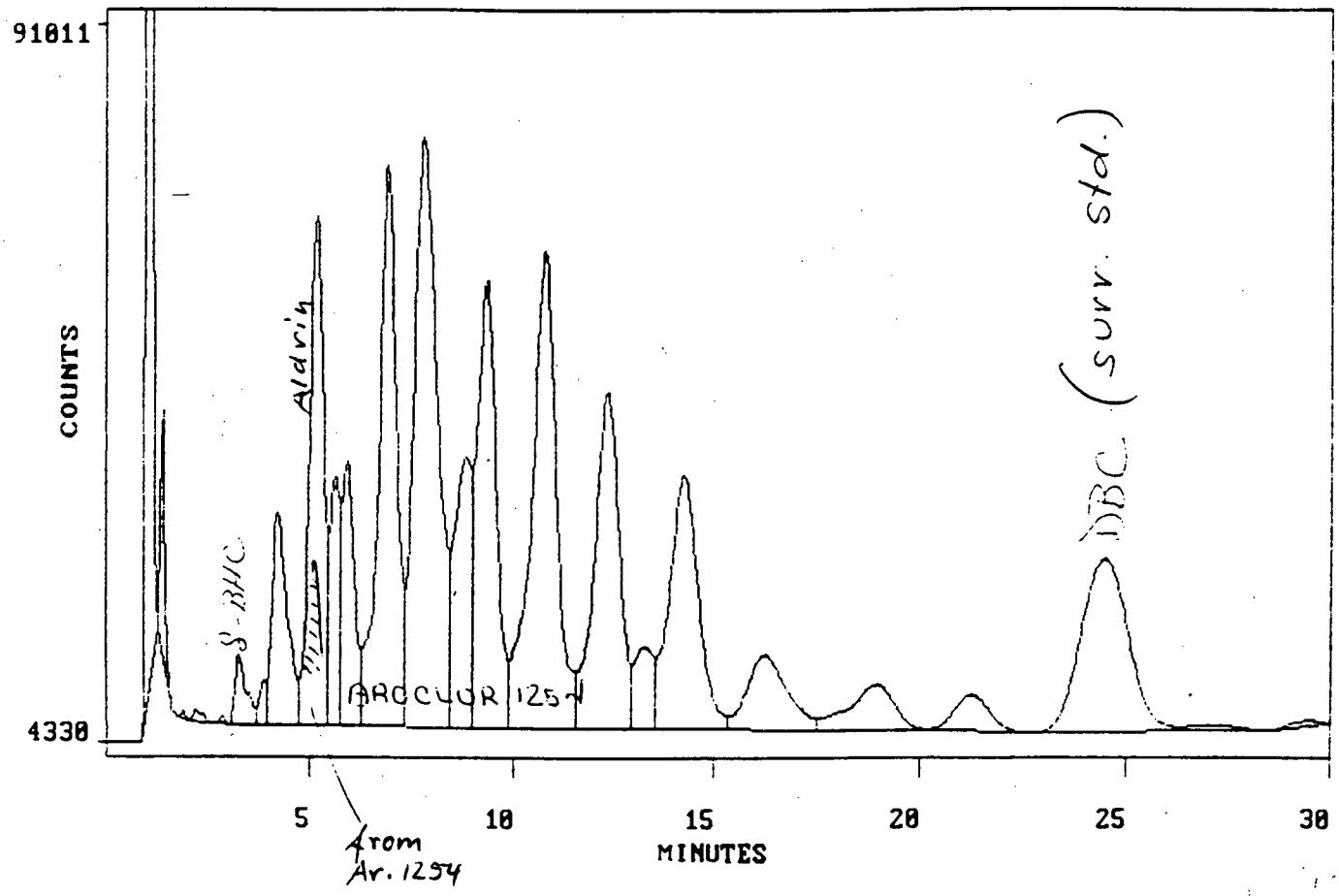
CONFIRMATORY COLUMN

Time:19:52:16 Date:THU 09 OCT 86

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time:16:58:06 Date:THU 09 OCT 86
Method:PEST2

FILE: 1:PEST2307 SCALE: 10 RANGE (MIN.): 0.03 TO 30.00



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 . . . . . 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 FW . . . . 20.00 sec End FW . . . . . 150.00 sec.
Actual FW . . . . 140.0
Slope sens. . . 0.75 uv/ssc

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 |
| 19 | 14.242 | | | [illegible] | [illegible] | [illegible] | [illegible] |

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| | | | | | |
|---|---|---|---|---|---|
| 22 | 21.252 | | 0.804 | 258685 | 4444 BB |
| 23 | 24.485 | DBC | 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 | |

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 08618

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 | Tricliloroethene | 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 | Chiorobenzene | 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. REIT | 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 | 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 | |
| 95-57-8 | 2-Chlorophenol | 20000U | 606-20-2 | 2,6-Dinitrotoluene | 20000U | |
| 541-73-1 | 1,3-Dichlorobenzene | 20000U | 84-66-2 | DiethyIphthalate | 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-Dimsthylphenol | 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 | 152 |
| 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 41

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

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 FOR 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 | 80U |
| 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 sample 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

Sample Number

660536

NJDEP #CD910-SED2
Run 2265

ORGANICS ANALYSIS DATA SHEET

Tentatively Identified Compounds

| C.A.S. Number | Compound Name | 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 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-SED2
NJDEP SAMPLE POINT I.D. 4SED2
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 1 (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)

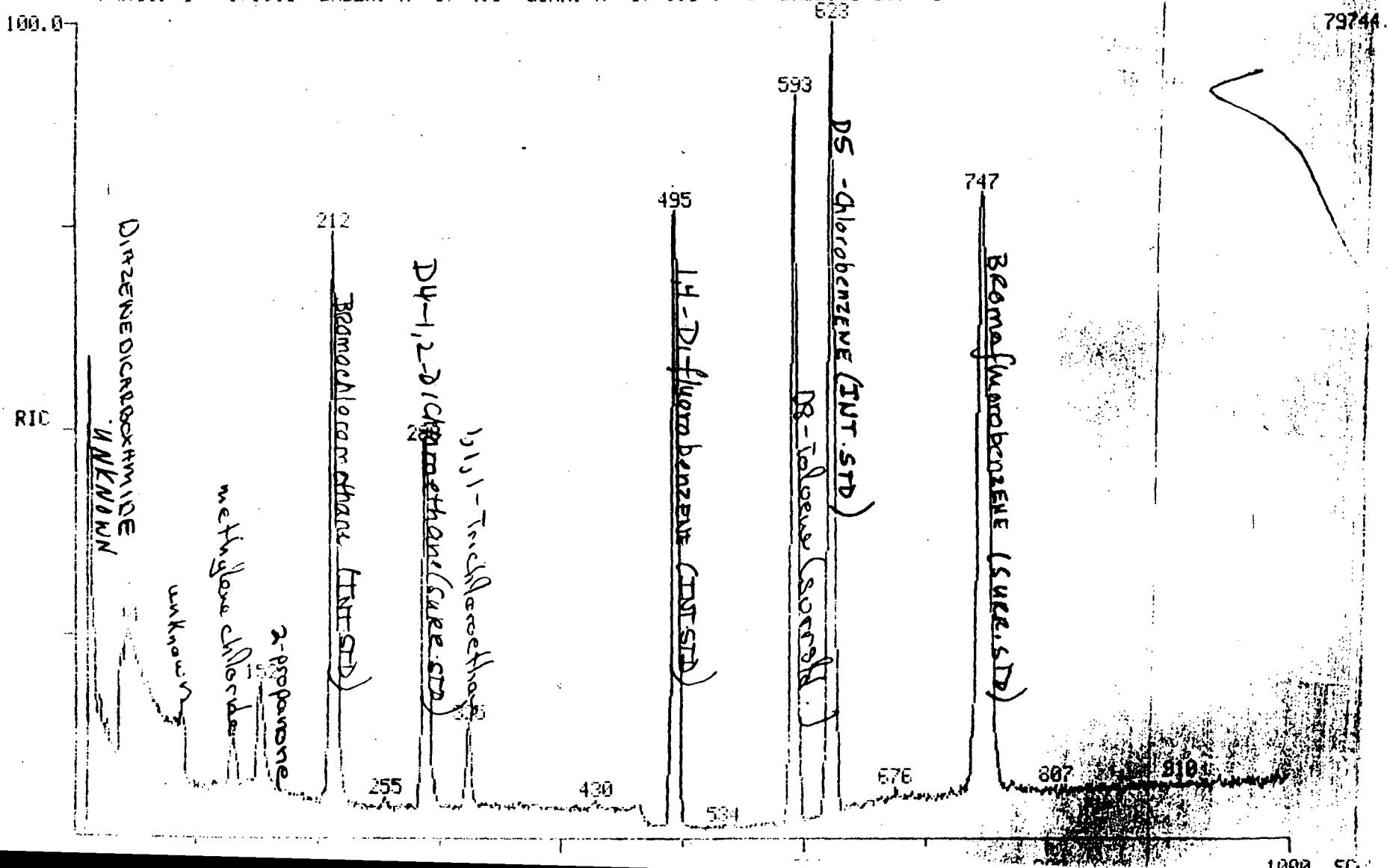
DATE REPORTED 10/ 8/86

S.C. McLENDON, P.E., LABORATORY DIRECTOR

137

THE LIABILITY OF H2M CORP. SHALL BE LIMITED TO THE PRICE OF THE SERVICE RENDERED AND PAID.

DATA: FU6431 #1 SCANS 1 TO 1000
CALT: FU6431 #2
COMMENTS:
RANGE: G 1.1000 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BASE: U 20. 3




FINISHED AT 08/27/98 4 00 PM

QUANTITATION REPORT FILE: PU6431

DATA: PU6431 TI
09/26/86 17:27:00
SAMPLE 1.3391G 660534
CONDS.
SUBMITTED BY: NJDEP ANALYST: CC

AMOUNT=AREA * REF AMOUNT/(REF AREA * RESP FACT)
RESP. FAC. FROM [illegible] 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 |
| 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(MEK) |
| 35 | 4-METHYL-2-PENTANONE(MIBK) |
| 36 | TETRACHLOROETHENE(N) |
| 37 | ETHANE, 1,1,2,2-TETRACHLORO- |
| 38 | TOLUENE(TOL) |
| 39 | CHLOROBENZENE(O) |
| 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) |

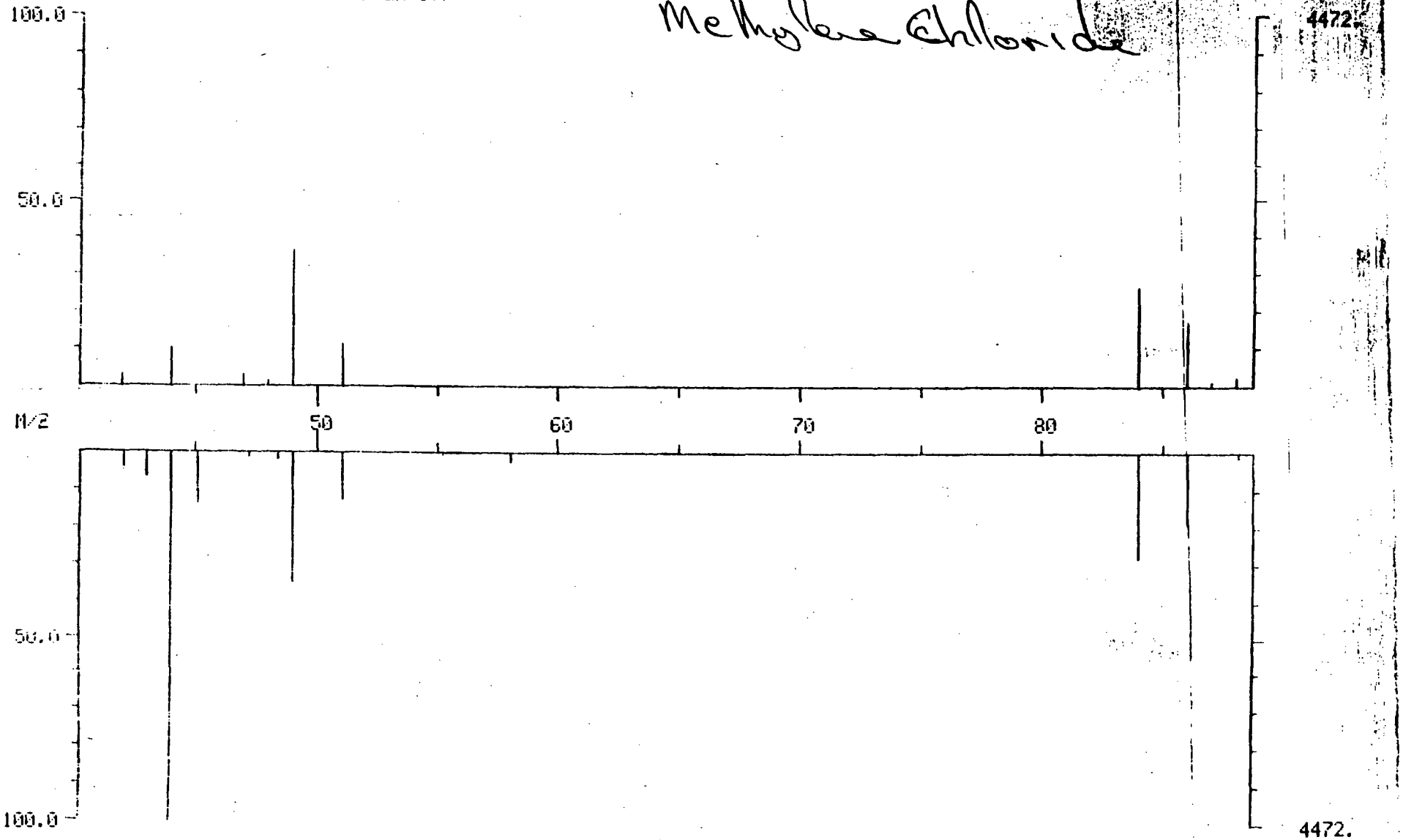
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | NOT FOUND | | | | | | | | | |
| 4 | NOT FOUND | | | | | | | | | |
| 5 | NOT FOUND | | | | | | | | | |
| 6 | NOT FOUND | | | | | | | | | |
| 7 | 84 | 129 | 6:27 | 1 | 0.608 | A BB | 6990. | 27.304 | NG | [illegible] |
| 8 | 43 | 152 | 7:36 | 1 | 0.717 | A BB | 52849. | 551.313 | NG | [illegible] |
| 9 | NOT FOUND | | | | | | | | | |
| 10 | 96 | 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 | 0.322 | 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 | [illegible] | 593 | 29:39 | 33 | 0.952 | A BB | 102728. | 276.328 | NG | 14.20 |
| 48 | [illegible] | 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 (S 15B 2N 0T)

DATA: FU6431 #129
CAL I: FU6431 #2

BASE M/Z: 49/ 44
RIC: 4991./ 10063.

Methylene Chloride



LIBRARY SEARCH
09/20/86 17:27:00 + 6:27
SAMPLE: 1.33316 660534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 # 129
CAL: PU6431 # 2

BASE M/Z: 49
RIC: 4991.

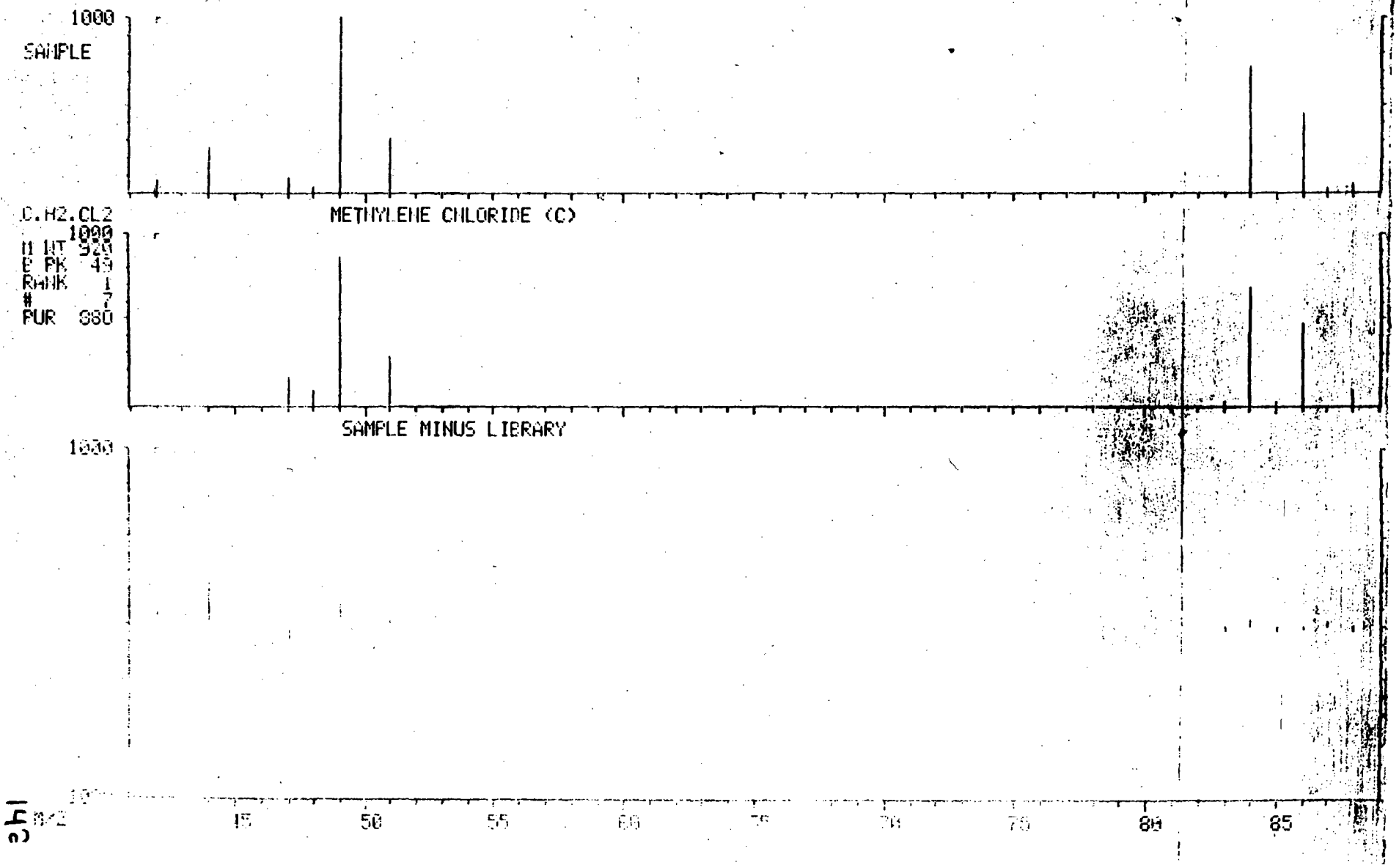


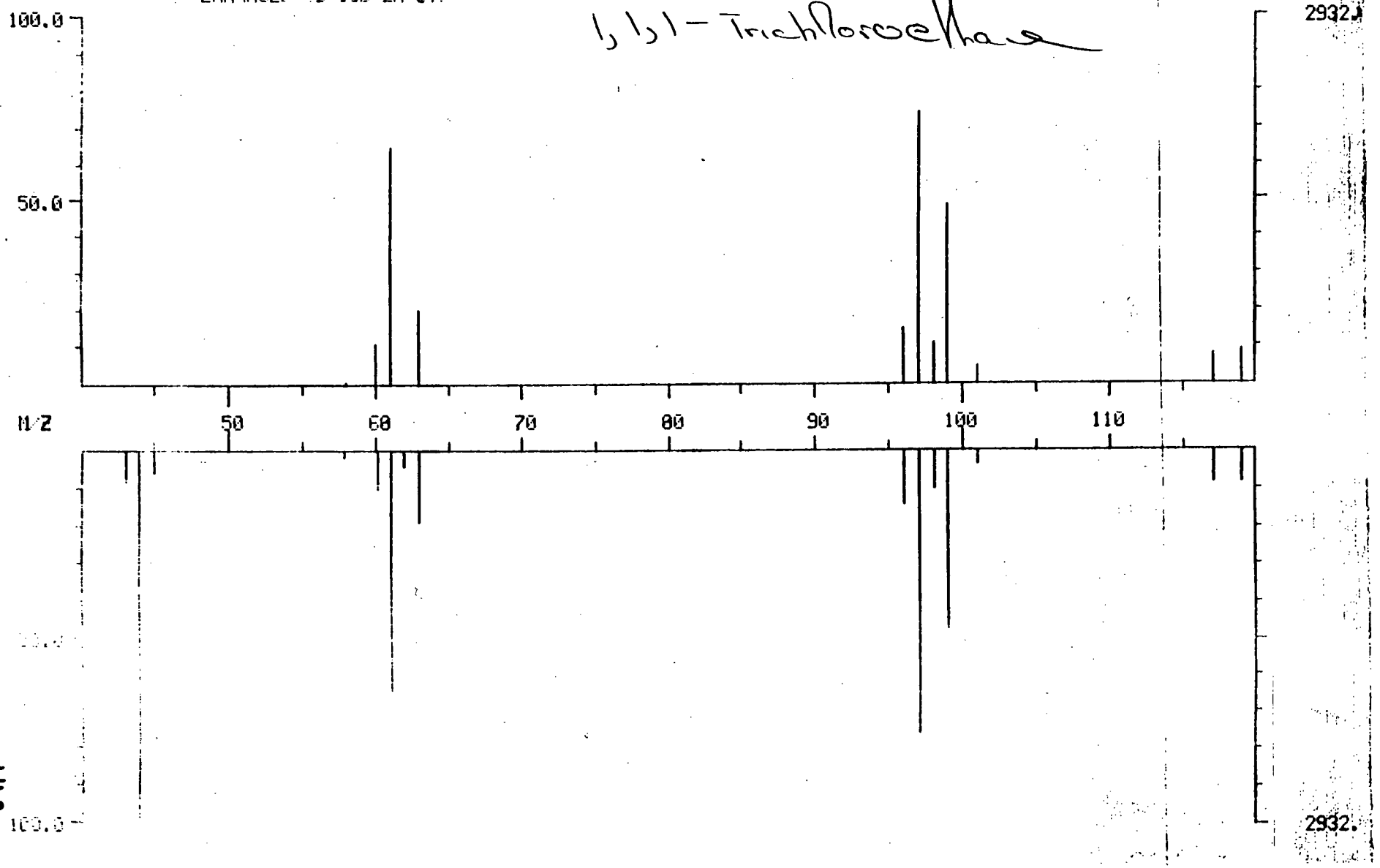

Fig 3h

DUAL MASS SPECTRUM
03/26/86 17:27:00 + 16:15
SAMPLE: 1.33910*660534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #325
CALI: PU6431 #2

BASE M/Z: 97/ 44
RIC: 7607./ 11183.

1,1,1-Trichloroethane

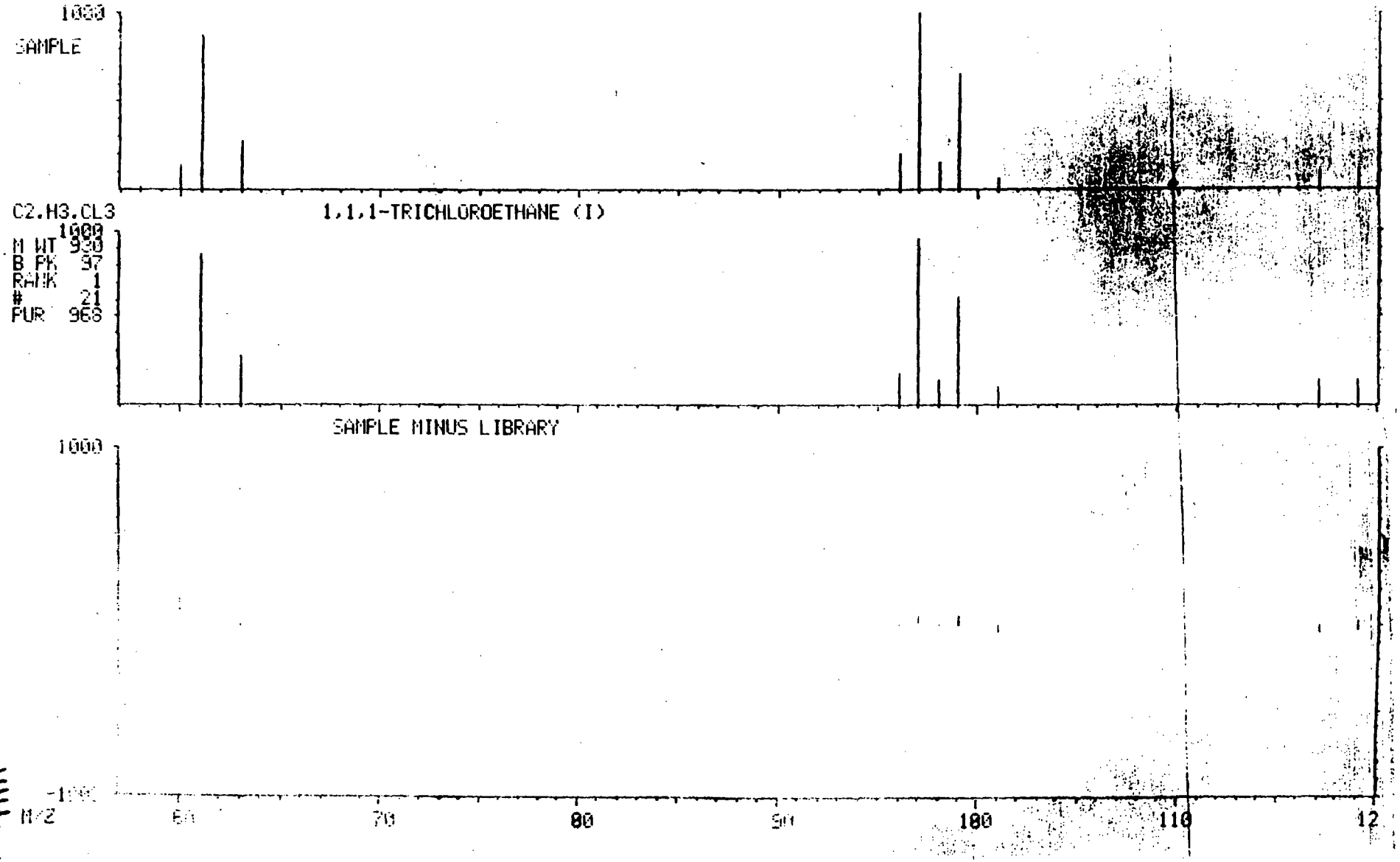



143

LIBRARY SEARCH
09/26/86 17:27:00 + 16:15
SAMPLE: 1.3391G 060534
COMDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6431 # 325
CALI: PU6431 # 2

BASE M/Z: 97
RIC: 7307.

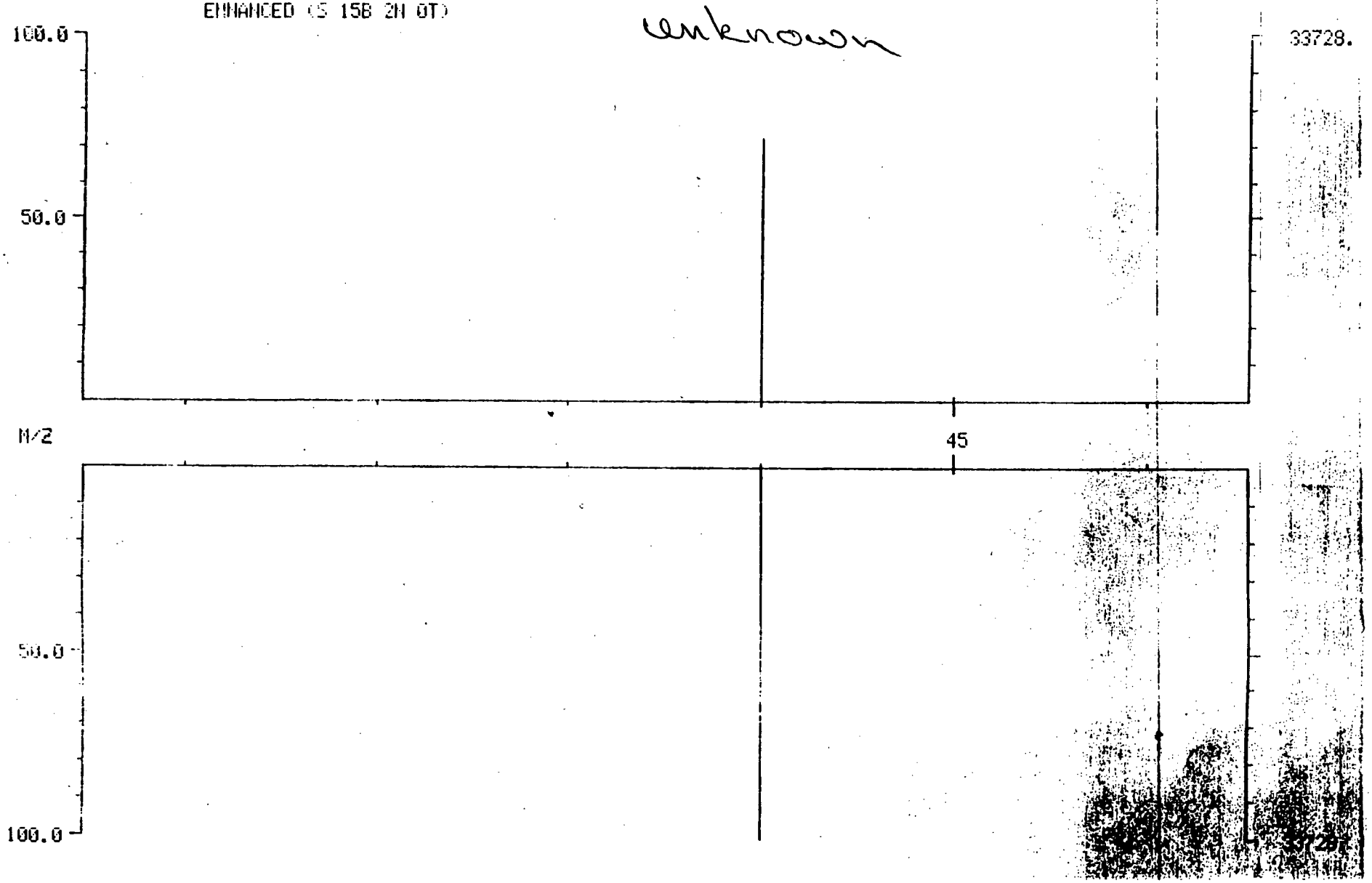


DUAL MASS SPECTRUM
09/26/86 17:27:00 + 0:36
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #12
CALI: PU6431 #2

BASE M/Z: 44/ 44
PIC: 24703./ 34111.

unknown

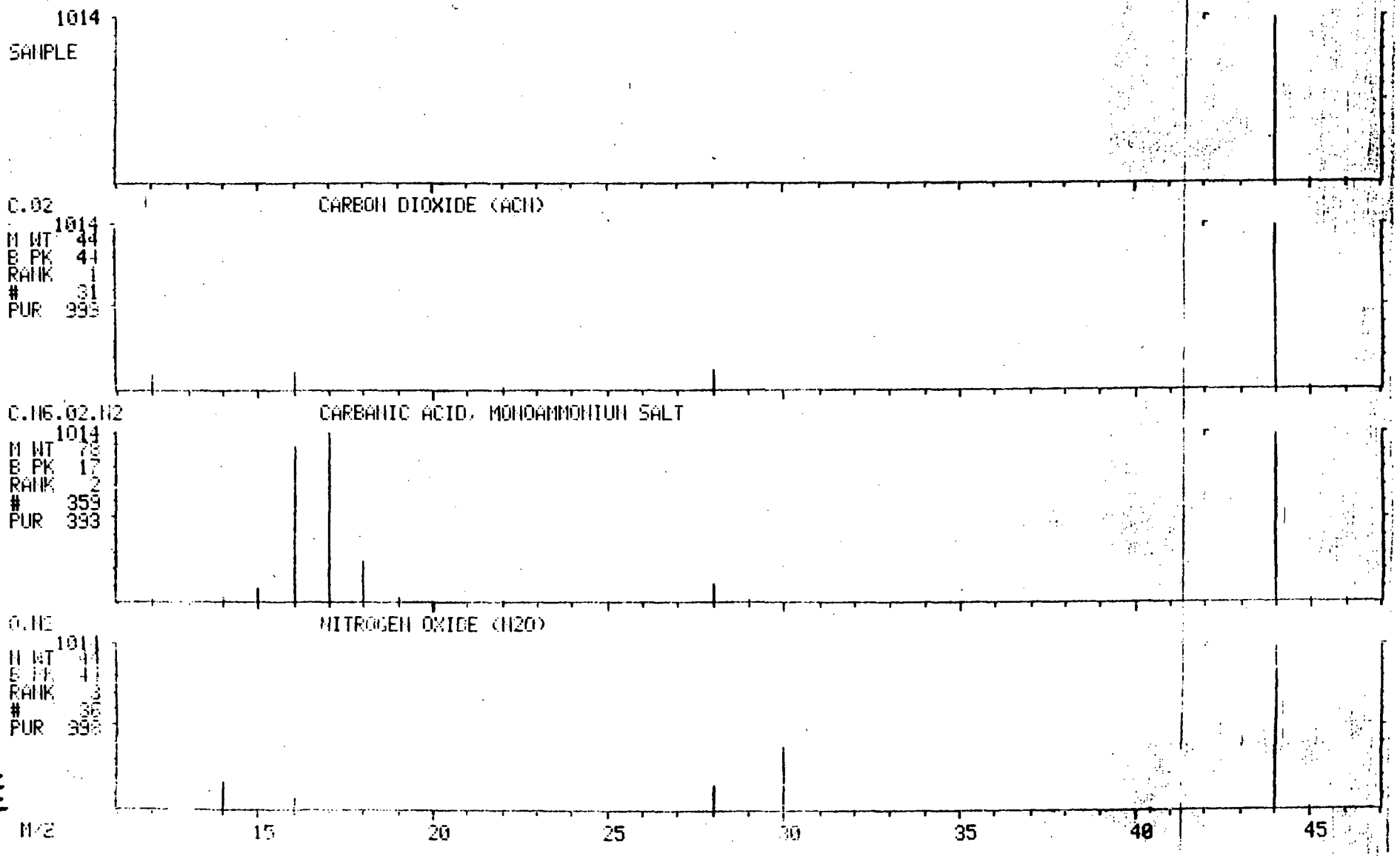



145 #

LIBRARY SEARCH
09/26/86 17:27:00 + 0:36
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 15B (N 0T)

DATA: PU6431 # 12
CALI: PU6431 # 2

BASE M/Z: 44
RIC: 24735.



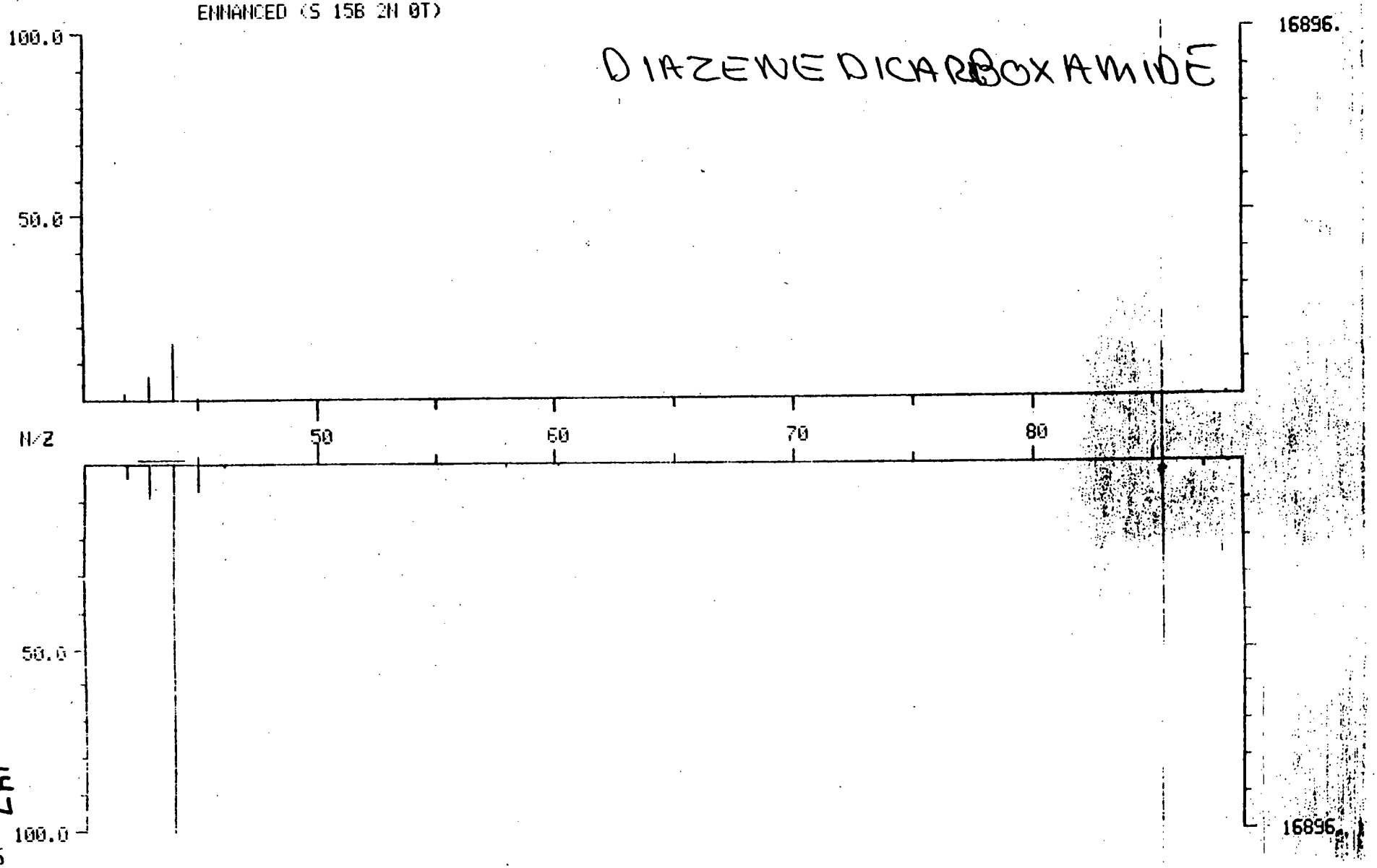

146

DUAL MASS SPECTRUM
09/26/86 17:27:00 + 2:12
SAMPLE: 1.33910 660534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #44
CALI: PU6431 #2

BASE N/Z: 44/ 44
RIC: 4303./ 20395.

DIAZENEDICARBOXAMIDE




147

LIBRARY SEARCH
09 [illegible] 1[illegible]:[illegible] + [illegible]2:1[illegible]
SAMPLE: 1.3331[illegible] A50534
CONDS.:
ENHANCED (S 159 2N OT)

DATA: PU6431 # 44
CALI: PU6431 # 2

BASE N/Z: 44
RIC: 4303.

1055
SAMPLE

C2.N4.O2.N4 DIAZENEDICARBOXAMIDE
1055
M WT 116
B PK 44
RANK 1
# 2621
PUR 852

C3.N4.O4.N2 ACETIC ACID, [(AMINOCARBONYL)AMINO]OXO-
1055
M WT 132
B PK 44
RANK 2
# 45[illegible]
PUR 7[illegible]

C5.H13.N 1-BUTANAMINE, N-METHYL-
1055
M WT [illegible]
B PK 44
RANK [illegible]
# [illegible]
PUR [illegible]

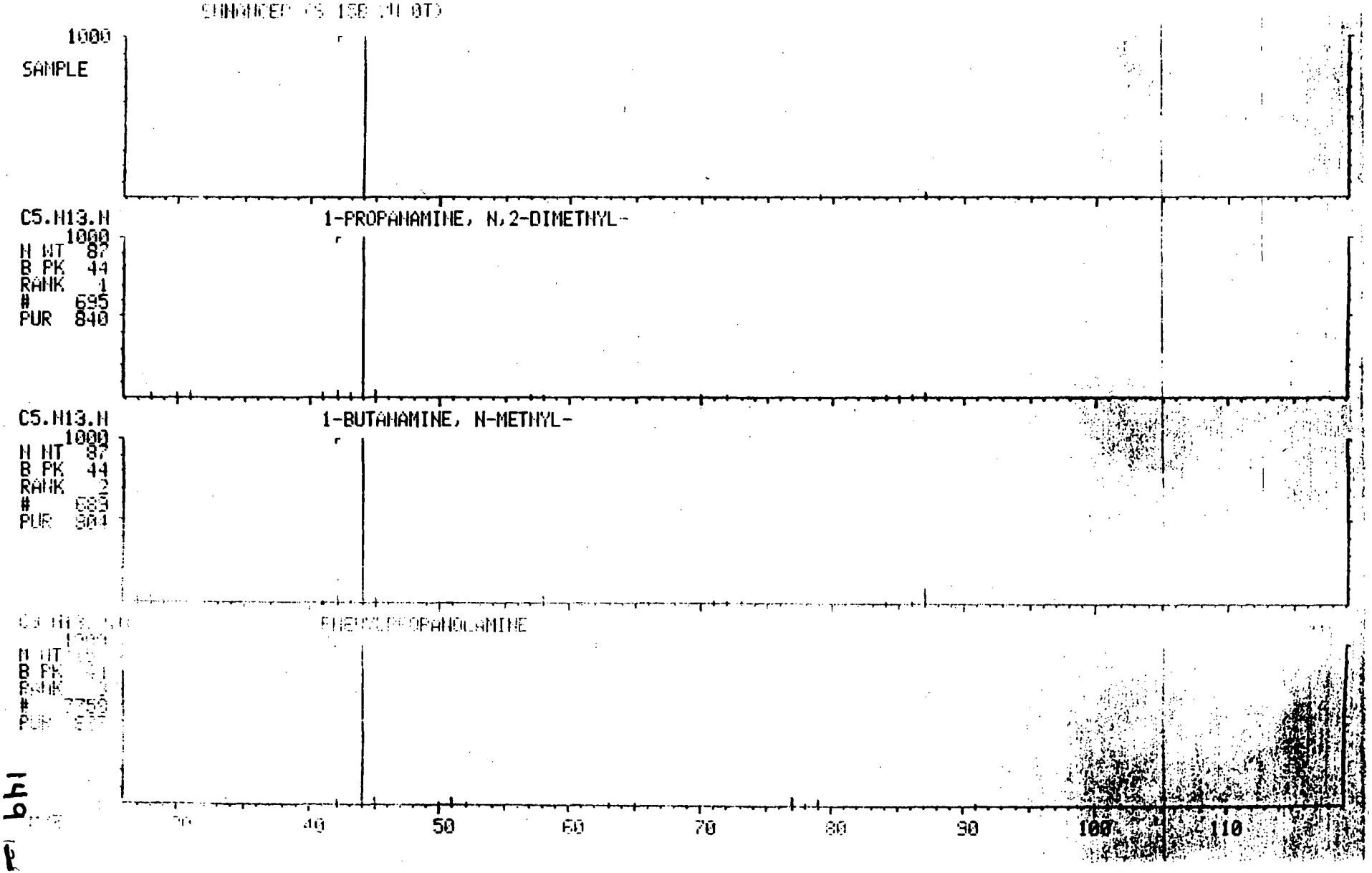
M/Z 30 40 50 60 70 80 90 100

(48)

LIBRARY SEARCH
[illegible] 17:27:08 + 4:21
SAMPLE: [illegible] 600534
COMMS.:
SUMMARIZE: CS 150 [illegible] 0TO

DATA: P06431 # 57
CALI: P06431 # 2

BASE M/Z: 44
RIC: [illegible]

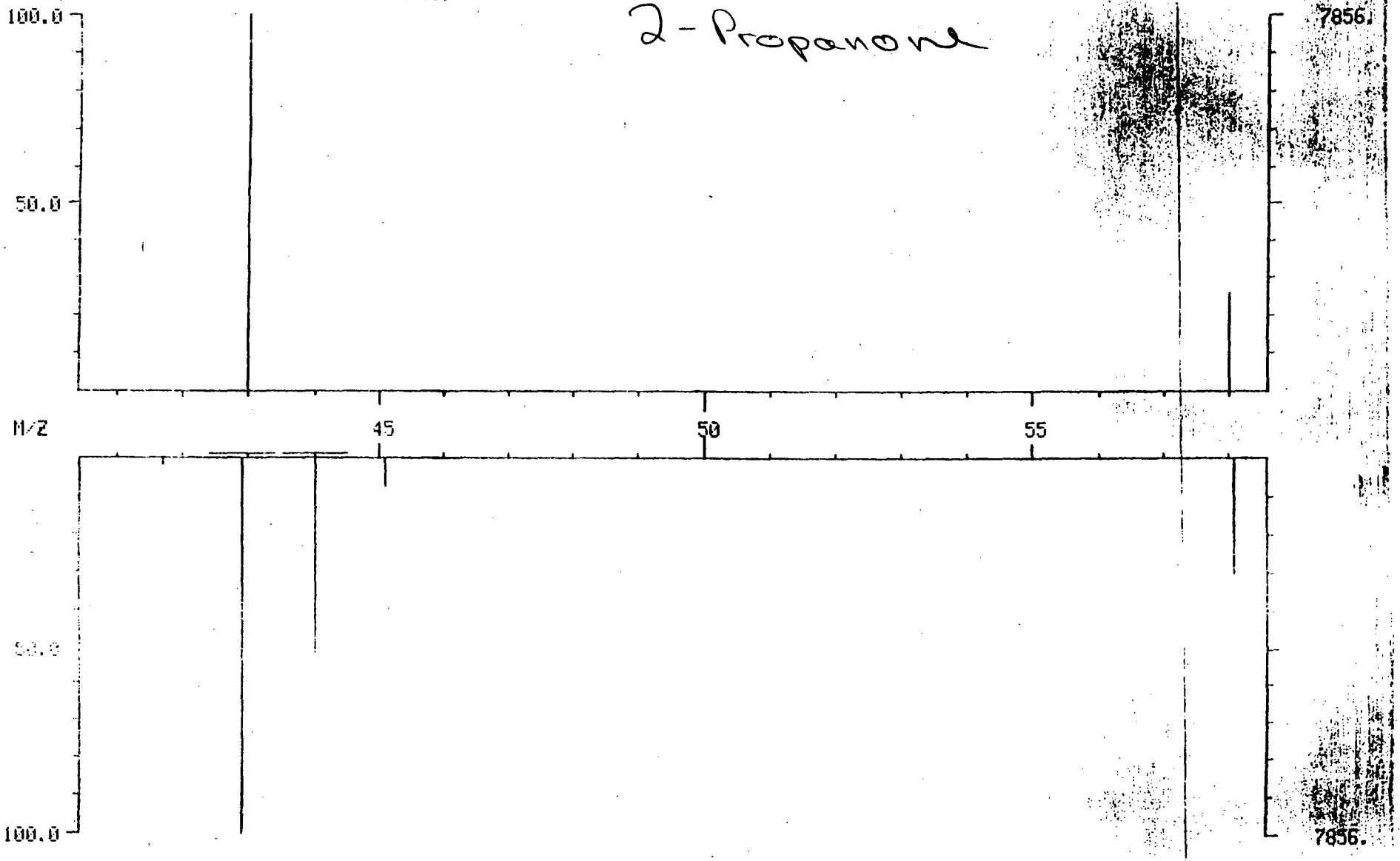


DUAL MASS SPECTRUM
03/26/92 12:27:00 A 7:06
SAMPLE: 1.3391C 660534
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6431 #152
C-LT: PU6431 #2

BASE M/Z: 43/ 43
RIC: 9919./ 15007.

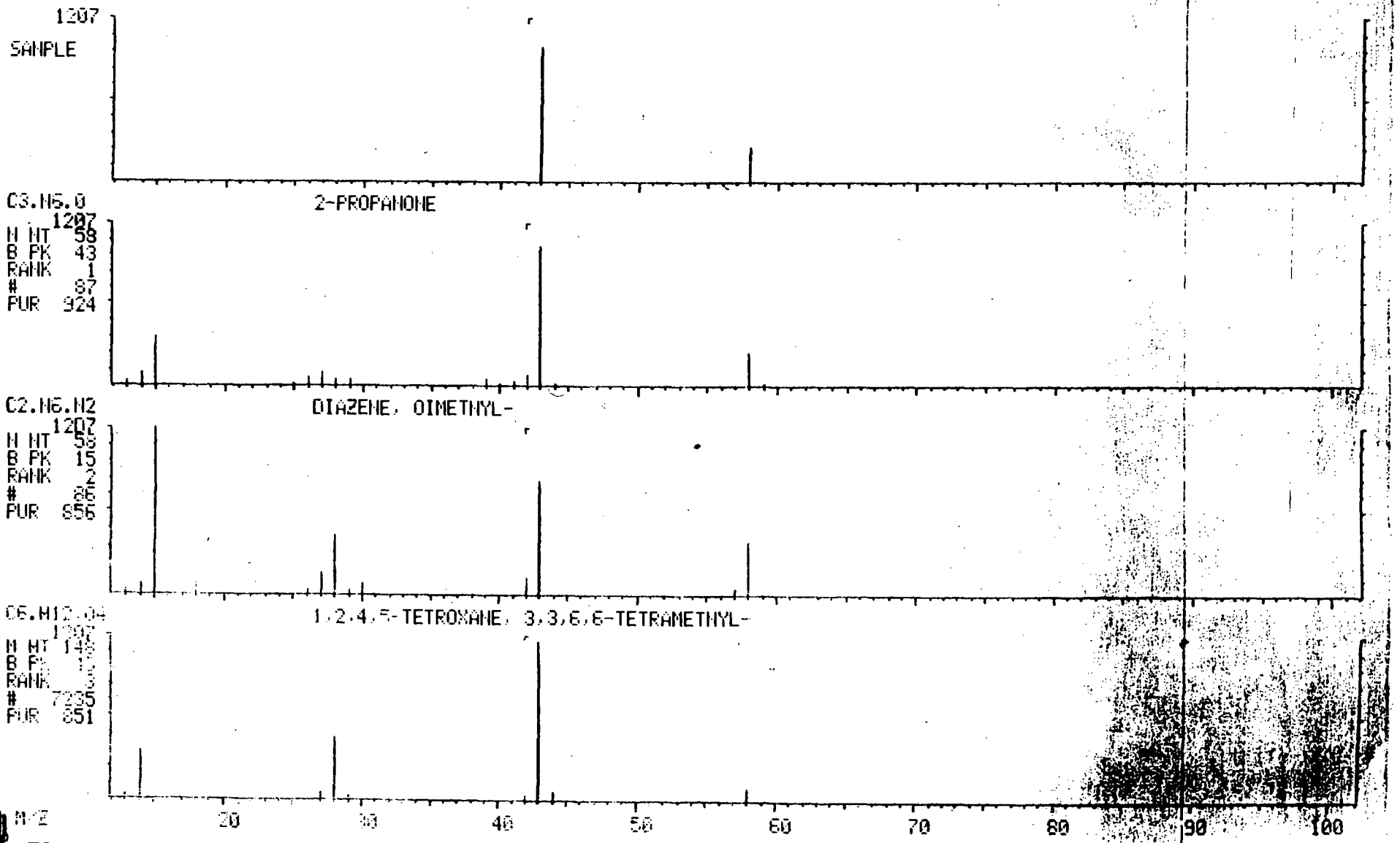
2-Propanone

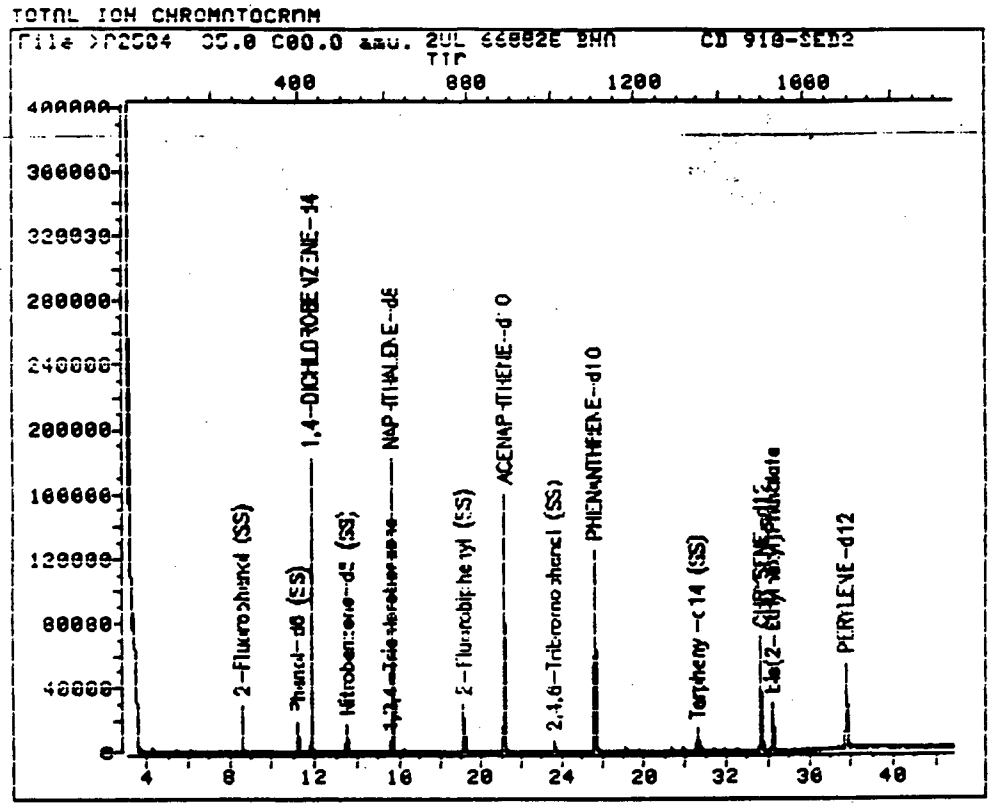


LIBRARY SEARCH
09/26/86 17:27:00 + 7:36
SAMPLE: 1.3391G 660534
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6431 # 152
CALI: PU6431 # 2

BASE M/Z: 43
RIC: 9919.






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: STEVE
Output File: ^P2504::OP
Data File: >P2504::D3
Name: 2UL 660535 BNA
hisc: CD 910-SED2

Quant Rev: 4 Quant Time: 861006 22:51
Injected at: 861006 22:06
Dilution Factor: 1.00

BTL#94

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 | 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

Samole: 2UL 660535 BNA  Ooerator: STEVE  MS  10/06/86 22:06
Misc  : CD 910-SED2  BTL#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 |

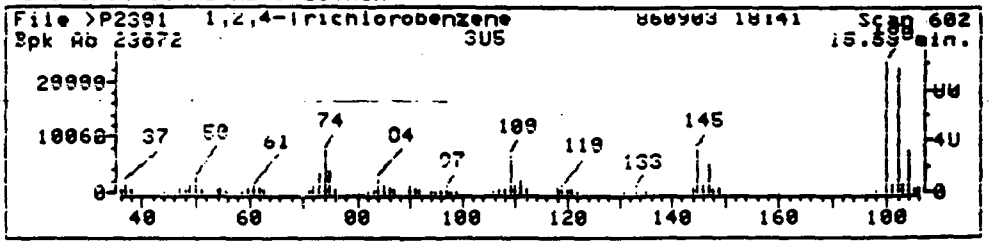
>P2504  2UL 660535 BNA  CD 910-SED2
35.01 500.0 CLP ADC TIC

| 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 |

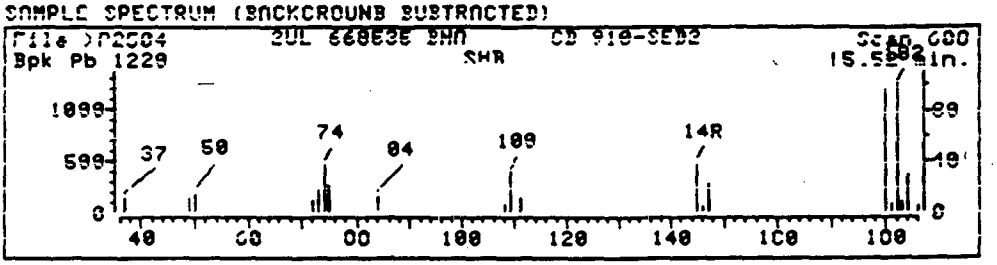
Sum of corrected areas:  1815268.

3:09 PM  TUE.,  7  OCT., 1986

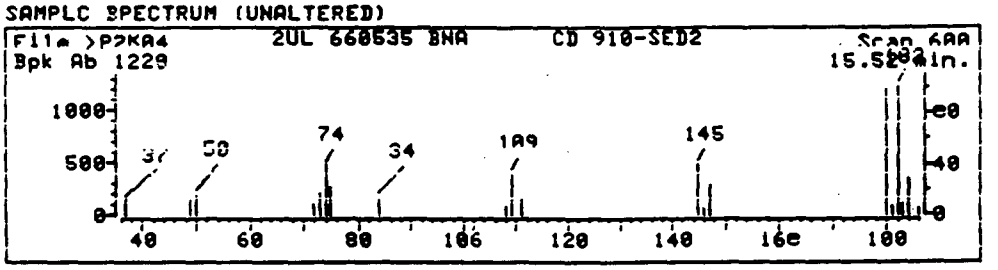
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)




SAMPLE SPECTRUM (UNALTERED)

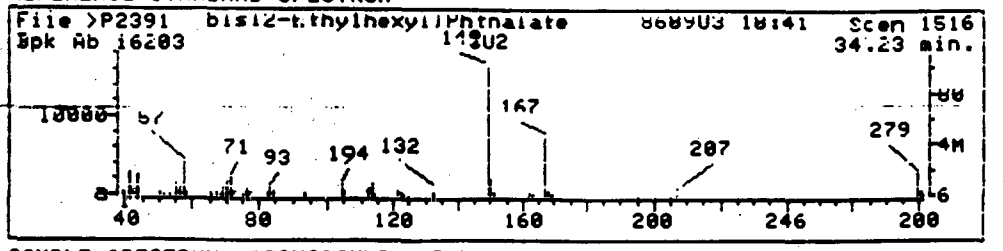



Data File: >P2504::D3
Name: 2UL 660535 BNA
Misc: CD 910-SED2
Quant Time: 861006 22:51
Injected at: 861006 22:06

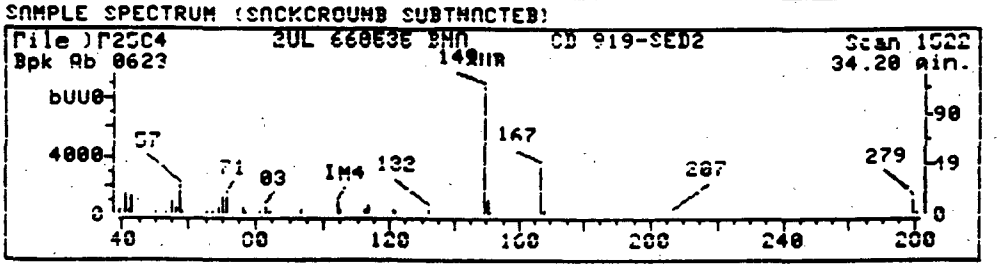
BTL#94

Compound No: 23
Compound Name: 1,2,4-Trichlorobenzene
Scan Number: 608
Retention Time: 15.52 min.
Area: 3197
Concentration: 1.44 NG
q-value: 89

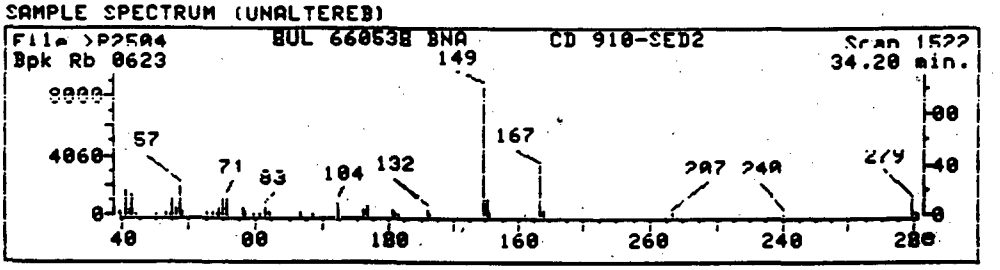
REFERENCE STANDARD SPECTRUM




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: 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

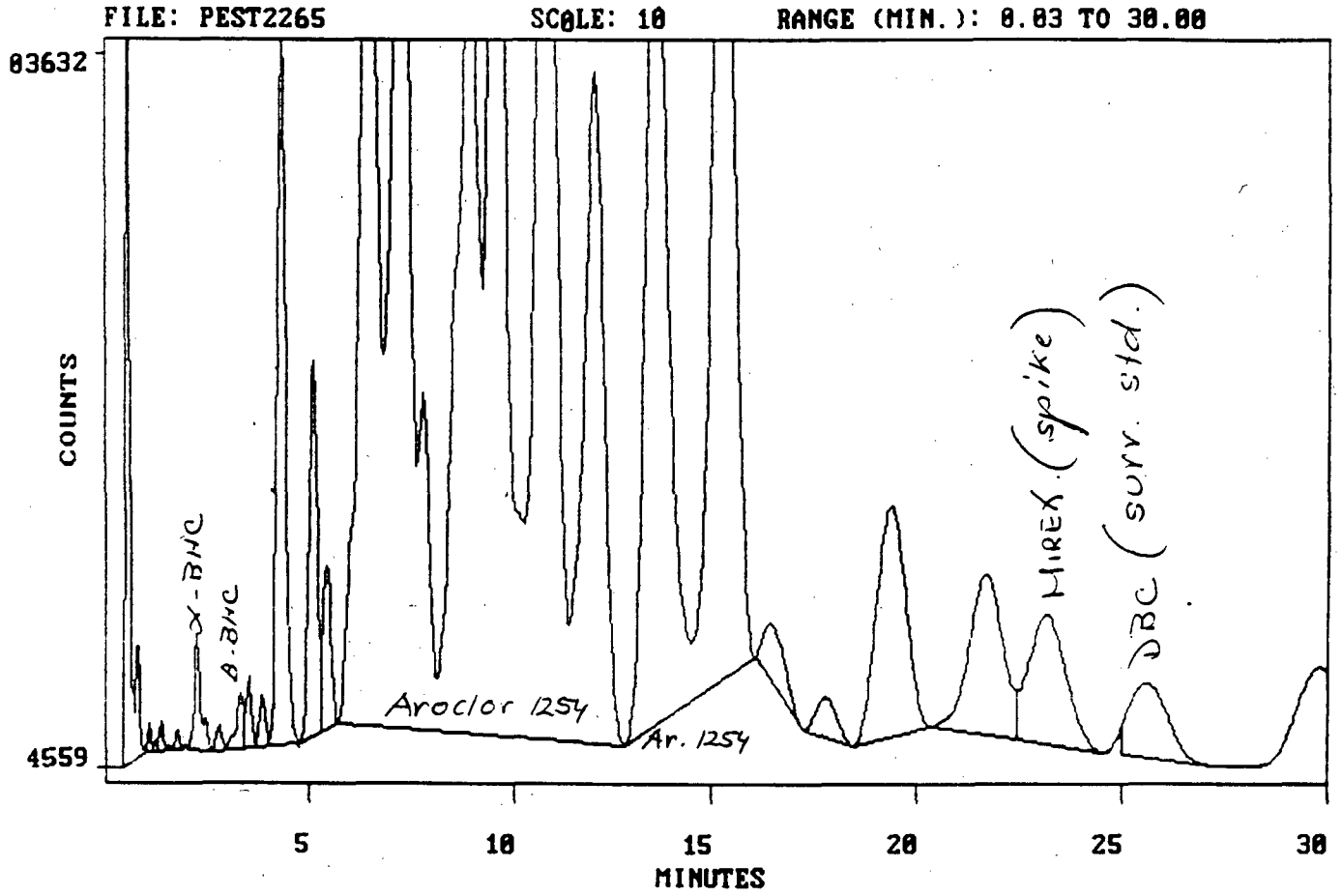
Time:13:55:46 Date:MON 13 OCT 86

RECONSTRUCT SCREEN DUMP

Date Acquisition

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 Tracor 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. 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

RF 100 ↓ est. conc µg/kg

| Peak | R.T. (min) | R/S | Peak name | Area % | Area | Peak Ht. | BL | |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.568 | | | 8.659 | 3721267 | 790626 | EE | |
| 2 | 1.105 | | | 0.038 | 16285 | 2985 | BV | |
| 3 | 1.279 | | | 0.016 | 6804 | 1172 | VV | |
| 4 | 1.407 | | | 0.092 | 39628 | 3292 | VZ | |
| 5 | 2.267 | α-BHC | | 0.328 | 141031 | 12632 | EE | |
| 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 | 1148093 | 35609 | VZ | 2900 |
| 11 | 5.090 | | | 1.367 | 587445 | 41768 | BV | |
| 12 | 5.438 | AROCLOR 1254 | | 0.553 | 237561 | 18198 | VB | |
| 13 | 9.586 | | | 57.202 | 24591566 | 171783 | EE | |
| 14 | 15.316 | | | 18.992 | 8161384 | 109933 | BE | |
| 15 | 16.448 | | | 0.529 | 224999 | 6119 | ES | |
| 16 | 17.309 | | | 0.350 | 150453 | 4347 | BE | |
| 17 | 19.338 | | | 2.921 | 255373 | 25675 | EE | |
| 18 | 21.697 | | | 2.400 | 1031168 | 17843 | BV | |
| 19 | 22.130 | | | 2.093 | 899612 | 14311 | VB | |
| 20 | 25.717 | | | 1.269 | 545224 | 8178 | BE | |
| TOTALS | | | | 100.000 | 42973329 | | | |

158

CONFIRMATORY COLUMN

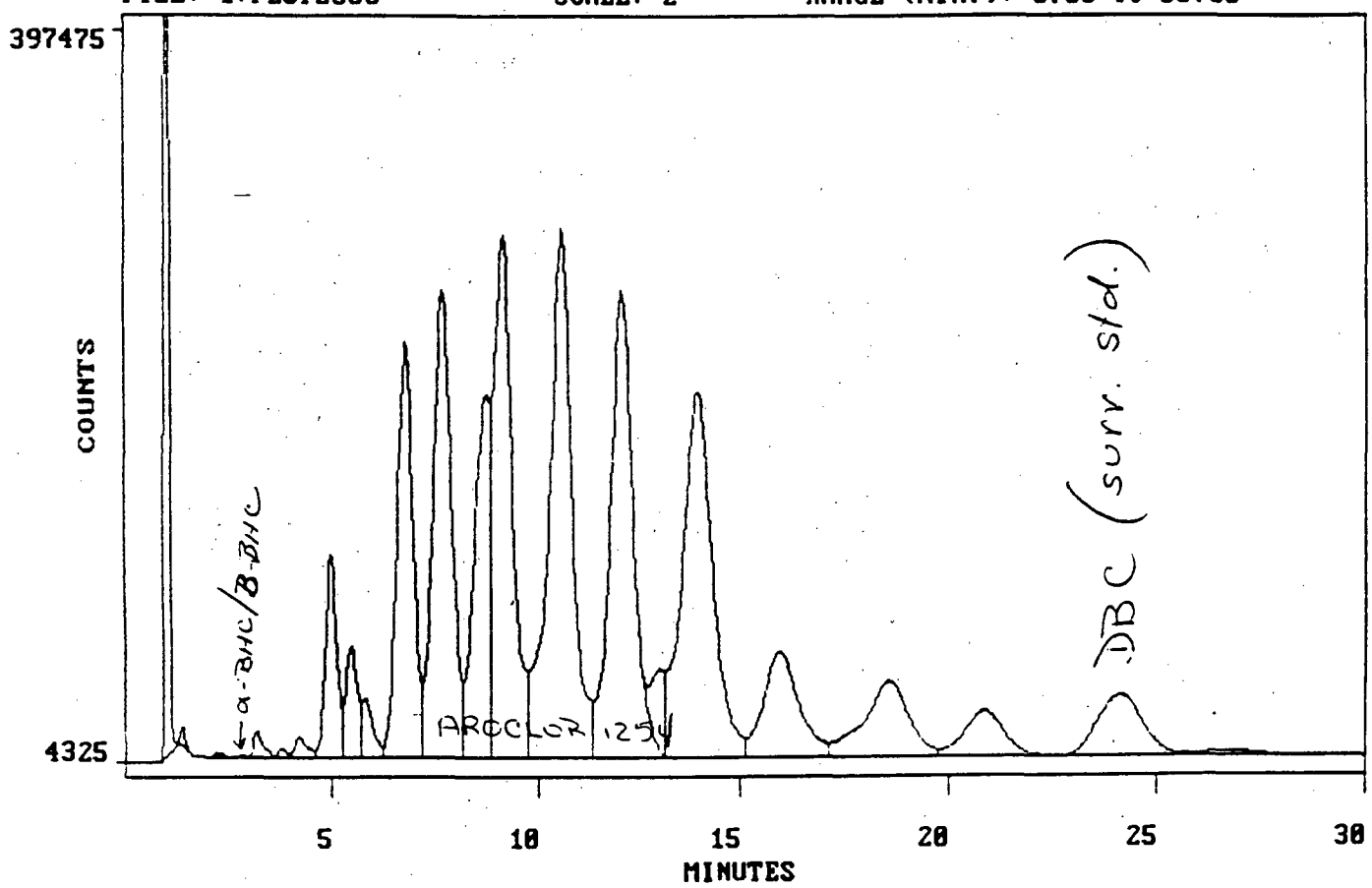
660536
CD910-SED2

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



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.....EY-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 |

160

| | | | | | | |
|---|---|---|---|---|---|---|
| 22 | 15.954 | | 4.127 | 3433168 | 57314 | VV |
| 23 | 13.595 | | 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-dichloroethehe | 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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**********
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 |
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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. 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 | Scar 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-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 | 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-ButyIphthalate | 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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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 |
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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 | Ganma-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 | 80U |
| 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

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*  *
**********
S.C. McLendon, P.E.
Laboratory Director

Lab Name : H2M LABS

| Sample Number |
|---|
| 660540 |

NJDEP #CD910-S1
Run 2266

ORGANICS ANALYSIS DATA SHEET

Tentatively Identified Compounds

| | C.A.S. Number | Compound Name | % Probability Fit | % Probability Rcft | 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 |
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Date Reported: 10-16-86

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. 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 #CD 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 | 4.10 | THALLIUM | <3.40 N |
| CADMIUM | 20.3 | ZINC | 450. N |
| CHROMIUM | 81.0 E | PHENOLS | <0.09 |
| COPPER | 235. | CYANIDE | <7.40 |
| LEAD | 411. | TOTAL SOLIDS | 59.0 % |
| MERCURY | 1.50 *N | | |
| NICKEL | 59.7 | | |

ALL RESULTS REPORTED IN mg/kg DRY WEIGHT

ALL RESULTS IN (MB/L) EXCEPT AS NOTED BY I (UB/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

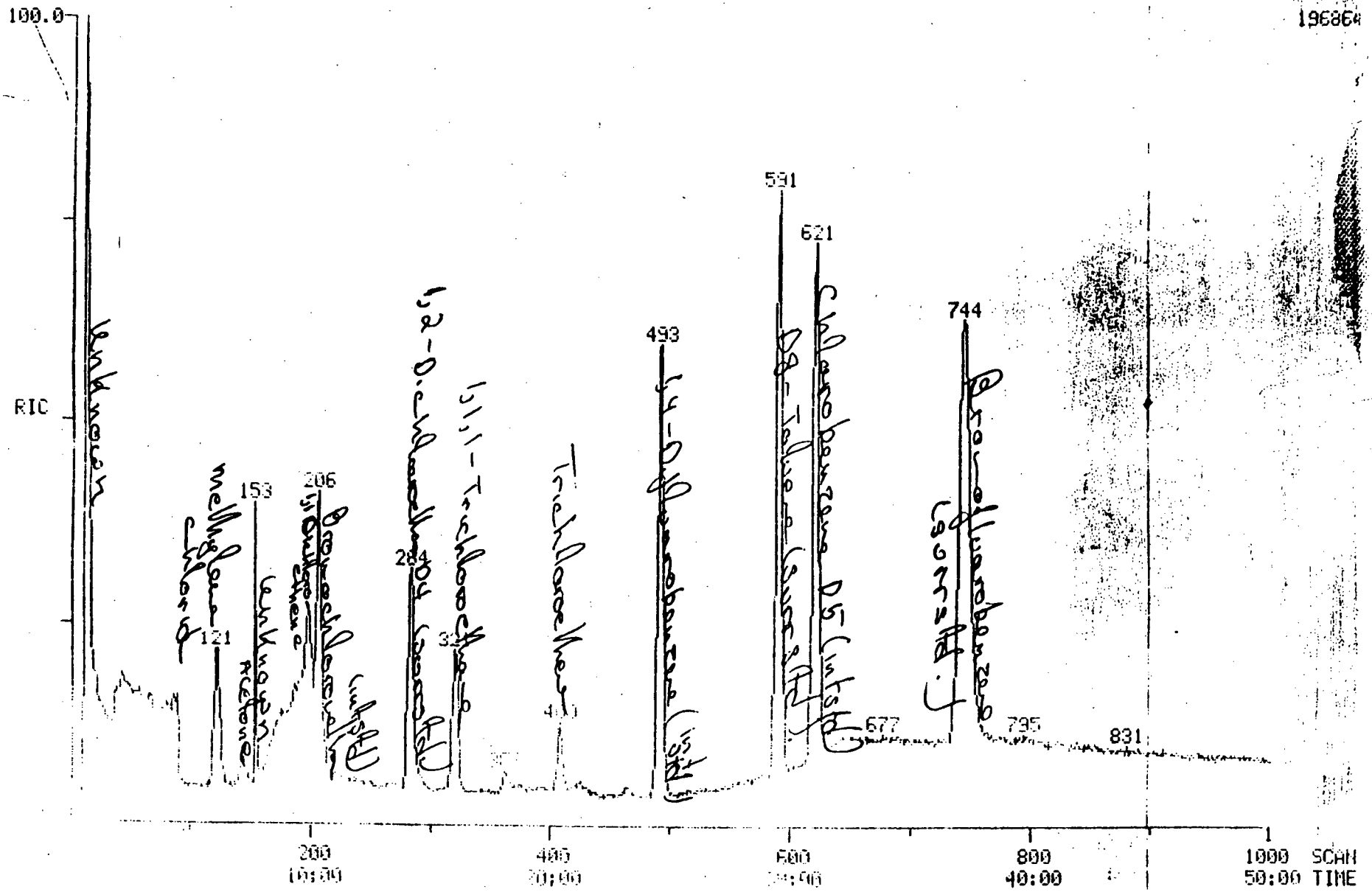
S.C. McLENDON, P.E., LABORATORY DIRECTOR

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: 660538
COMDS.:
RANGE: G 1,1000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: PU6432 #1
CALT: PN6432 #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: NJDEP 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. 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) |
| 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 | DIEROMOCHLOROMETHANE(O) |
| 28 | 1,1,2-TRICHLOROETANE(M) |
| 29 | BENZENE(BEN) |
| 30 | CIS-1,3-OICHLOROPROPENE(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 | OPTHO/PARA-XYLENE |
| 44 | META-DICHLOROBENZENE(MDCB) |
| 45 | ORTHO-DICHLOROBENZENE(ODCB) |
| 46 | PARA-DICHLOROBENZENE(PDCB) |
| 47 | D8-TOLUENE(SURR. STD) |
| 48 | BROMOFLUORBENZENE(SURR. STD) |

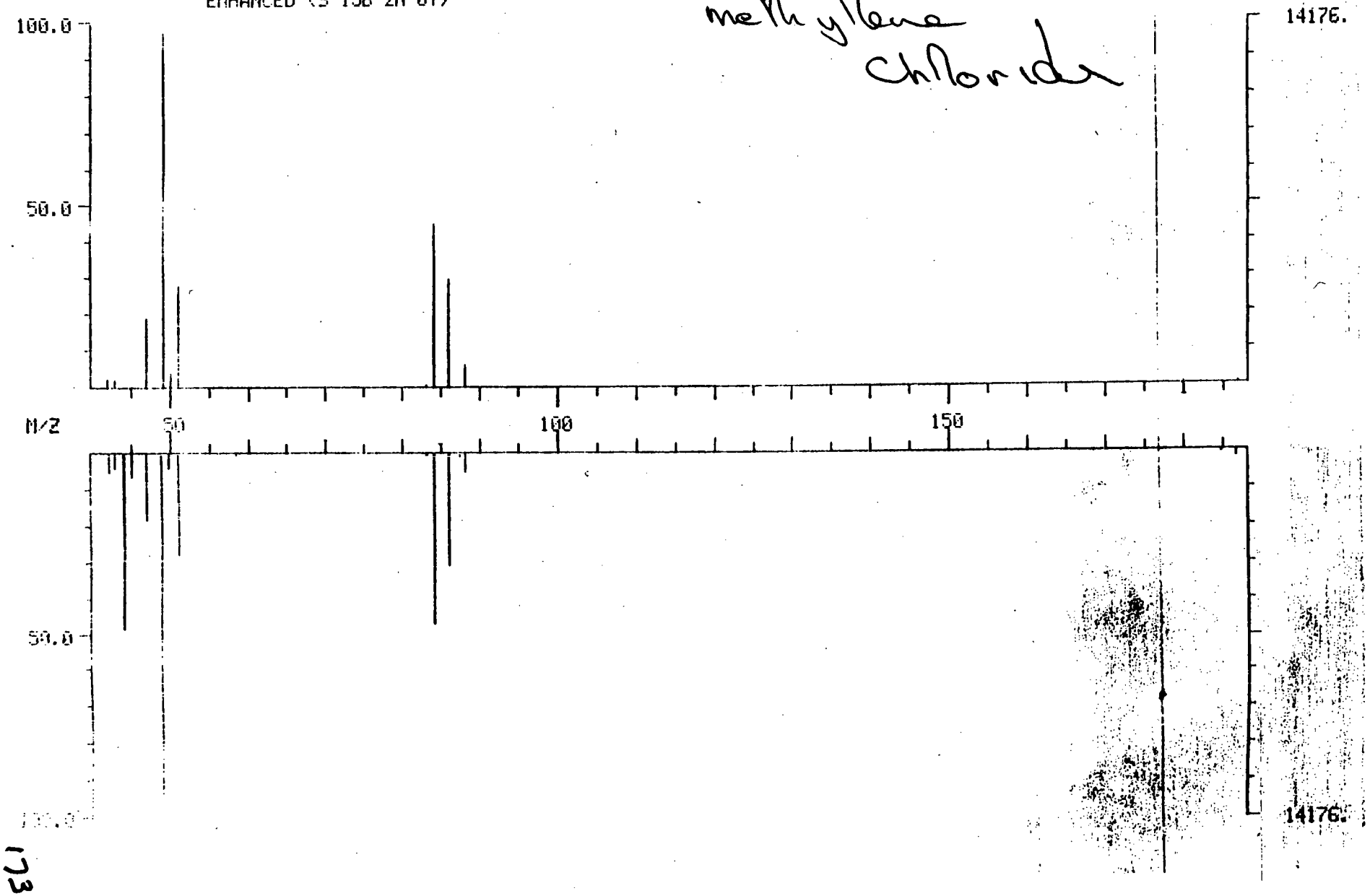
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | A*BV | [illegible] | [illegible] | NG | 0.32 |
| 4 | NOT FOUND | | | | | | | | | |
| 5 | NOT FOUND | | | | | | | | | |
| 6 | NOT FOUND | | | | | | | | | |
| 7 | 84 | 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 | 1.815 | 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 | | | | | | | | | |
| 31 | NOT FOUND | | | | | | | | | |
| 32 | NOT FOUND | | | | | | | | | |
| 33 | 117 | 621 | 31:03 | 33 | 1.000 | A BB | 197550. | 250.000 | NG | 13.09 |
| 34 | NOT FOUND | | | | | | | | | |
| 35 | 43 | 554 | 27:42 | 33 | 0.392 | 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 | 1178. | 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 | | | | | | | | | |
| 43 | 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: 060508
CODE:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 #122
CALI: PU6432 #2

BASE M/Z: 49/ 49
RIC: 33151./ 42751.

methylene chloride

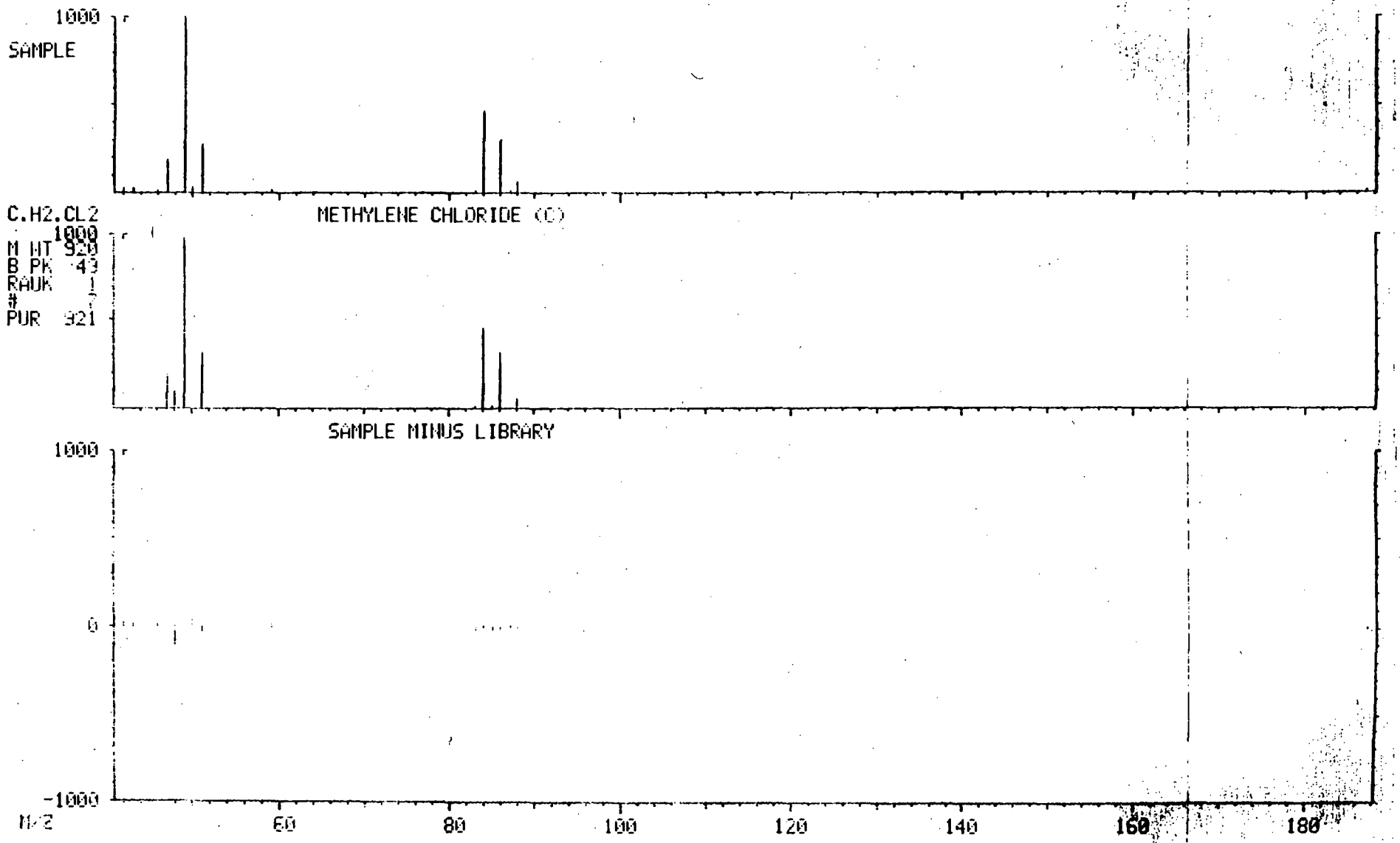



173

LIBPAPY SEARCH
09/26/86 18:21:00 + 6:05
SAMPLE: FF9913
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 # 122
CAL.: PU6432 # 2

BASE M/Z: 49
RIC: 23151.



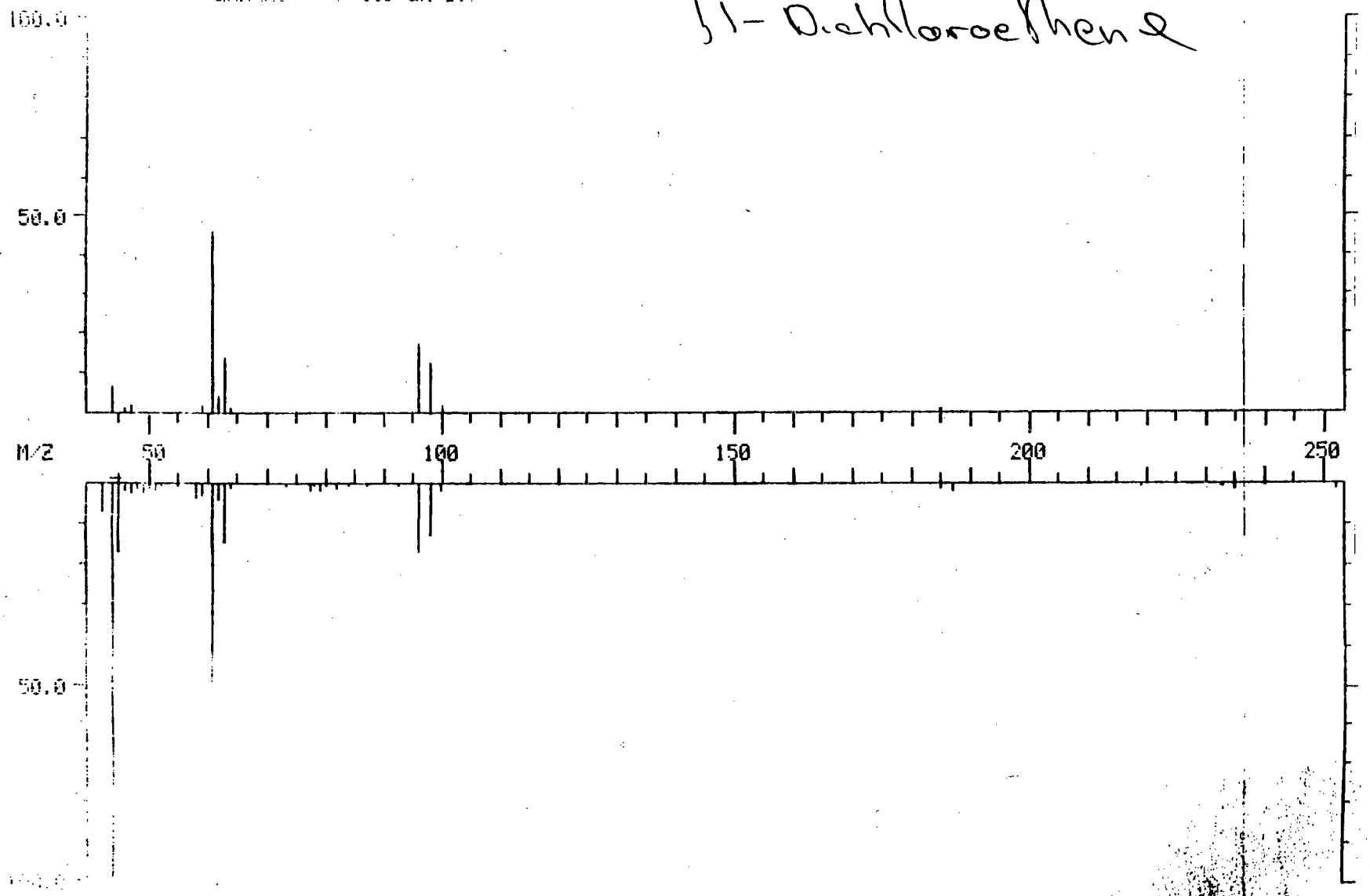

174

DUAL MASS SPECTRUM
09/26/86 18:21:00 + 9:51
SAMPLE: 860528
CONDS.:
ENHANCED (S 159 2N 0T)

DATA: PU6432 #197
CALI: PU6432 #2

BASE M/Z: 61/ 44
RIC: 22463./ 53439.

1,1-Dichloroethene

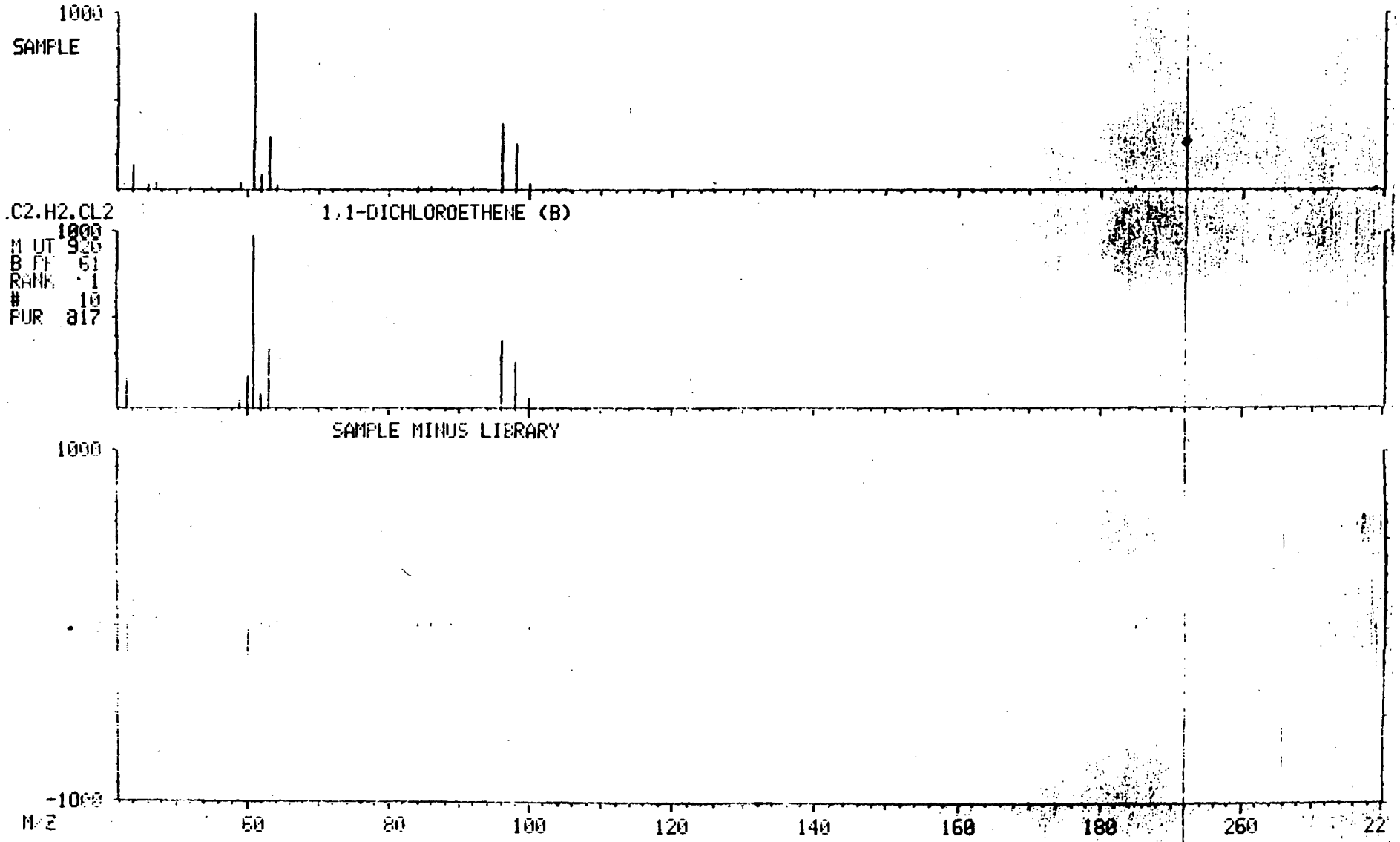



175

LIBRARY SEARCH
[illegible] 18:21:00 + 0:51
SAMPLE: [illegible]
COMDS.:
ENHANCED (S 150 01 0T)

DATA: PU6432 # 197
CALI: PU6432 # 2

BASE M/Z: 61
RIC: 22463.



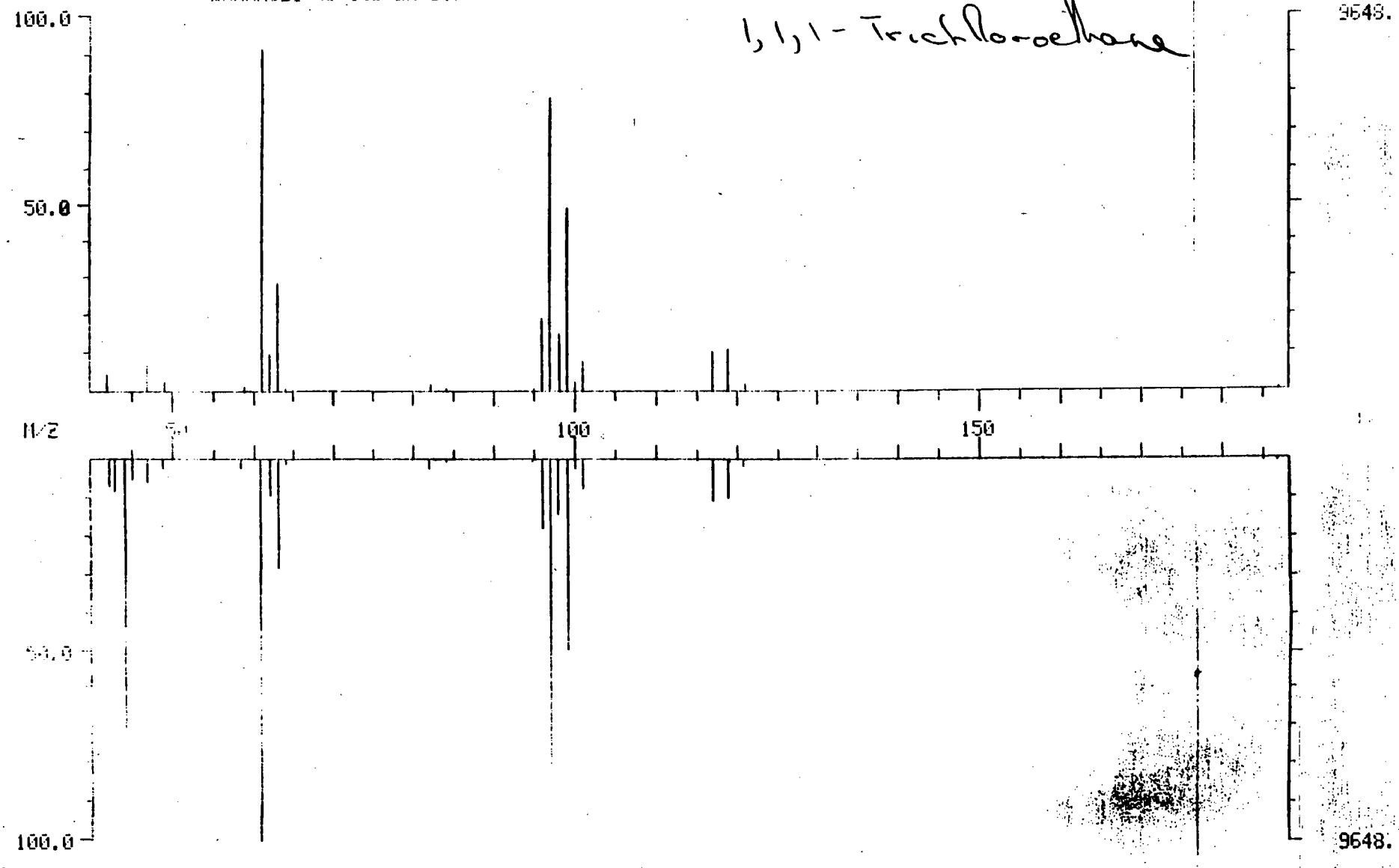

176

DUAL MASS SPECTRUM
09/26/86 18:21:09 + 16:03
SAMPLE: 880538
COMMT.:
EIHAMCEU (S 156 3M 0T)

DATA: PU6432 #321
CALI: PU6432 #2

BASE M/Z: 61/ 61
PIC: 32959./ 43007.

1,1,1-Trichloroethane

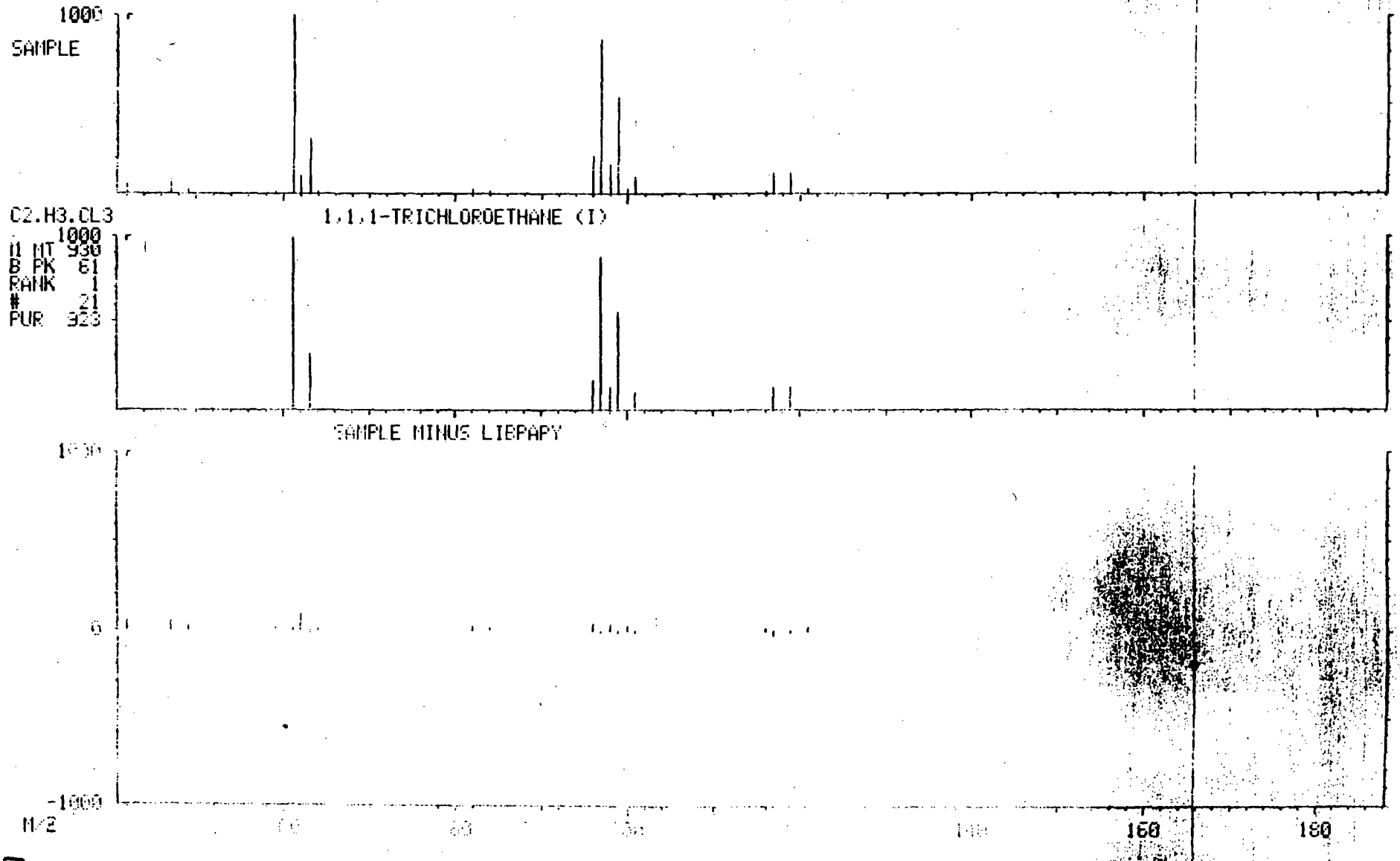



#4
LL

LIBRARY SEARCH
09/26/86 18:21:00 + 16:03
SAMPLE: 660538
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6432 # 321
CALI: PU6432 # 2

BASE M/Z: 61
RIC: 32959.



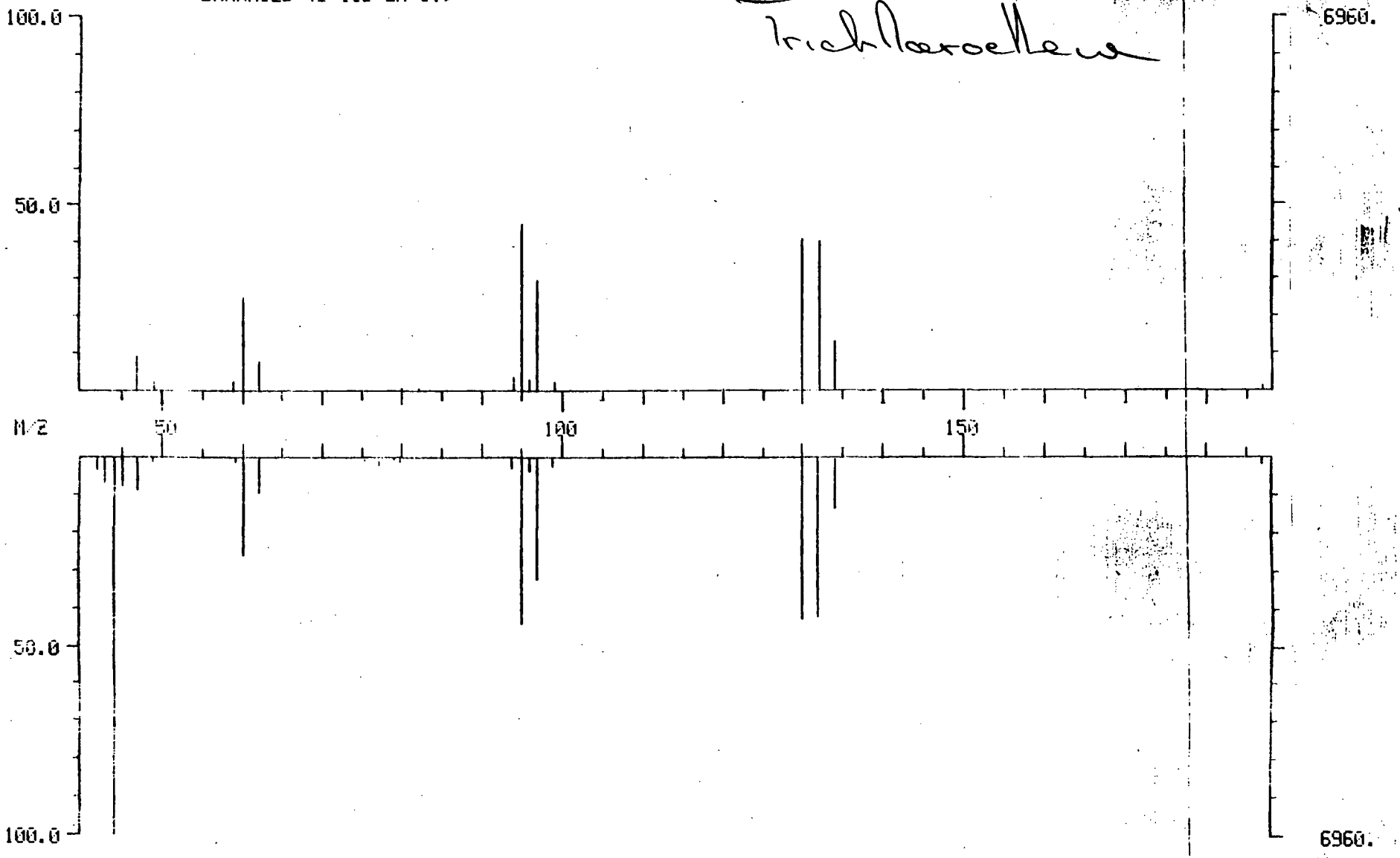

178

DUAL MASS SPECTRUM
09/26/86 18:21:08 + 20:27
SAMPLE: 660538
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: FU6432 #409
CALI: FU6432 #2

BASE M/Z: 95/ 44
RIC: 15565./ 24767.

Trichloroethene

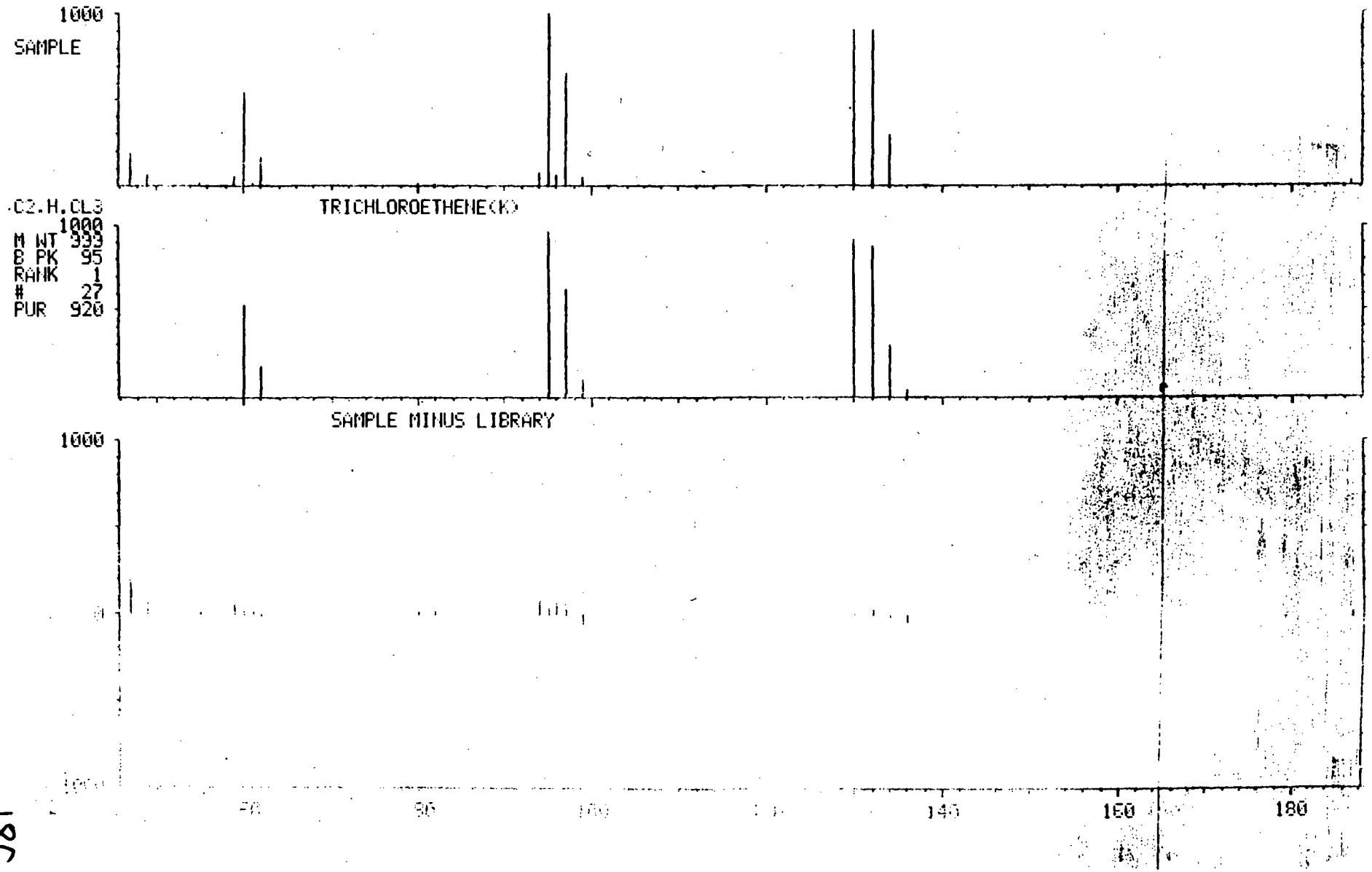



179

LIBRARY SEARCH
09/26/86 18:21:00 + 20:27
SAMPLE: 660508
CONDS.:
ENHANCED (S 158 2N OT)

DATA: PU6432 # 409
CAL 1: PU6432 # 2

BASE M/Z: 95
RIC: 15885.

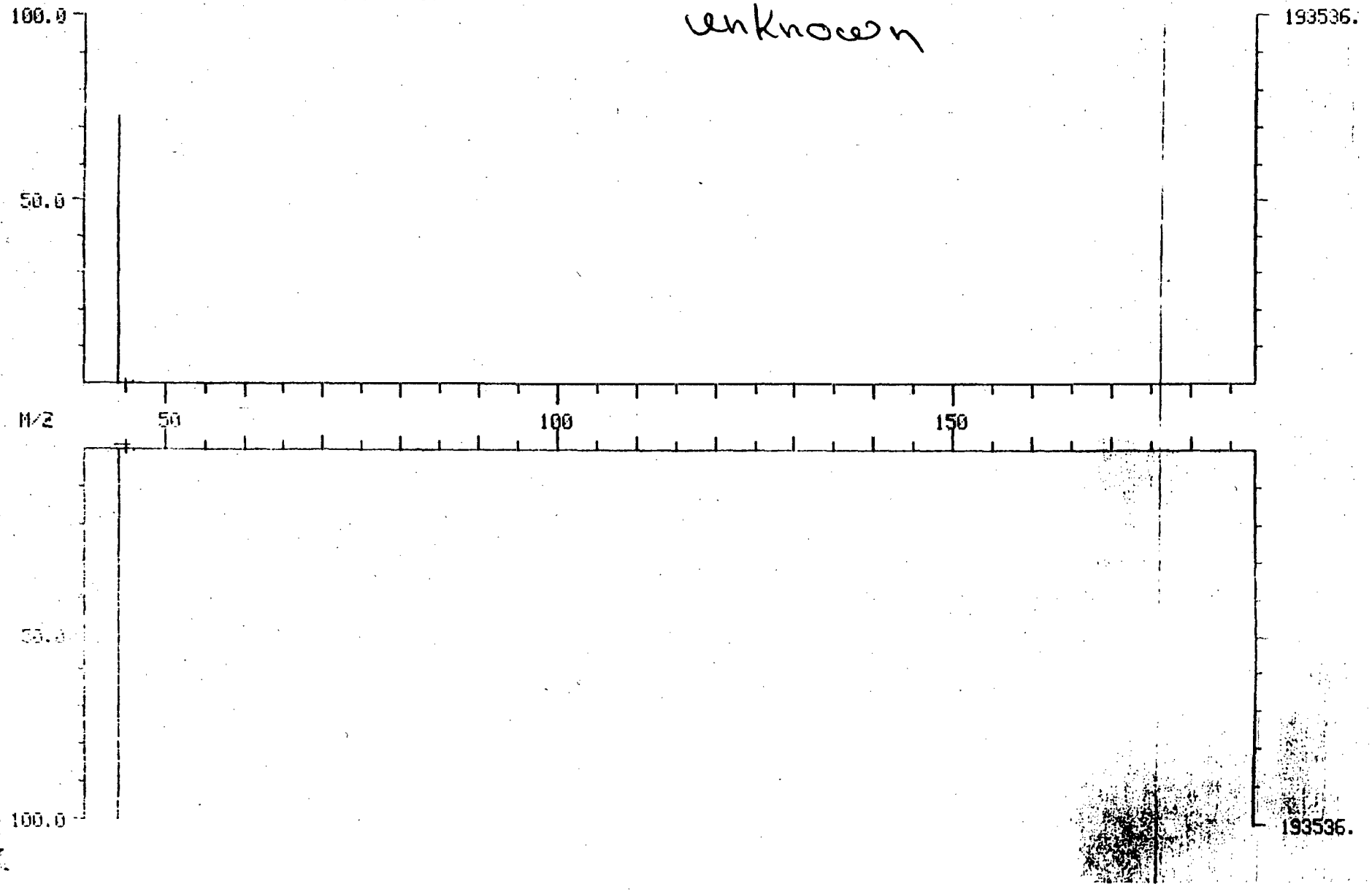


DUAL MASS SPECTRUM
03/29/80 12:11:03 + 0:36
SAMPLE: 650526
CONDS.:
ENHANCED (S 158 IN DT)

DATA: BU6432 #12
FILE: BU6432 #2

BASE M/Z: 44/ 44
RIC: 143615./ 196507.

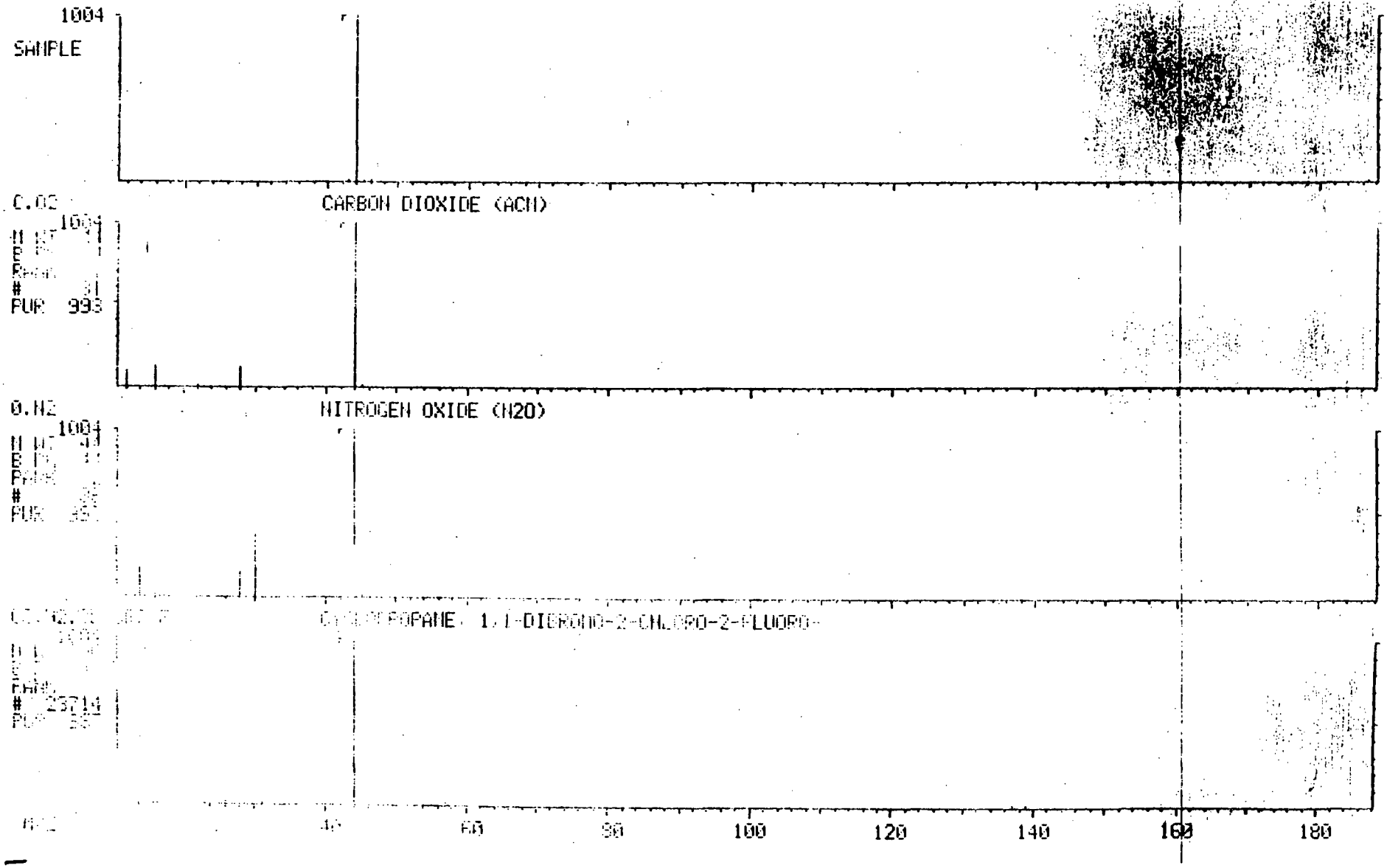
unknown




181

BASE M/Z: 44
RIC: 143615

CONDS.:
ENHANCED (S 15B 2H OT)



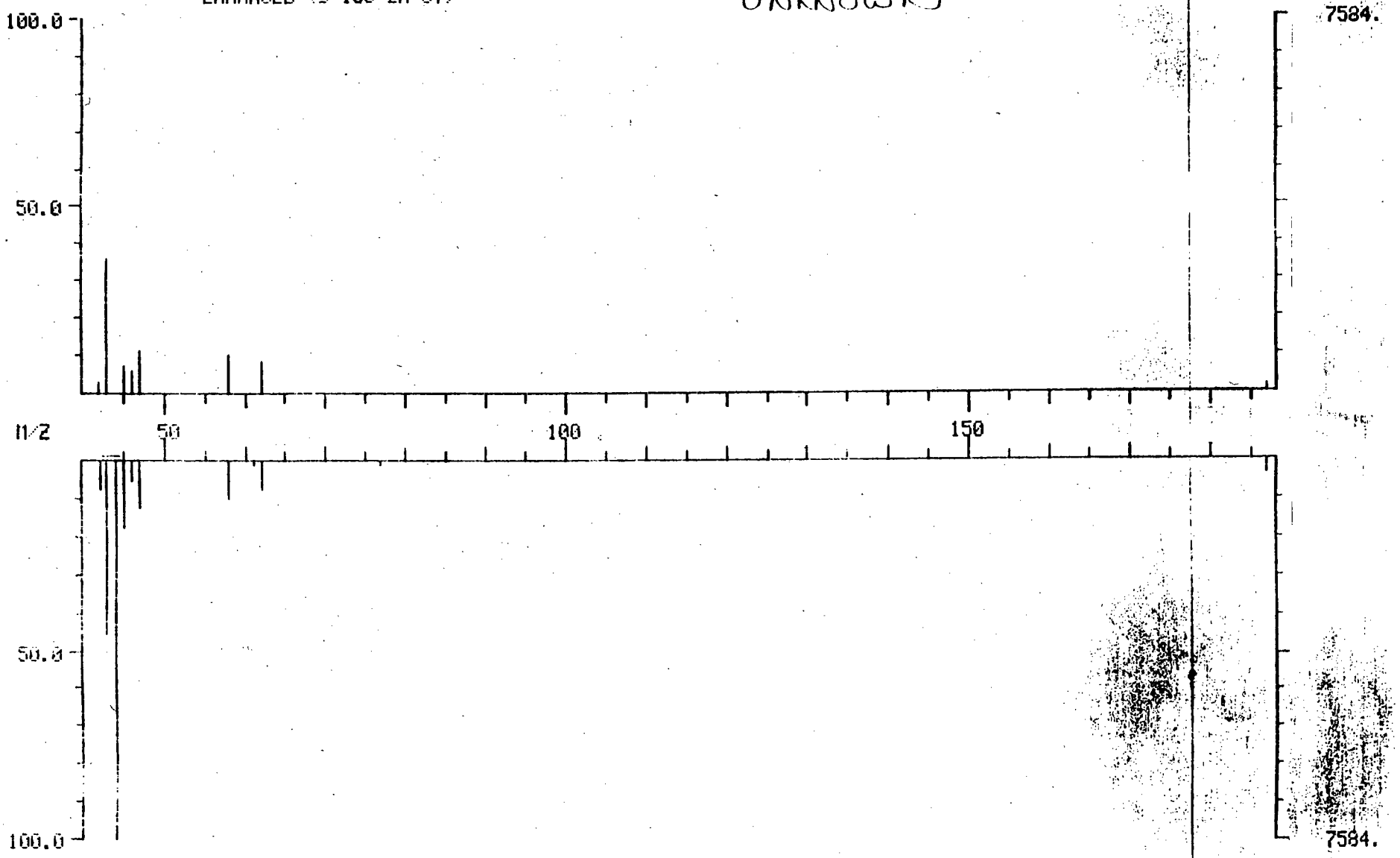

181

DUAL MASS SPECTRUM
09/05/95 18:11:00 : 7:09
SAMPLE: 660532
CONDS.:
ENHANCED (S 156 2N 0T)

DATA: PU6432 #143
CALI: PU6432 #2

BASE M/Z: 43/ 44
RIC: 6431./ 16063.

UNKNOWN

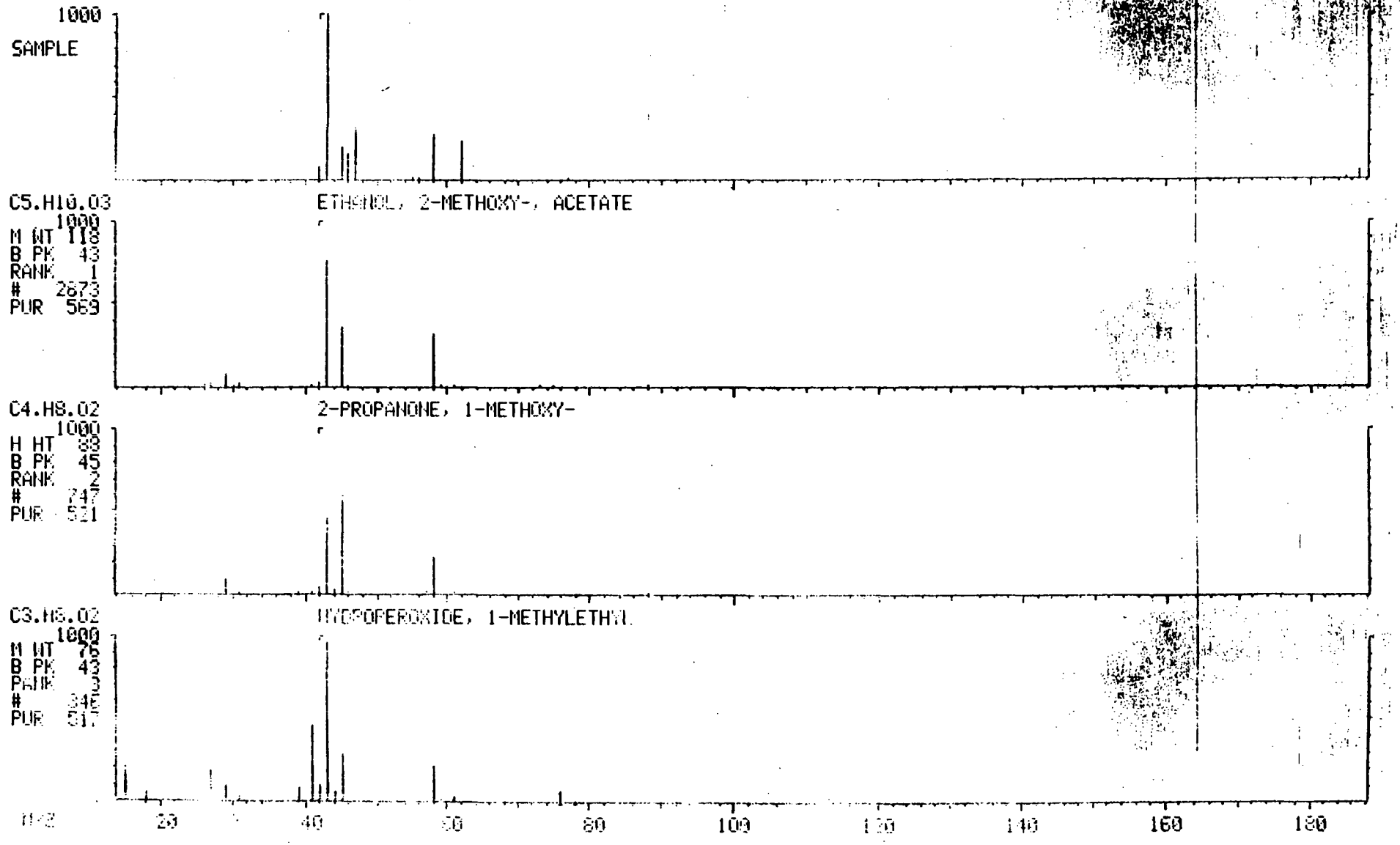



183

LIBRARY SEARCH
[illegible]26/86 18:21:00 + 7:09
SAMPLE: 680538
CONDS.:
ENHANCED (S 156 2N OT)

DATA: PU6432 # 143
CALI: PU6432 # 2

BASE M/Z: 43
RIC: [illegible]6431



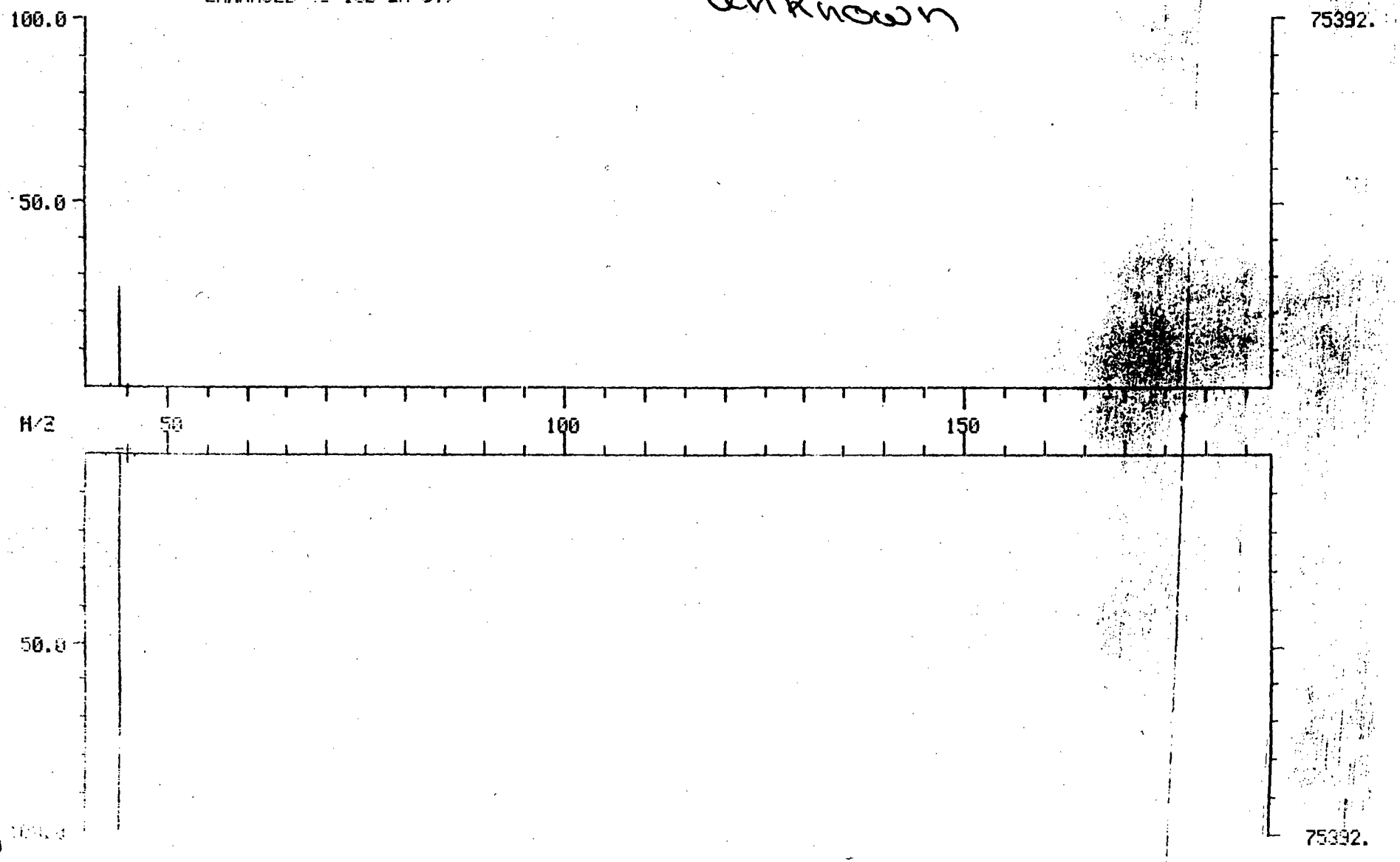

184

DUAL MASS SPECTRUM
03/26/86 18:21:00 + 7:39
SAMPLE: 660538
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6432 #153
CALI: PU6432 #2

BASE M/Z: 44/ 44
RIC: 21471./ 78207.

unknown




185

LIBRARY SEARCH
09/26/86 18:21:09 + 7:39
SAMPLE: 660538
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6432 # 153
CH 1: PU6432 # 2

BASE M/Z: 44
RIC: 2147L.

SAMPLE

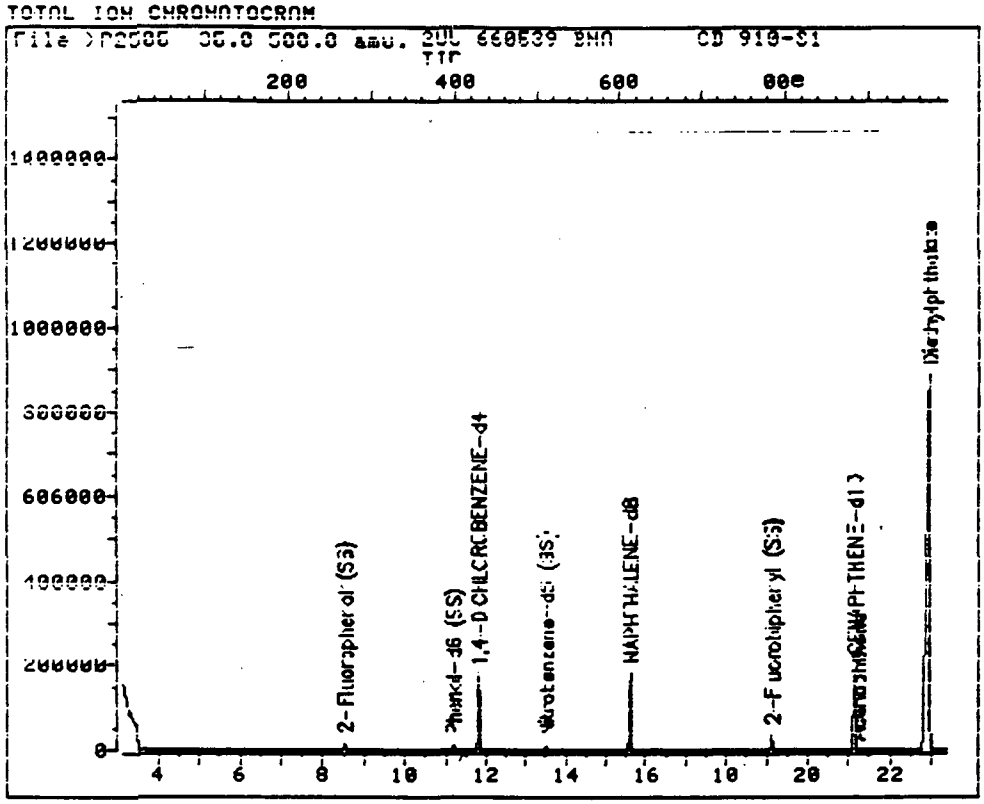
C3.H2.CL.BR2.F CYCLOPROPANE, 1,1-DIBROMO-2-CHLORO-2-FLUORO-
M WT 250
B PK 44
RANK 1
# 23714
PUR 955

C.O2 CARBON DIOXIDE (ACN)
M WT 44
B PK 44
RANK 2
# 31
PUR 955

C.N2 NITROGEN OXIDE (N2O)
M WT 44
B PK 44
RANK 3
# 2
PUR 951

M/Z 20 40 60 80 100 120 140 160 180

TOTAL ION CHROMATOGRAM



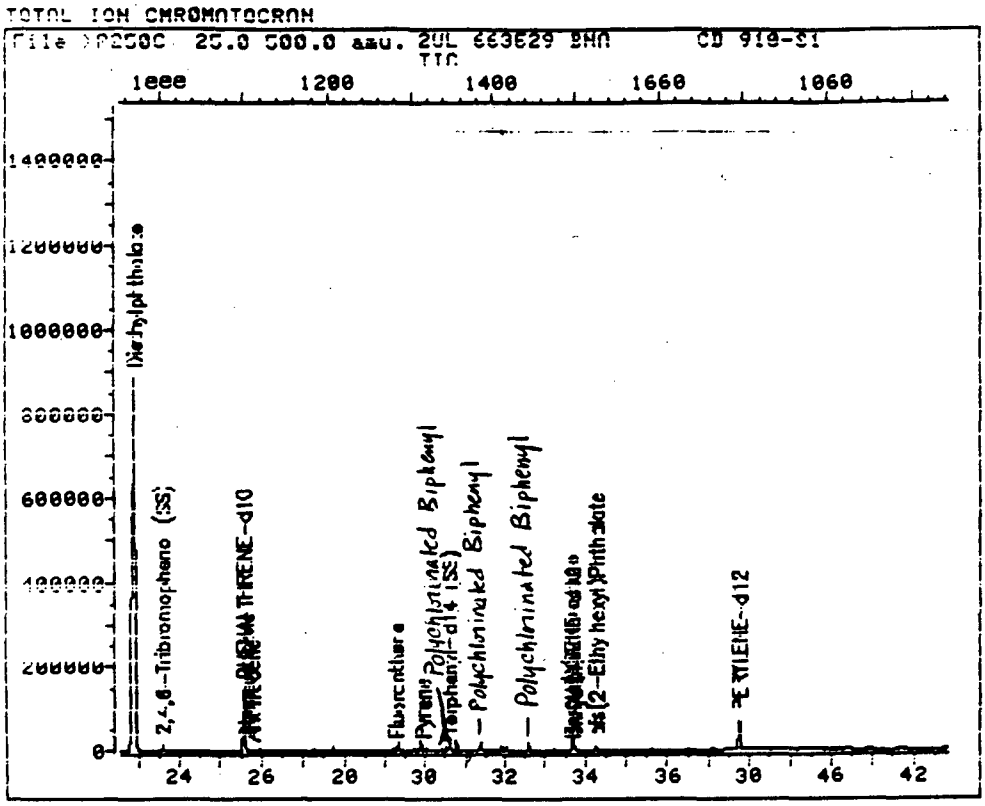

Data File: >P2505::D3
Name: 2UL 660539 BNA
Miac: CD 910-S1

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 1 of 2




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: STEUE  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-Fluorpohenol (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-Tribromoohenol (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

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  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 |

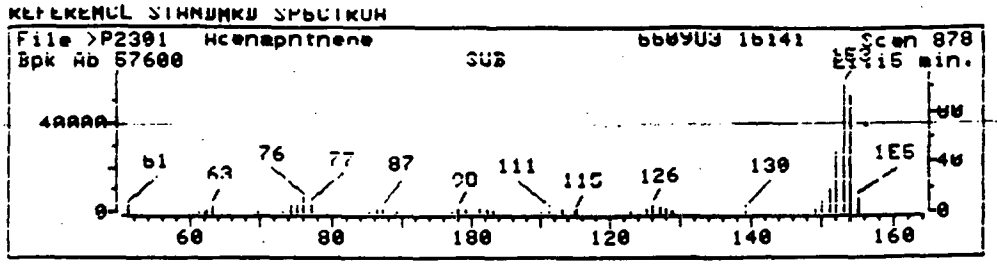
>P2505  2UL 660539 BNA  CD 910-S1
35.01 500.0 CLP ADC TIC

| 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 | 54497 | 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 |

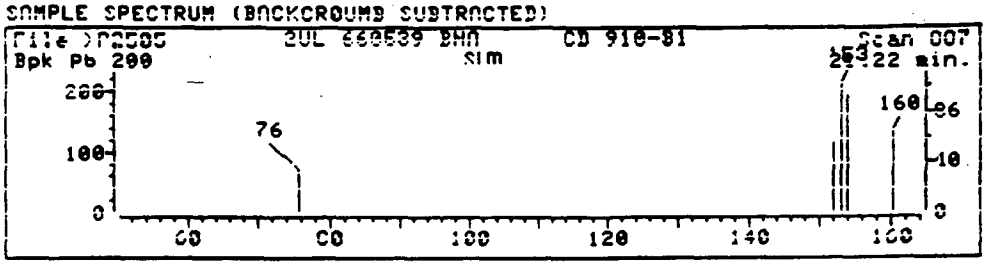
Sum of corrected areas: 2170278.

3:30 PM TUE., 7 OCT., 1986

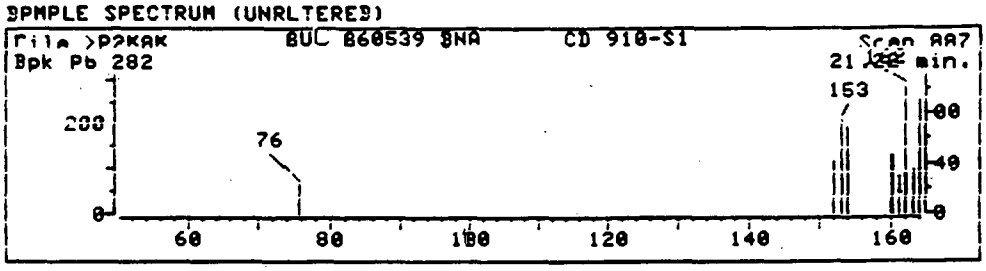
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)




SAMPLE SPECTRUM (UNFILTERED)

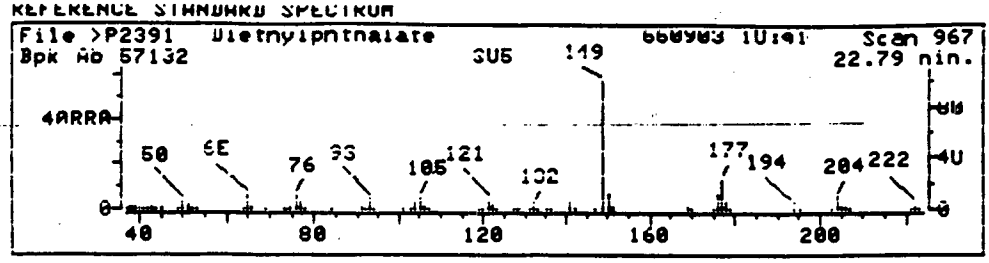



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

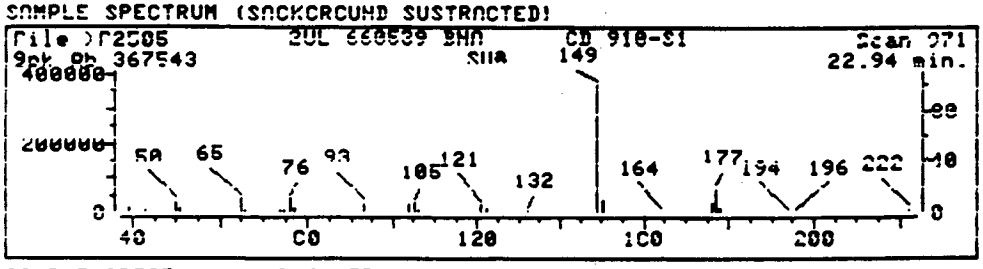
BTL#95

Compound No: 34
Compound Name: Acenaphthene
Scan Number: 887
Retention Time: 21.22 min.
Area: 503
Concentration: .13 NG
a-value: 95

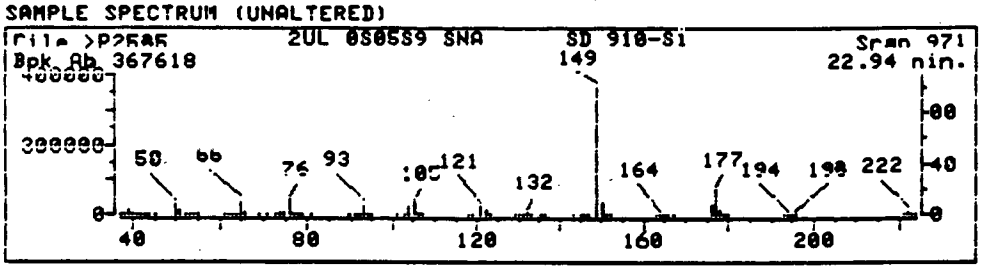
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (SACKGROUND SUBTRACTED)




SAMPLE SPECTRUM (UNALTERED)

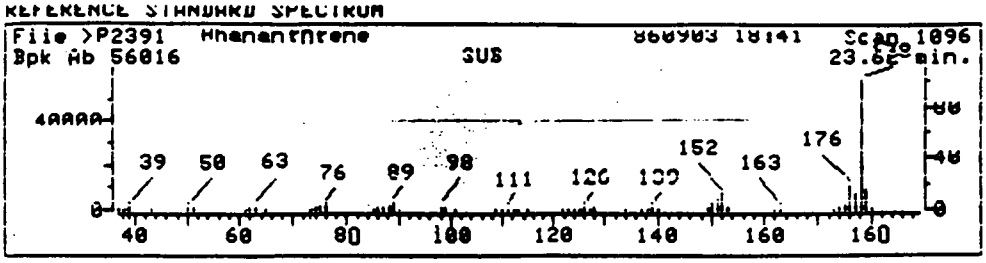



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

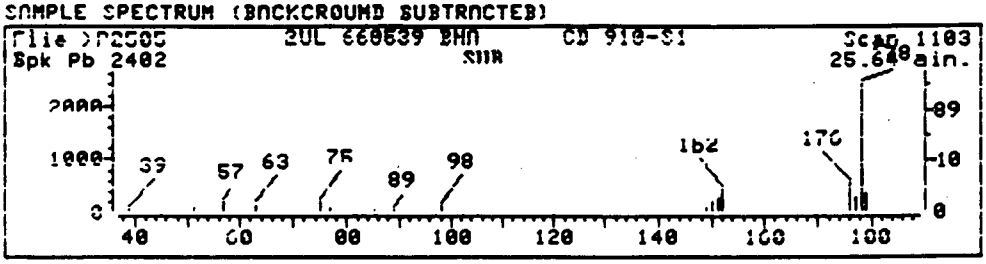
BTL#95

Compound No: 39
Compound Name: Diethylphthalate
Scan Number: 971
Retention Time: 22.94 min.
Area: 1986695
Concentration: 380.81 NG
q-value: 97

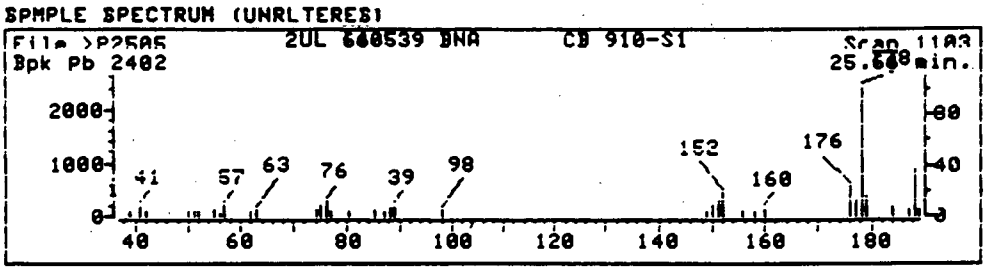
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)




SAMPLE SPECTRUM (UNFILTERED)

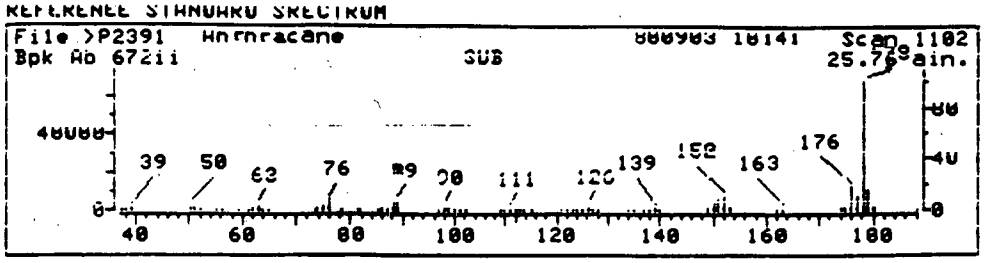



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

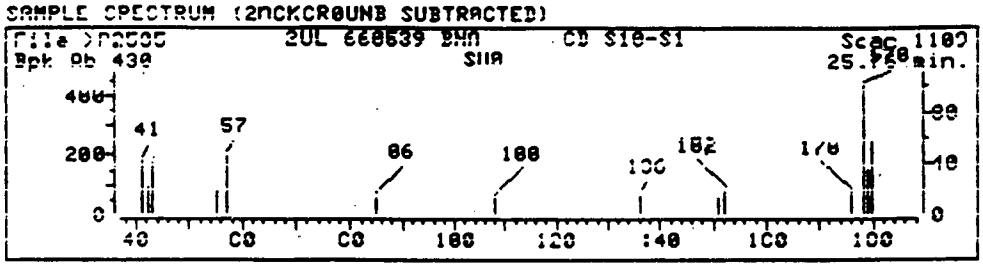
BTL#95

Compound No: 50
Compound Name: Phenanthrene
Scan Number: 1103
Retention Time: 25.64 min.
Area: 5107
Concentration: 1.17 NG
q-value: 51

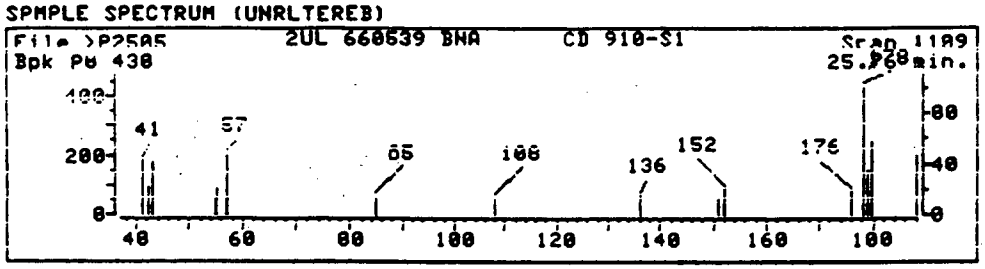
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (2NCKGROUNB SUBTRACTED)



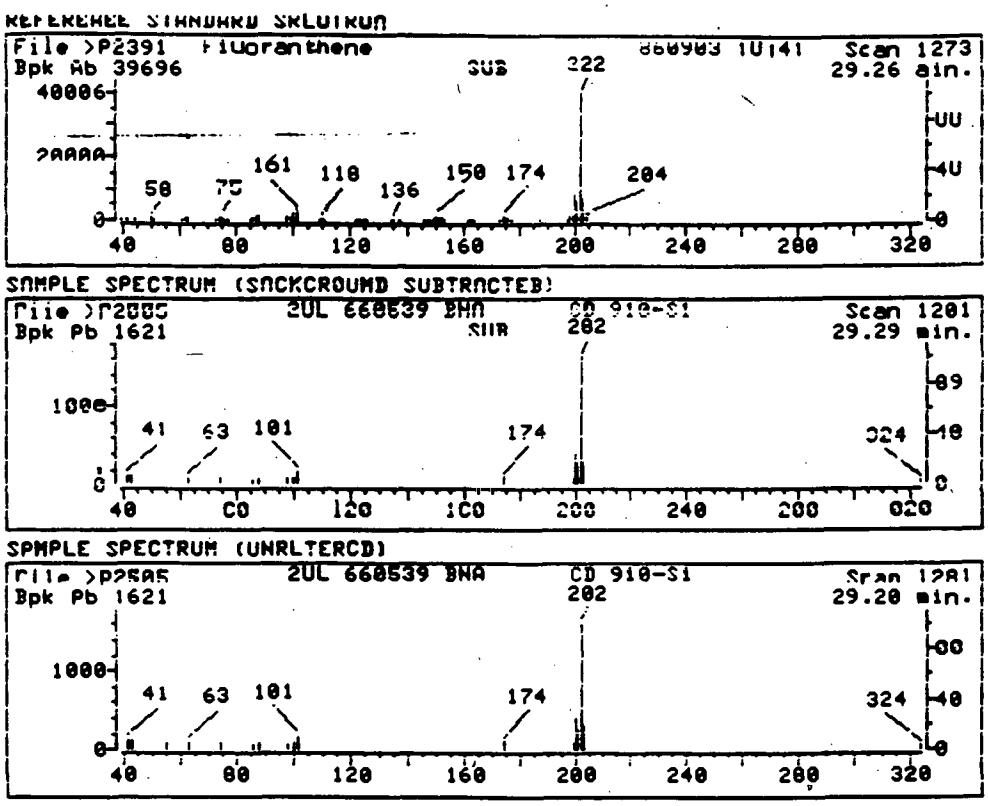

SAMPLE SPECTRUM (UNRLTERED)




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

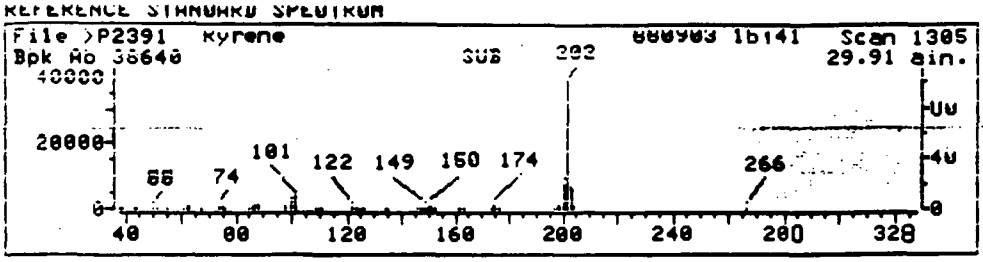



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

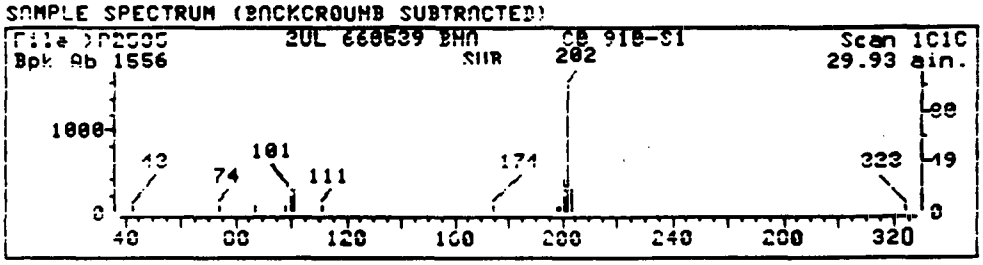
BTL#95

Compound No: 53
Compound Name: Fluoranthene
Scan Number: 1281
Retention Time: 29.28 min.
Area: 4683
Concentration: 1.94 NG
q-value: 60

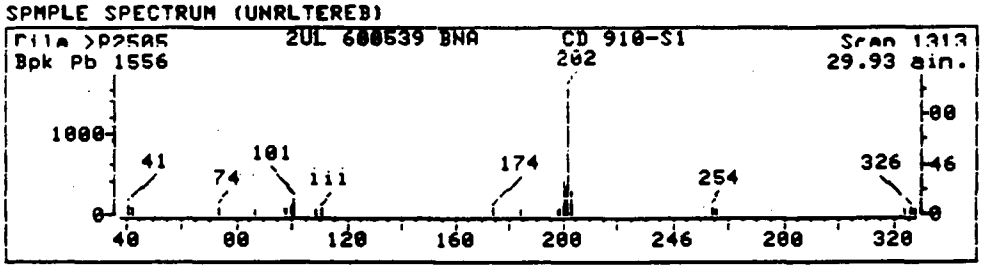
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



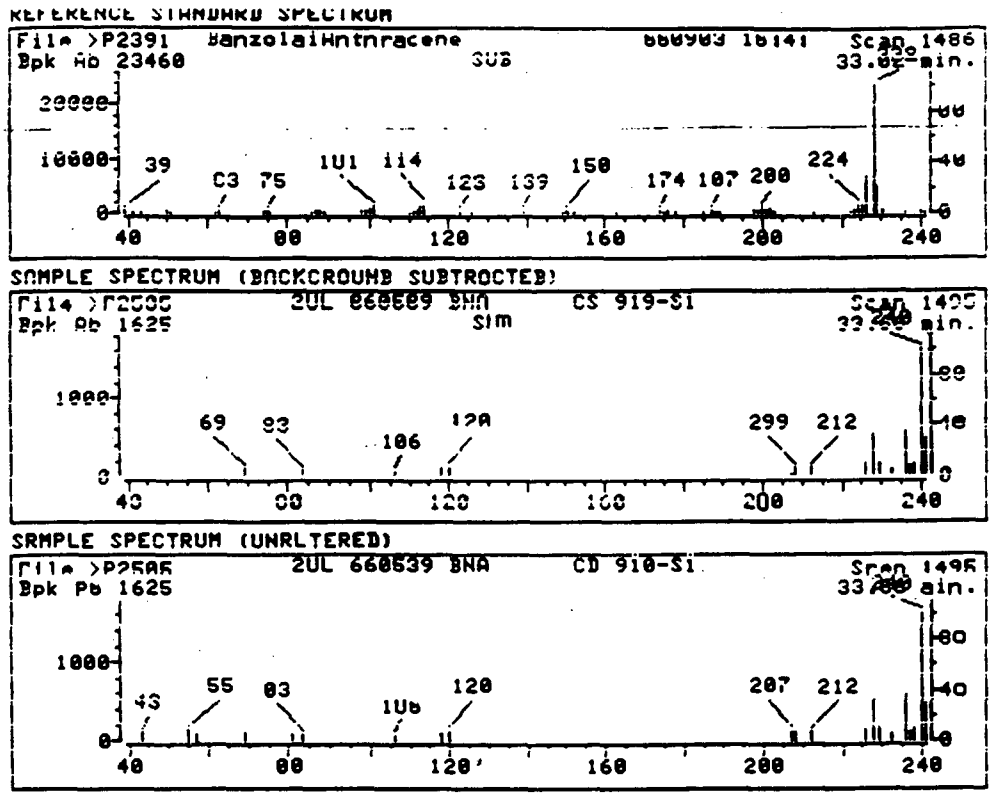

SAMPLE SPECTRUM (UNFILTERED)




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: 57
Compound Name: Pyrene
Scan Number: 1313
Retention Time: 29.93 min.
Area: 4849
Concentration: 1.44 NG
q-value: 46

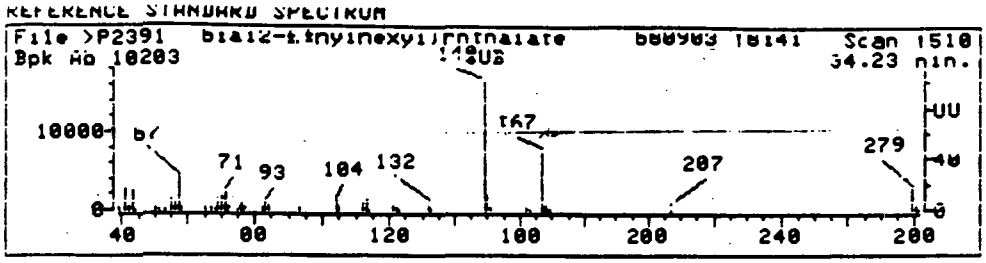



Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

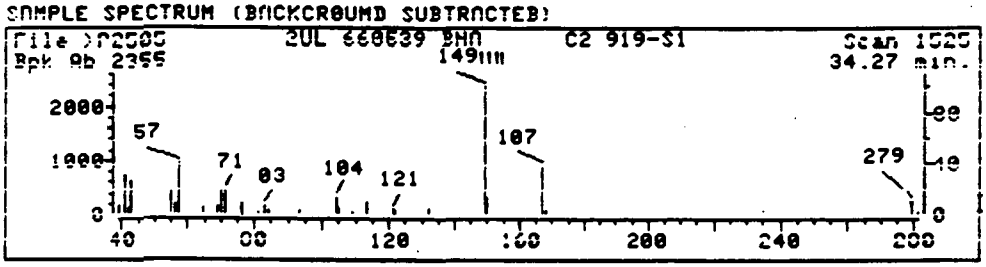
BTL#95

Compound No: 60
Compound Name: Benzo(a)Anthracene
Scan Number: 1495
Retention Time: 33.66 min.
Area: 2315
Concentration: .75 NG
q-value: 84

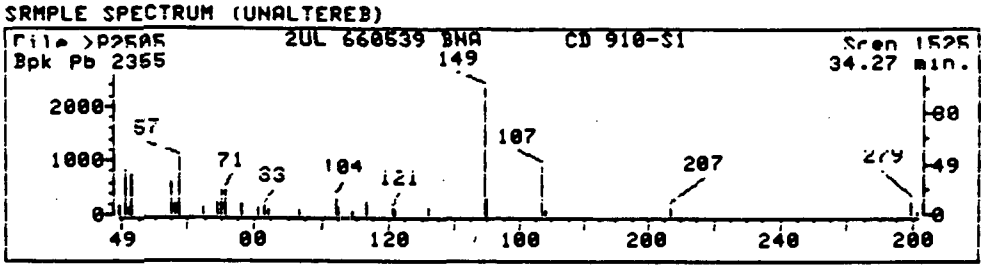
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



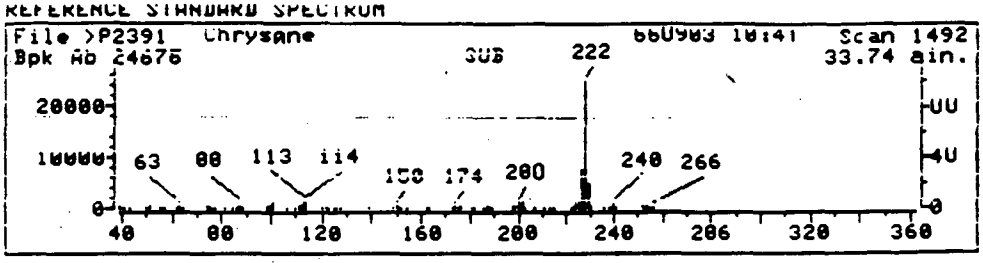

SAMPLE SPECTRUM (UNALTERED)



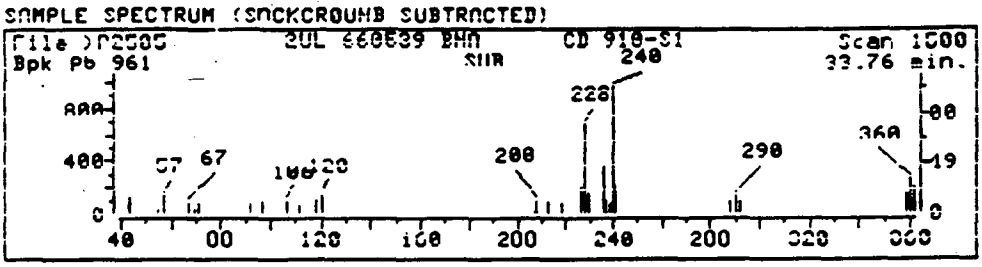

Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1 BTL#95
Quant Time: 861006 23:43
Injected at: 861006 22:58

Compound No: 61
Compound Name: bis(2-Ethylhexyl)Phthalate
Scan Number: 1525
Retention Time: 34.27 min.
Area: 5805
Concentration: 2.18 NG
q-value: 86

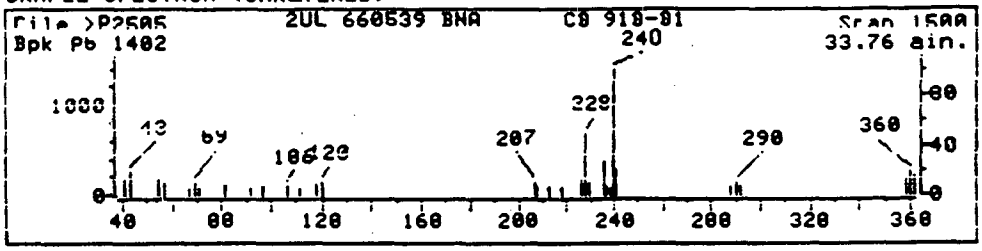
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



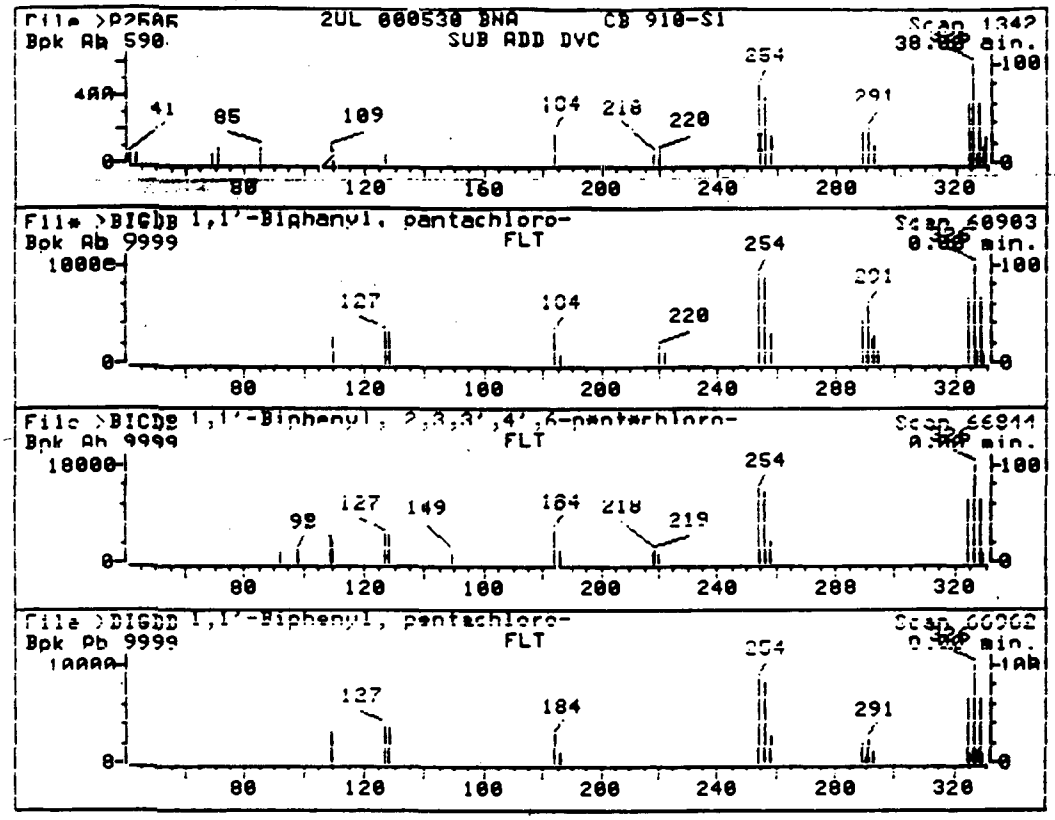

SAMPLE SPECTRUM (UNFILTERED)




Data File: >P2505::D3
Name: 2UL 660539 BNA
Misc: CD 910-S1
Quant Time: 861006 23:43
Injected at: 861006 22:58

BTL#95

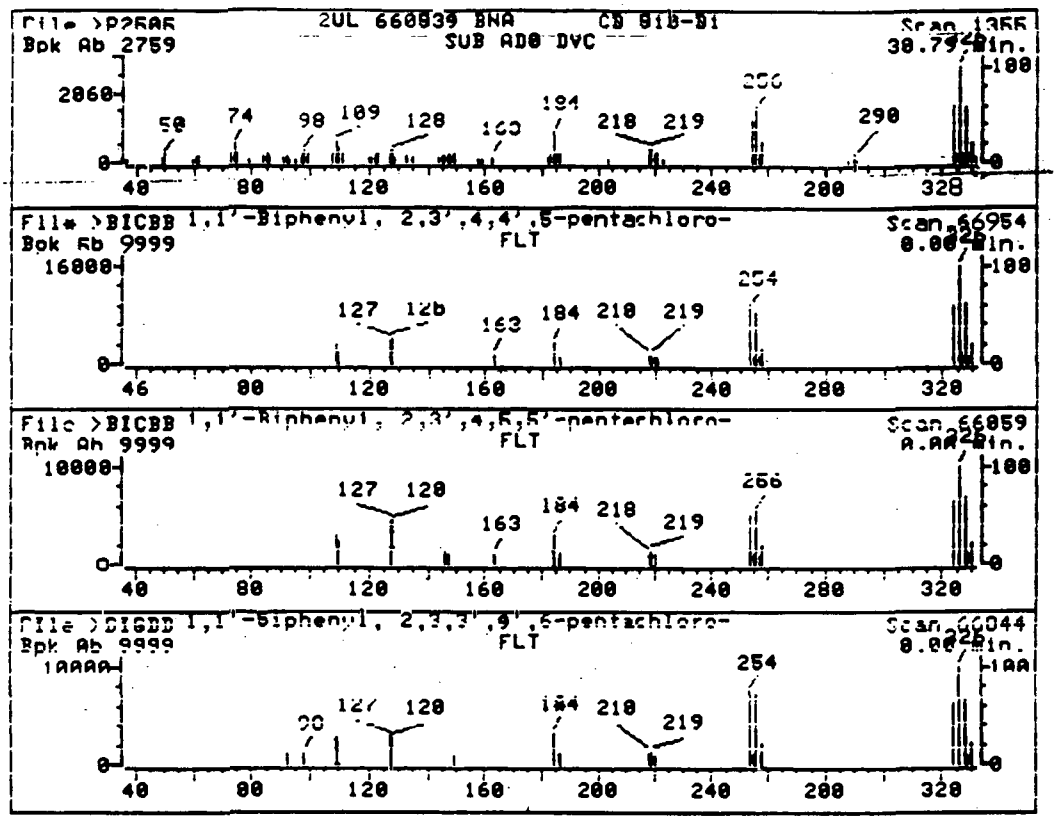
Compound No: 62
Compound Name: Chrysene
Scan Number: 1500
Retention Time: 33.76 min.
Area: 2389
Concentration: .76 NG
q-value: 92




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

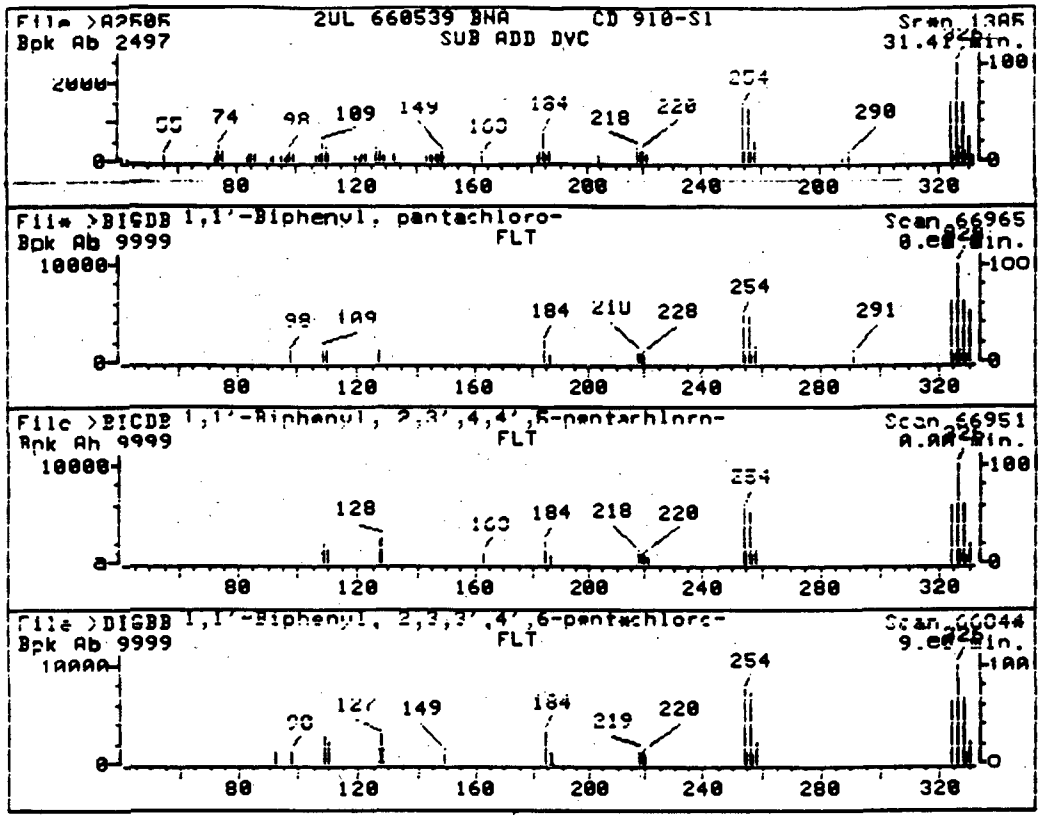
| | Prob. | CAS # | CON # | ROOT | K | DK | #FLG | TILT | % | CON | C I | R IV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | 88* | 25429292 | 66963 | "BIGDB | 85 | 130 | 3 | 0 | 75 | 2 | 65 | 50 |
| 2. | 86* | 38380039 | 66844 | "BIGDB | 107 | 95 | 3 | 0 | 89 | 10 | 59 | 71 |
| 3. | 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

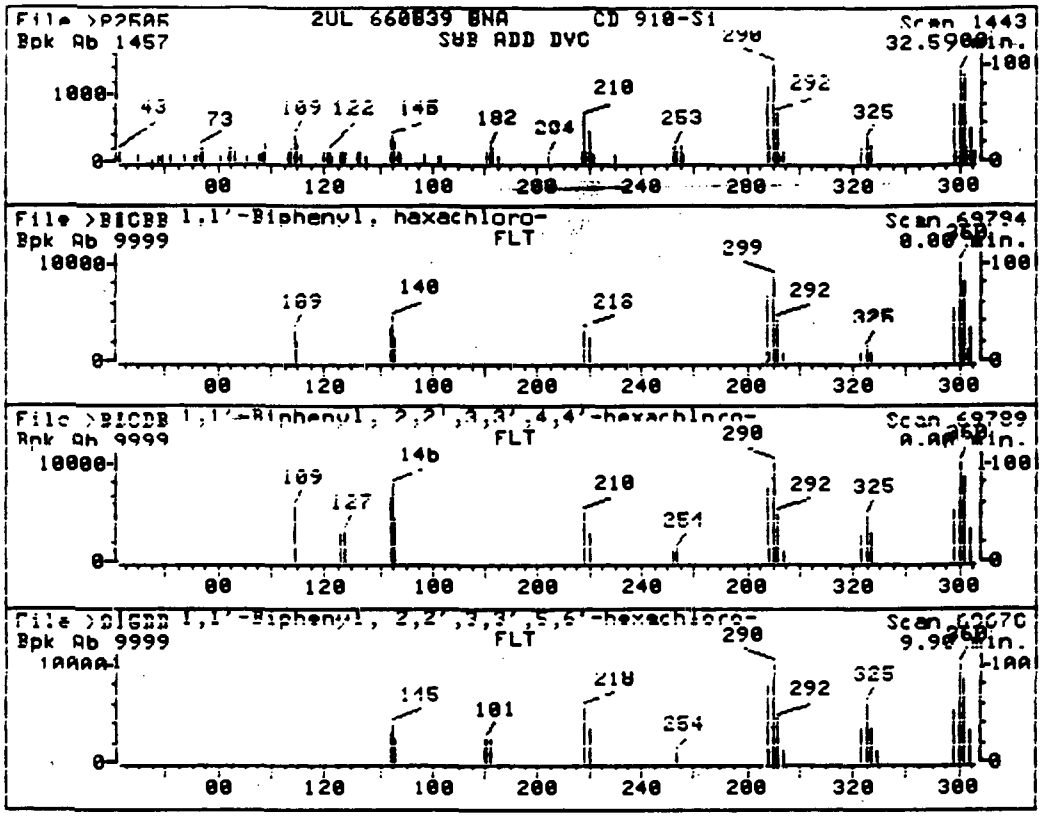
| | Prob. | CAS # | CON # | ROOT | K | DK | #FLG | TILT | % | CON | C I | R IV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | 96* | 31508006 | 66954 | "BIGDB | 131 | 51 | 2 | 0 | 79 | 6 | 68 | 96 |
| 2. | 96* | 68194127 | 66850 | "BIGDB | 134 | 68 | 3 | 0 | 85 | 3 | 72 | 94 |
| 3. | 95* | 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

Samole 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

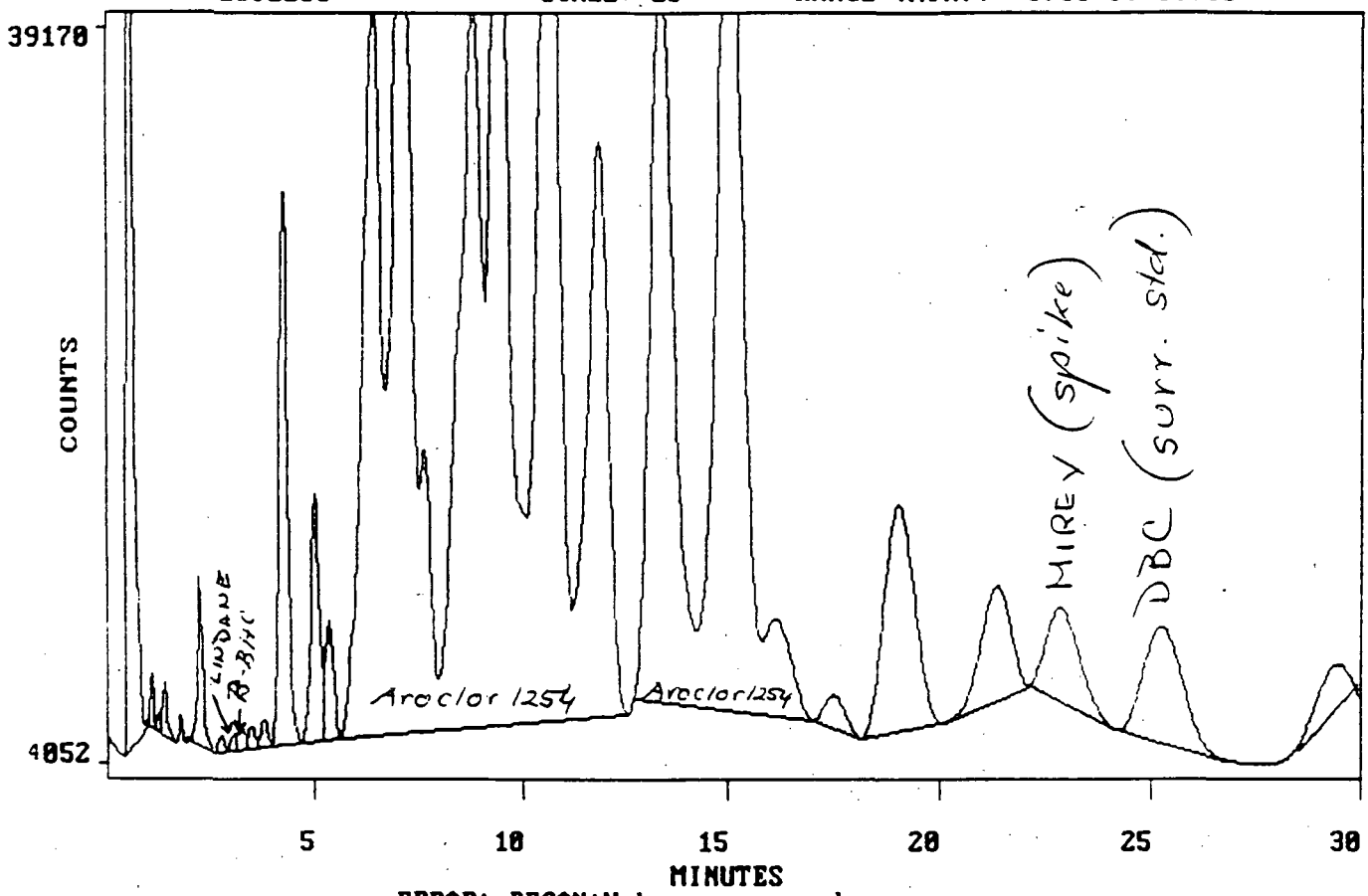
PRIMARY COLUMN

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: PEST2266 SCALE: 25 RANGE (MIN.): 0.03 TO 30.00




ERROR: RECON:Unknown command

Channel # ___ REINT  Time 14 56 05  Date MON 13 OCT 86

Sample name
Data file ..... FEST2266
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 | BE |
| 6 | 2.742 | | | 0.041 | 7907 | 920 | EV |
| 7 | 3.080 | | LINDANE | 0.040 | 7748 | 782 | VV |
| 8 | 3.273 | | A-BHC | 0.064 | 12240 | 967 | VV |
| 9 | 3.489 | | | 0.061 | 11796 | 1081 | VV |
| 10 | 3.787 | | | 0.082 | 15796 | 1324 | VV |
| 11 | 4.250 | | Aldrin? → unknown | 1.871 | 360185 | 26095 | VV |
| 12 | 5.007 | | AROCLOR1254 | 0.365 | 156431 | 11616 | VV |
| 13 | 5.350 | | | 0.381 | 73348 | 5602 | VB |
| 14 | 9.413 | | | 45.317 | 8723570 | 40026 | EE |
| 15 | 15.042 | | | 17.657 | 3398959 | 41827 | ES |
| 16 | 17.513 | | | 0.260 | 50036 | 1526 | BE |
| 17 | 19.064 | | | 2.694 | 519051 | 10487 | EB |
| 18 | 21.355 | | | 1.330 | 255936 | 5270 | EB |
| 19 | 22.860 | | | 1.254 | 241370 | 4372 | BB |
| 20 | 25.265 | | | 1.840 | 354123 | 5375 | BB |
| 21 | 29.545 | | | 0.571 | 109828 | 1790 | BB |

~3000000/100 (subtracted Ar1254)

205

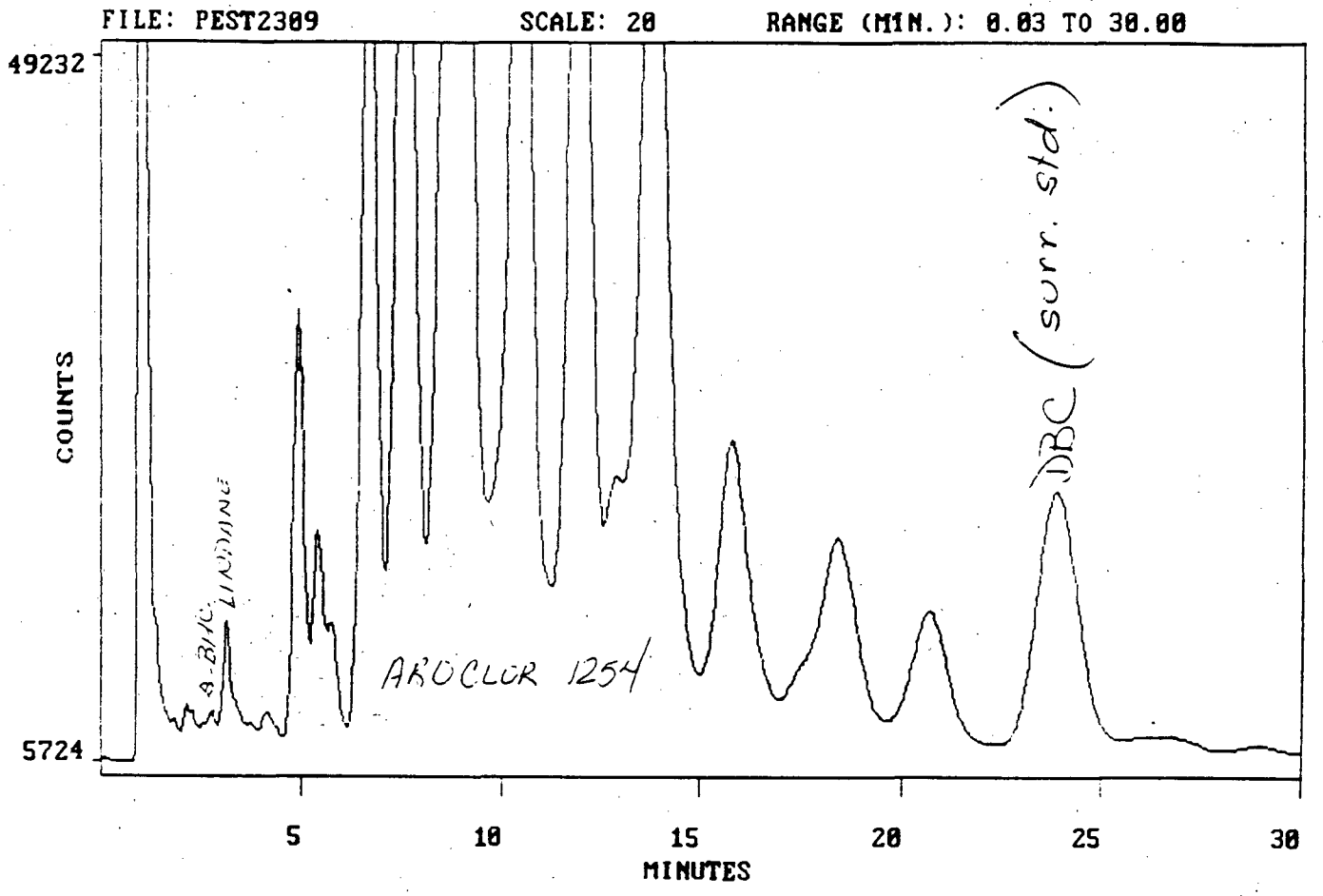
MC540
CD910-S1

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




206
~~156~~

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~~ Column Runs
SECONDARY

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. | SL |
|---|---|---|---|---|---|---|---|
| 1 | 0.098 | | | 0.003 | 1069 | 104 | BB |
| 2 | 1.100 | | | 32.640 | 11245397 | 869548 | BB |
| 3 | 1.846 | | | 0.008 | 2665 | 476 | SB |
| 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 * Aldr RT 2.70 ↓ 140mg/L ↓ Aldrin * <100

207

| | | | | | | |
|---|---|---|---|---|---|---|
| 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

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. 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 | Trichlorofluoromethane | 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 | 67-66-3 | 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 | 108-88-3 | 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

**********
*  *
*  *
**********
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. RFIT | RI or Scan Number | Estimated Concentration (ug/l or ug/kg) |
|---|---|---|---|---|---|---|
| 1. | | Unknown (Carbon Dioxide) | | | 12 | 320B |
| 2. | | Unknown | | | 228 | 110 |
| 3. | 550-21-4 | Trimethylpentane | 89 | 87 | 576 | 30 |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |
| 9. | | | | | | |
| 10. | | | | | | |
| 11. | | | | | | |
| 12. | | | | | | |
| 13. | | | | | | |
| 14. | | | | | | |
| 15. | | | | | | |
| 16. | | | | | | |
| 17. | | | | | | |
| 18. | | | | | | |
| 19. | | | | | | |
| 20. | | | | | | |
| 21. | | | | | | |
| 22. | | | | | | |
| 23. | | | | | | |
| 24. | | | | | | |
| 25. | | | | | | |
| 26. | | | | | | |
| 27. | | | | | | |
| 28. | | | | | | |
| 29. | | | | | | |
| 30. | | | | | | |

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. 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 | 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 | 3000J | 1103 |
| 105-67-9 | 2,4-Dimsthylphenol | 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-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 | 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 | 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 Nb. 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. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
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| 29. | | | | | |
| 30. | | | | | |

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. 660544
Date Extracted: 9/18/86
Date Analyzed: 10/7/86
Type: Misc. - Tier I
Point: S-2
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 | 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 |
| 68-57-1 | 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 | S0U |
| 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

**********
*  *
**********
S.C. McLendon, P.E.
Laboratory Director

Lab Name : H2M LABS

ORGANICS ANALYSIS DATA SHEET

| Sample Number |
|---|
| 660544 |

NJDEP #CD910-S2
Run 2268

Tentatively Identified Compounds

| C.A.S. Number | Compound Name | % Probability Fit | % Probability REF | 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 |
| 11. | | | | | |
| 12. | | | | | |
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| 27. | | | | | |
| 28. | | | | | |
| 29. | | | | | |
| 30. | | | | | |

Date Reported: 10-16-86

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.
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-S2
NJDEP SAMPLE POINT I.D. ISOIL 2
SOIL SAMPLE

| PARAMETER | RESULT | PARAMETER | RESULT |
|---|---|---|---|
| ANTIMONY | <12.9 N | SELENIUM | 1.70 S N |
| ARSENIC | 15.9 | SILVER | 2.40 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 | <4.70 |
| 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)

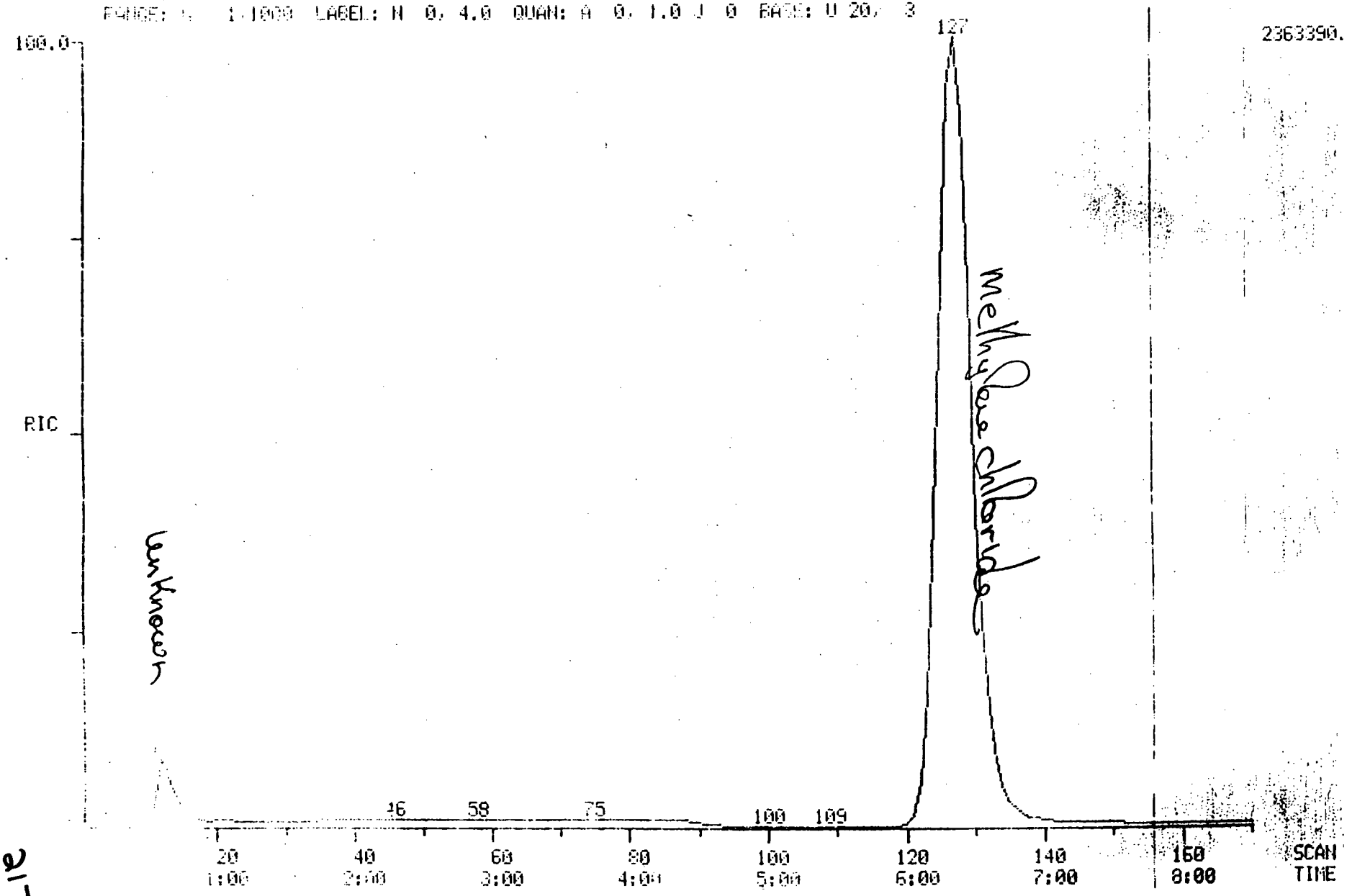
DATE REPORTED 10/ 8/86

S. C. McLENDON, P.E., LABORATORY DIRECTOR

THE LIABILITY OF H2M CORP. SHALL BE LIMITED TO THE PRICE OF THE SERVICE RENDERED AND PAID.

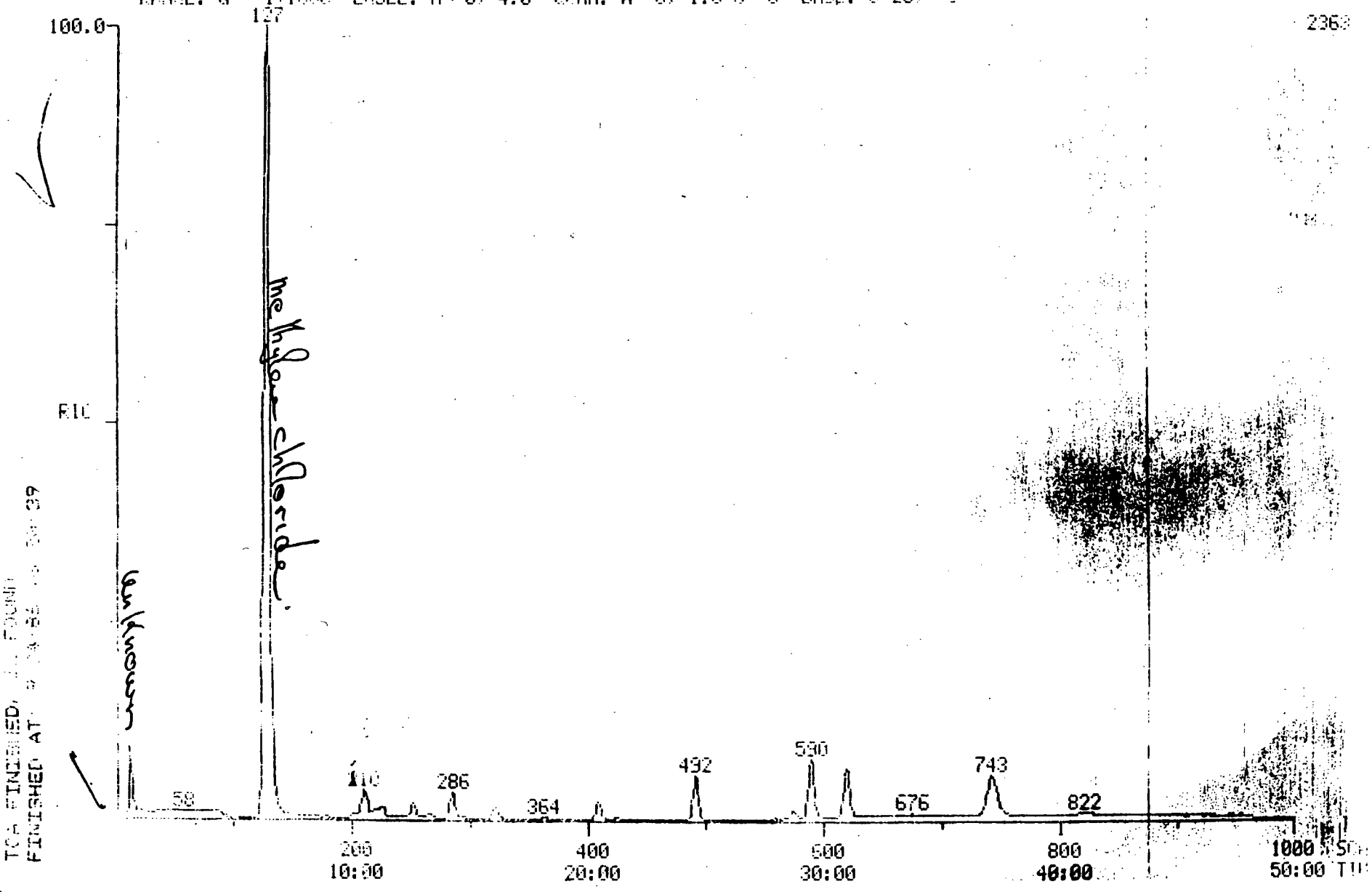
RIC
03/25/86 19:18:00
SAMPLE: 850542
CONDS.:
RANGE: 1 1.0000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: PU6433 #409 SCANS 1 TO 170
CALI: PU6433 #2




L17

DATA: PU6433 #1 SCANS 1 TO 1000
CALI: PU6433 #2
SAMPLE: 660542
COMMS.:
RANGE: G 1.1000 LABEL: M 0. 4.0 QUAN: A 0. 1.0 J 0 BACK: U 20. 3




TOA FINISHED, [illegible] FOUND
FINISHED AT [illegible]

QUANTITATION REPONT FILE: PU6433

DATA: PU6433.TI
09/26/86 19:18:08
SAMPLE: 660542
COND5:
SUBMITTED BY NJDEP 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-OICHLOROETHENE (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-DICHLOROPPOPENE(Z) |
| 31 | 2-CHLOROETHYLVINYLETHER(NN) |
| 32 | BROMOFORM(P) |
| 33 | CHLOROBENZENE-D5 (INT. STD) |
| 34 | 2-HEXANONE(MEK) |
| 35 | 4-METHYL-2-PENTANONE(MIEK) |
| 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(MDCB) |
| 45 | ORTHO-DICHLOROBENZENE(ODCB) |
| 46 | PARA-OICHLOROBENZENE(POCB) |
| 47 | D8-TOLUENE(SURR. STD) |
| 48 | BROMOFLUORBENZENE(SURR. STD) |

No. / Rt. Time Fac. RRT Meth. Area/Height Amount Tot.

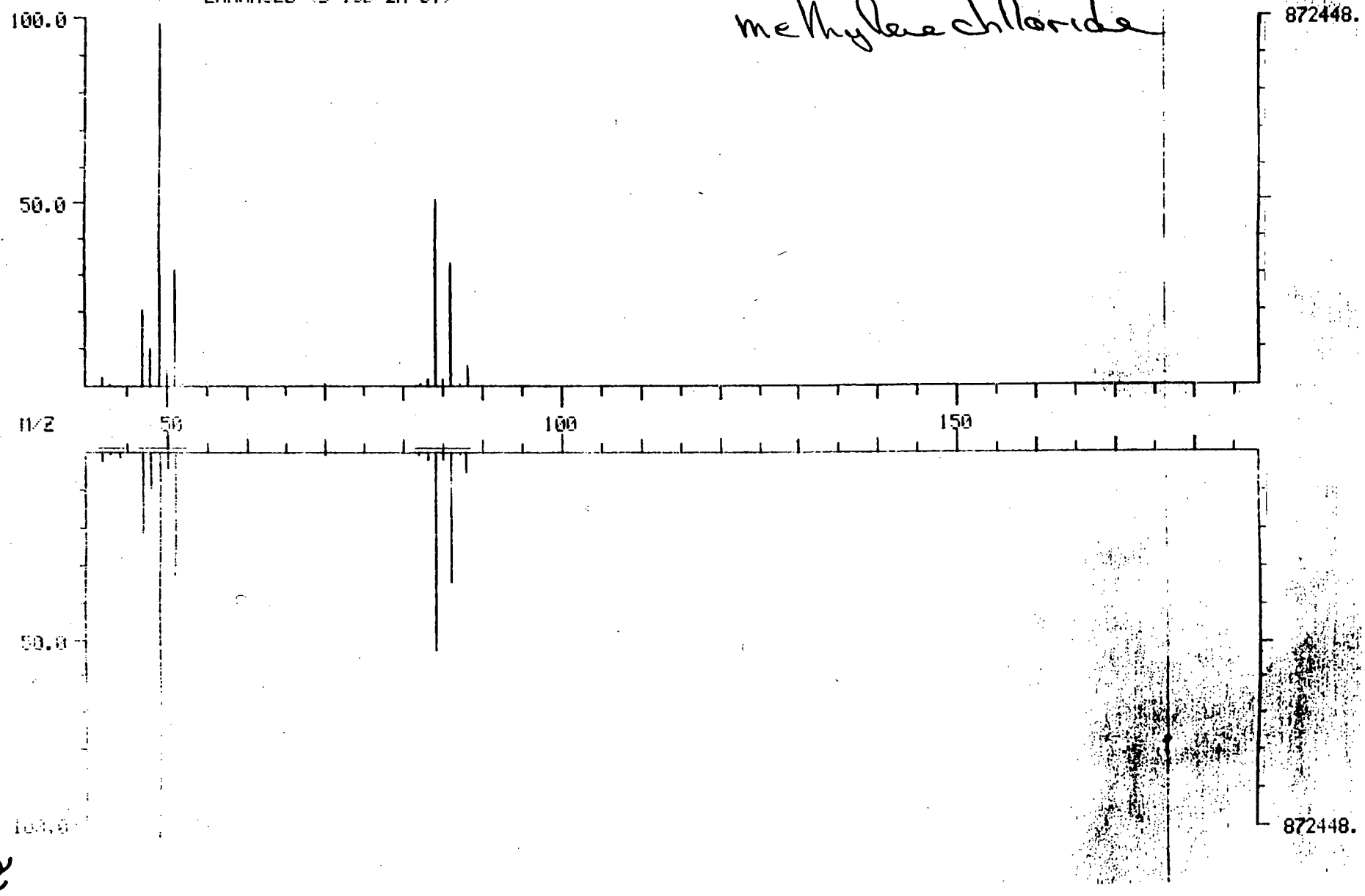
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | NOT FOUND | | | | | | | | | |
| 5 | NOT FOUND | | | | | | | | | |
| 6 | NOT FOUND | | | | | | | | | |
| 7 | 84 | 127 | 6:21 | 1 | 0.605 | A BB | 2647650. | 5969.010 | NG | 67.04 |
| 8 | 43 | 150 | 7:30 | 1 | 0.714 | A BB | 19833. | 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 |
| 35 | 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 | 2.[illegible] |
| 48 | 95 | 742 | 37:09 | 33 | 1.198 | A BB | 204752. | 232.605 | NG | 2.[illegible] |

FINAL MASS SPECTRUM
[illegible] 15:18:00 + 6:21
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #127
CALI: PU5433 #2

BASE M/Z: 49 49
TIC: 2285560./ 2363330.

methylene chloride

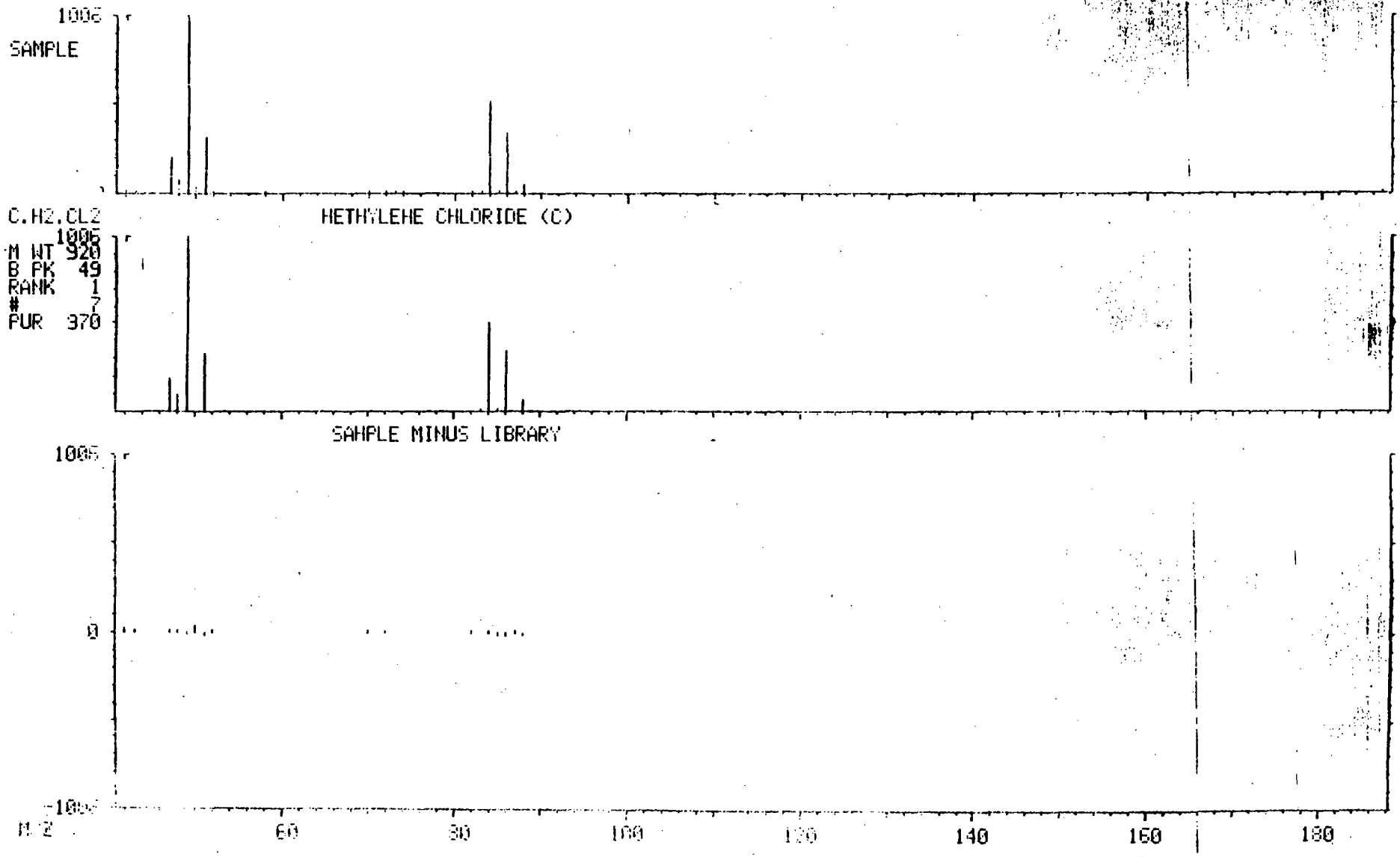



RE

LIBRARY SEARCH
03/26/86 19:18:00 + 6:21
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6433 # 127
CALI: PU6433 # 2

BASE M/Z: 49
RIC: 2285560.

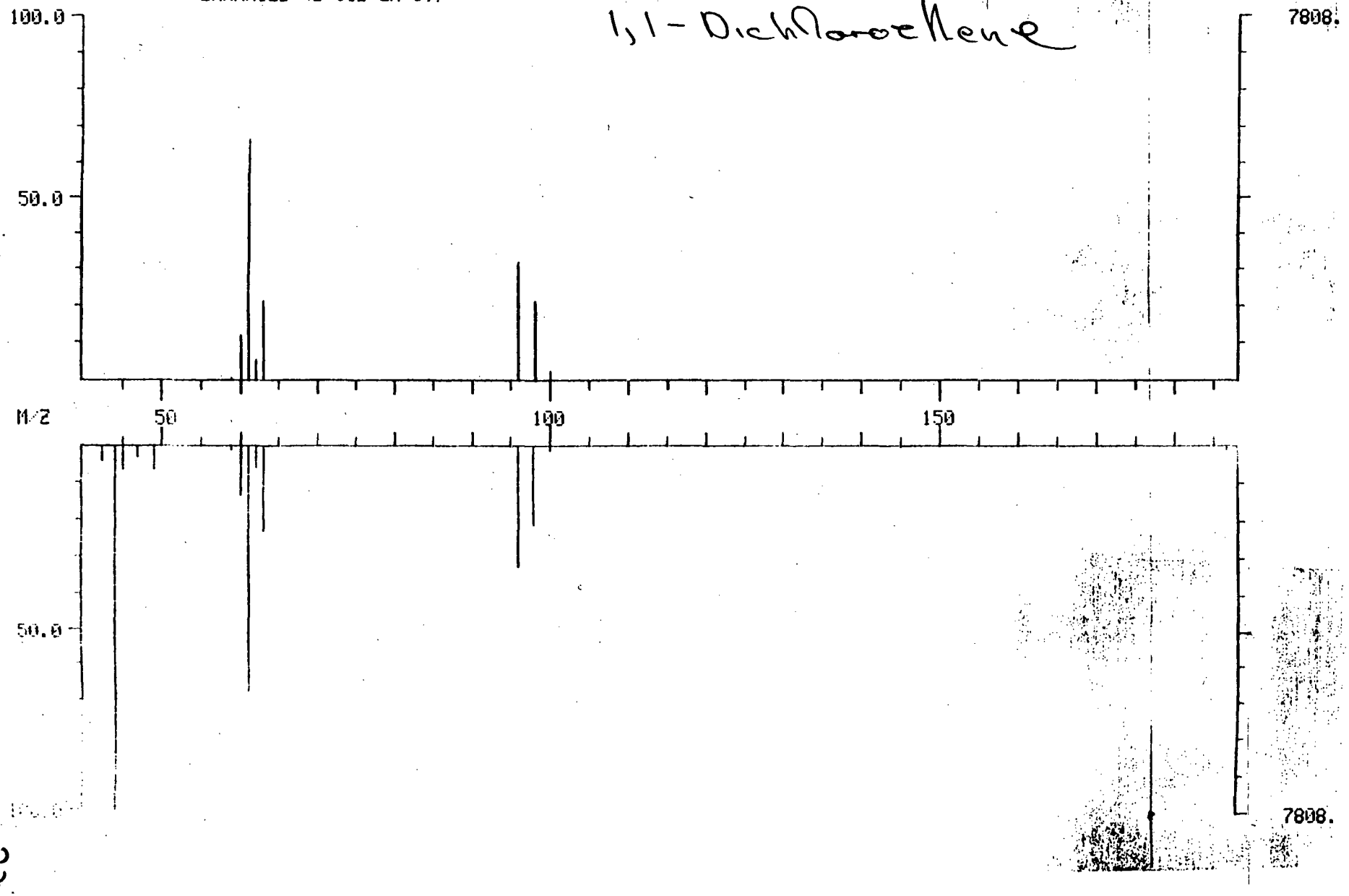


DUAL MASS SPECTRUM
[illegible] 12:10:00 + 10:03
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 1201
CALI: PU6433 1 2

BASE M/Z: 61/ 44
RIC: 12607./ 22527.

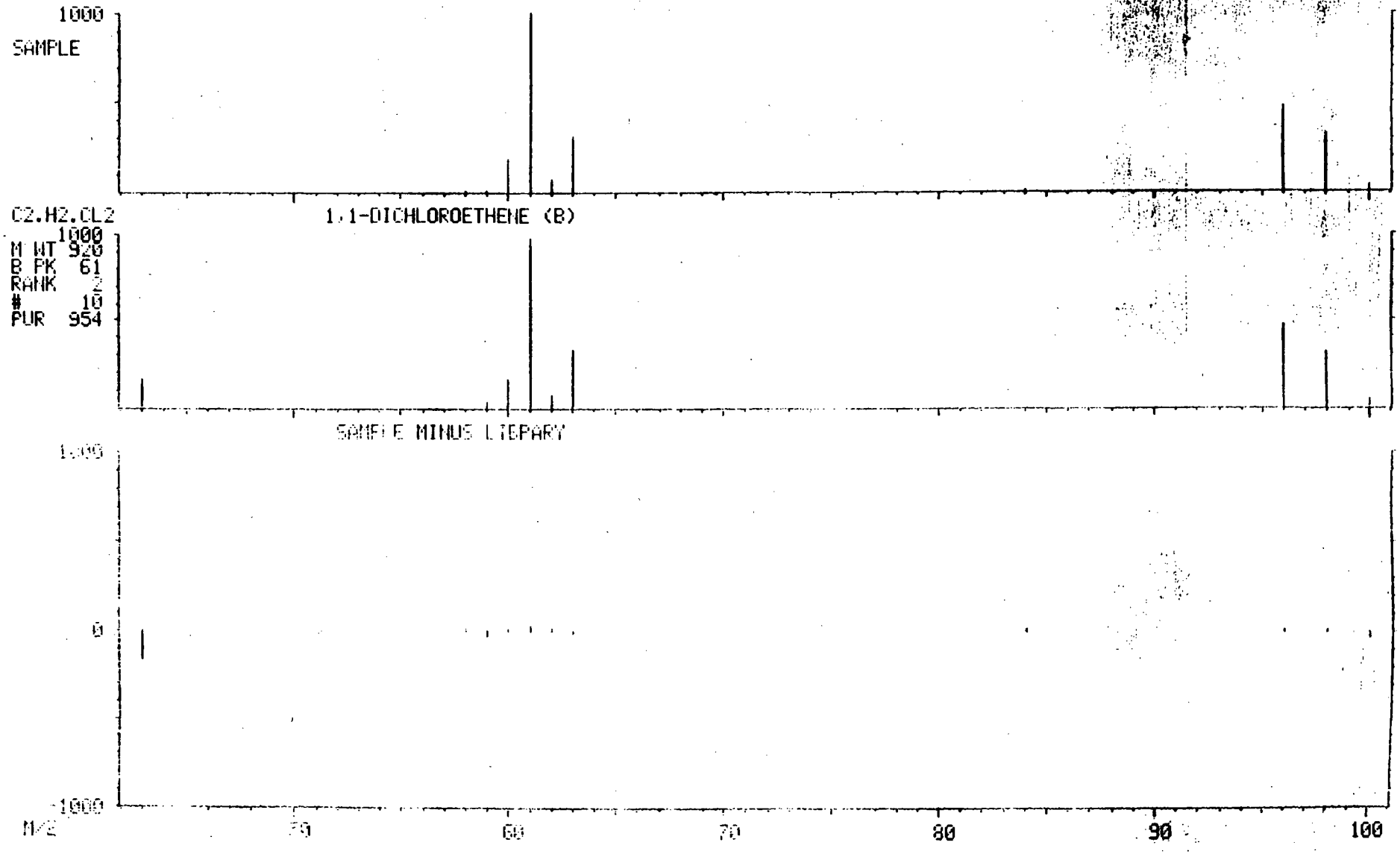
1,1-Dichloroethene



LIBRARY SEARCH
09/25/86 13:18:00 + 10:03
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 # 201
DATA: PU6433 # 2

BASE M/Z: 61
RIC: 12607.



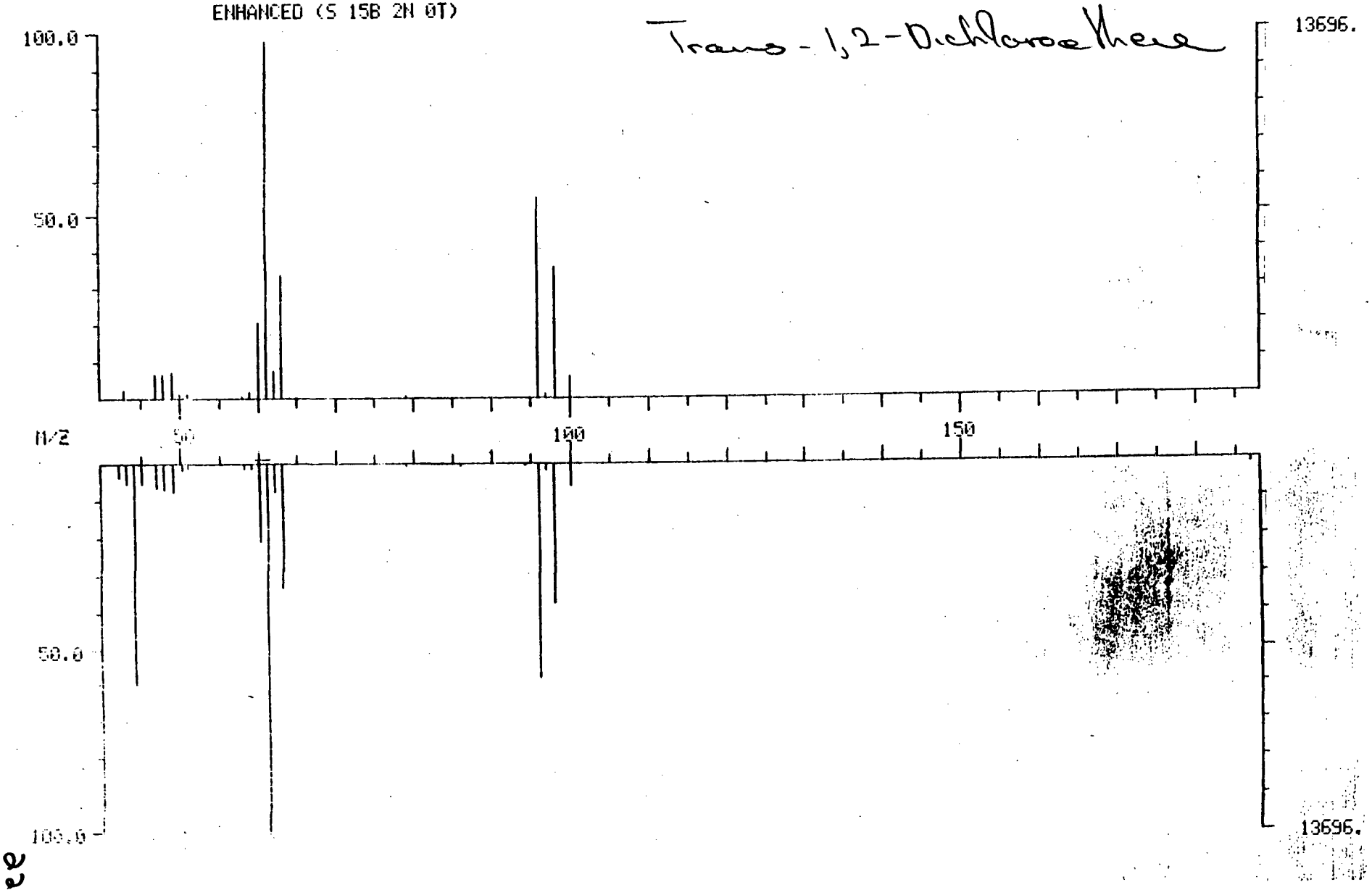

24

DUAL MASS SPECTRUM
09/26/86 19:18:00 + 12:36
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #252
CALI: PU6433 #2

BASE M/Z: 61/ 61
PIC: 39359./ 50303.

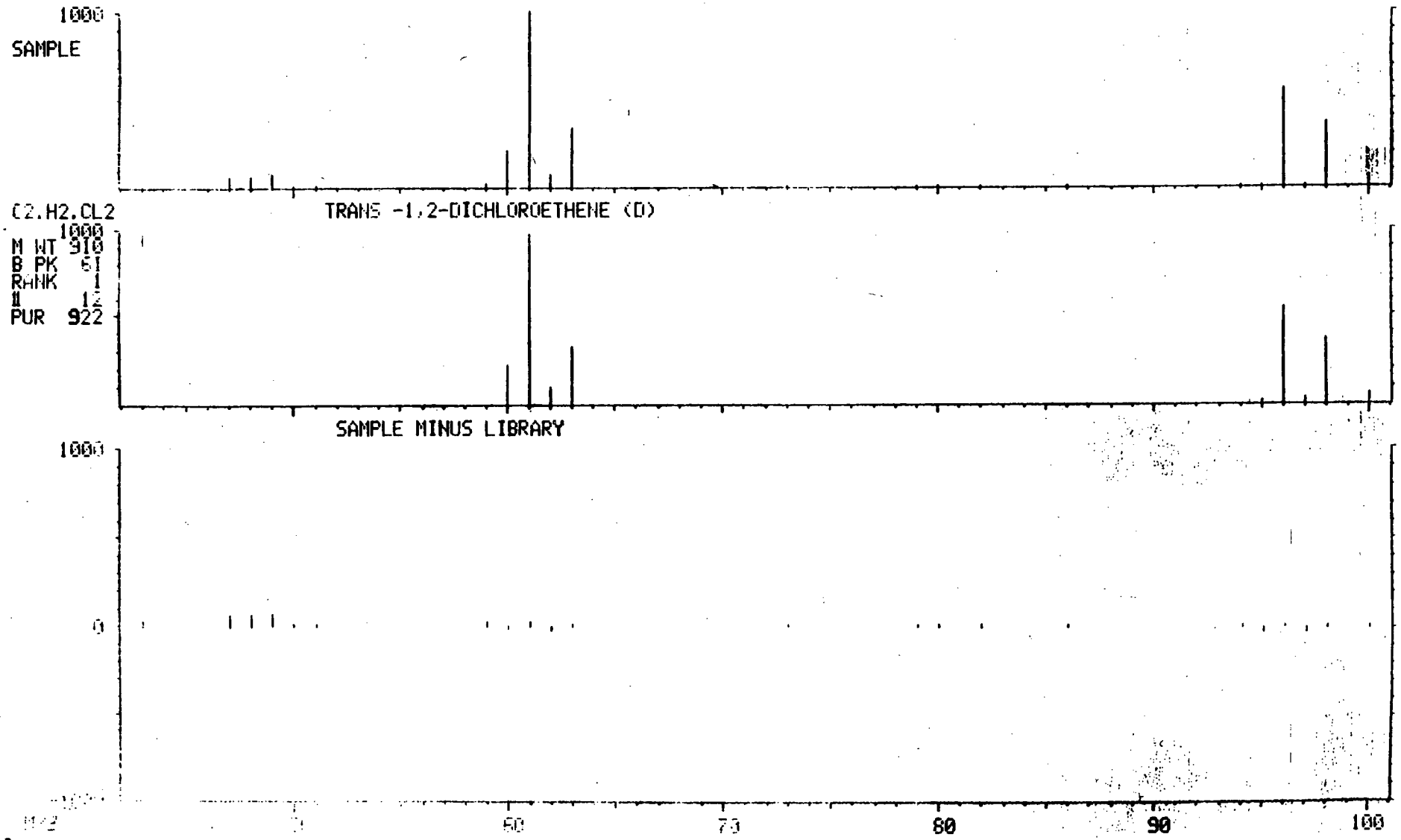
Trans-1,2-Dichloroethene



LIBRARY SEARCH
[illegible] + 12:36
SAMPLE: [illegible]
[illegible]:
ENHANCED (5 15B 2N OT)

DATA: FU6433 # 252
CALI: FU6433 # 2

BASE M/Z: 61
RIC: 39295.

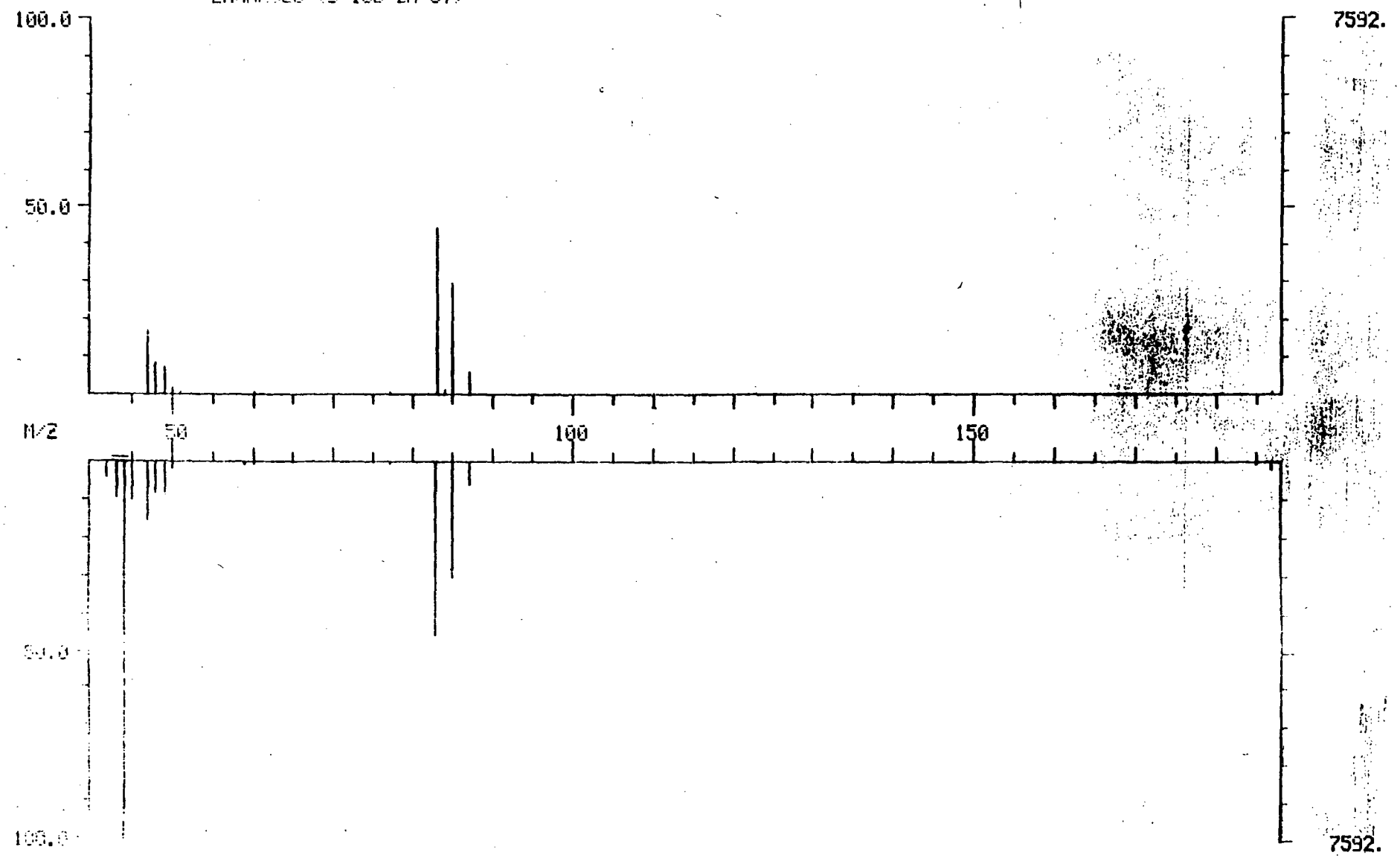


DUAL MASS SPECTRUM
03/26/86 19:18:03 + 13:18
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #266
CAL: PU6133 #2

BASE M/Z: 83/ 44
RIC: 8958. 18559.

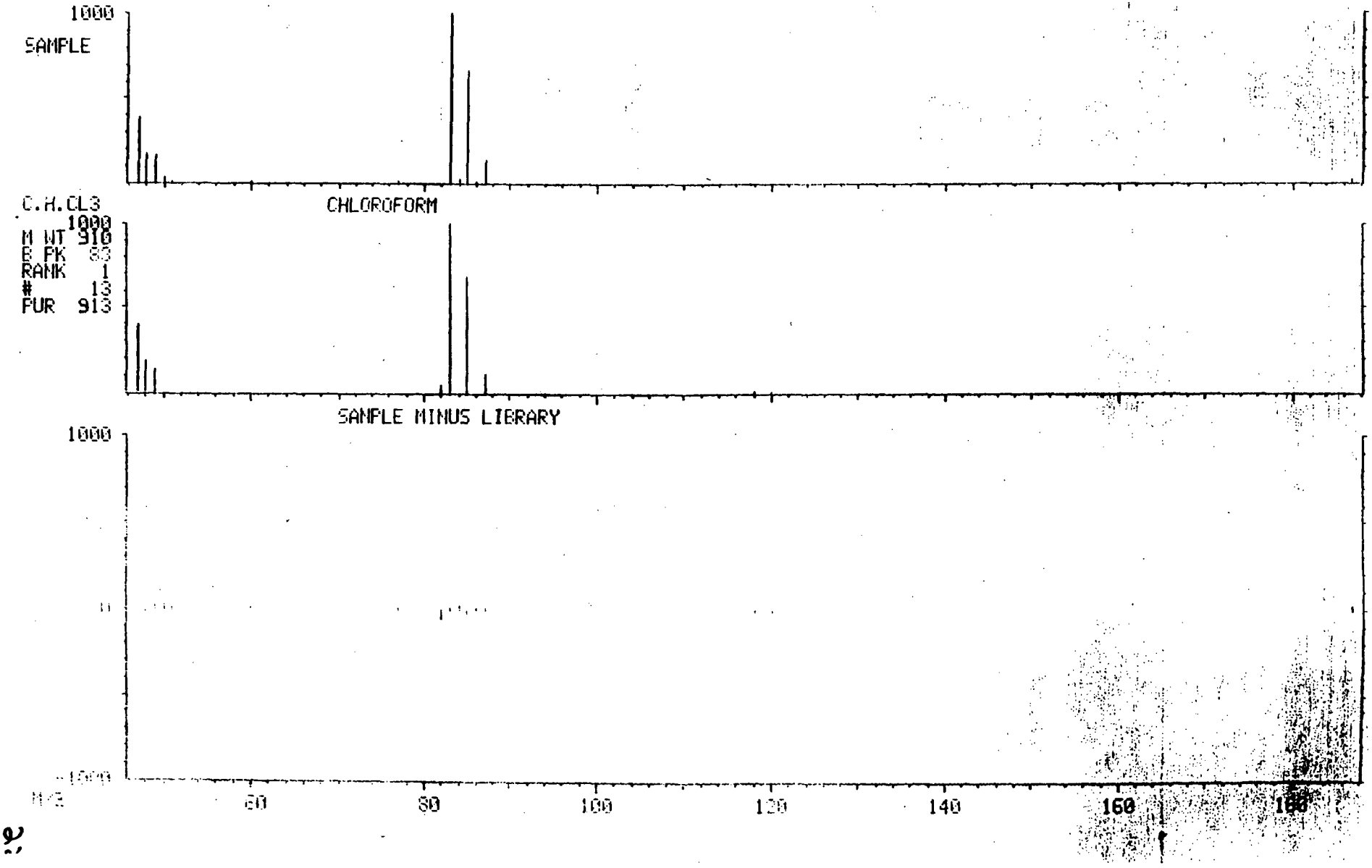
Chloroform



LIBRARY SEARCH
03/26/85 19:18:20 + 13:13
SAMPLE: 000542
CONDS.:
ENHANCED (S 15B 2N 0T)

Data: PU6433 # 285
Lib: PU6433 # 2

BASE M/Z: 83
RIC: [illegible]

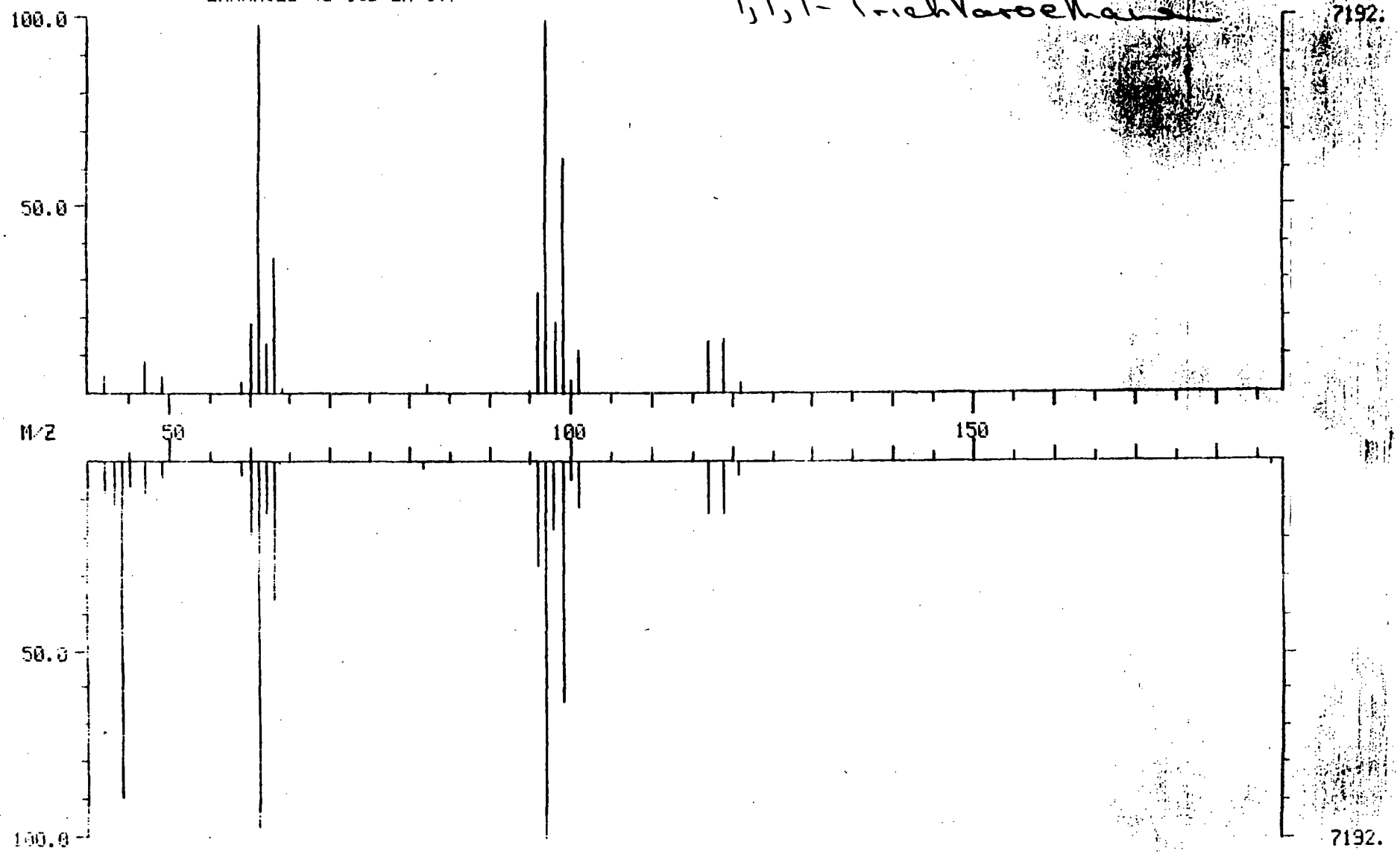


DUAL MASS SPECTRUM
09/28/86 19:18:09 + 16:05
SAMPLE: [illegible]
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: FUE433 #322
[illegible]: FUE433 #2

BASE M/Z: 97/ 97
RIC: 31371./ 39999.

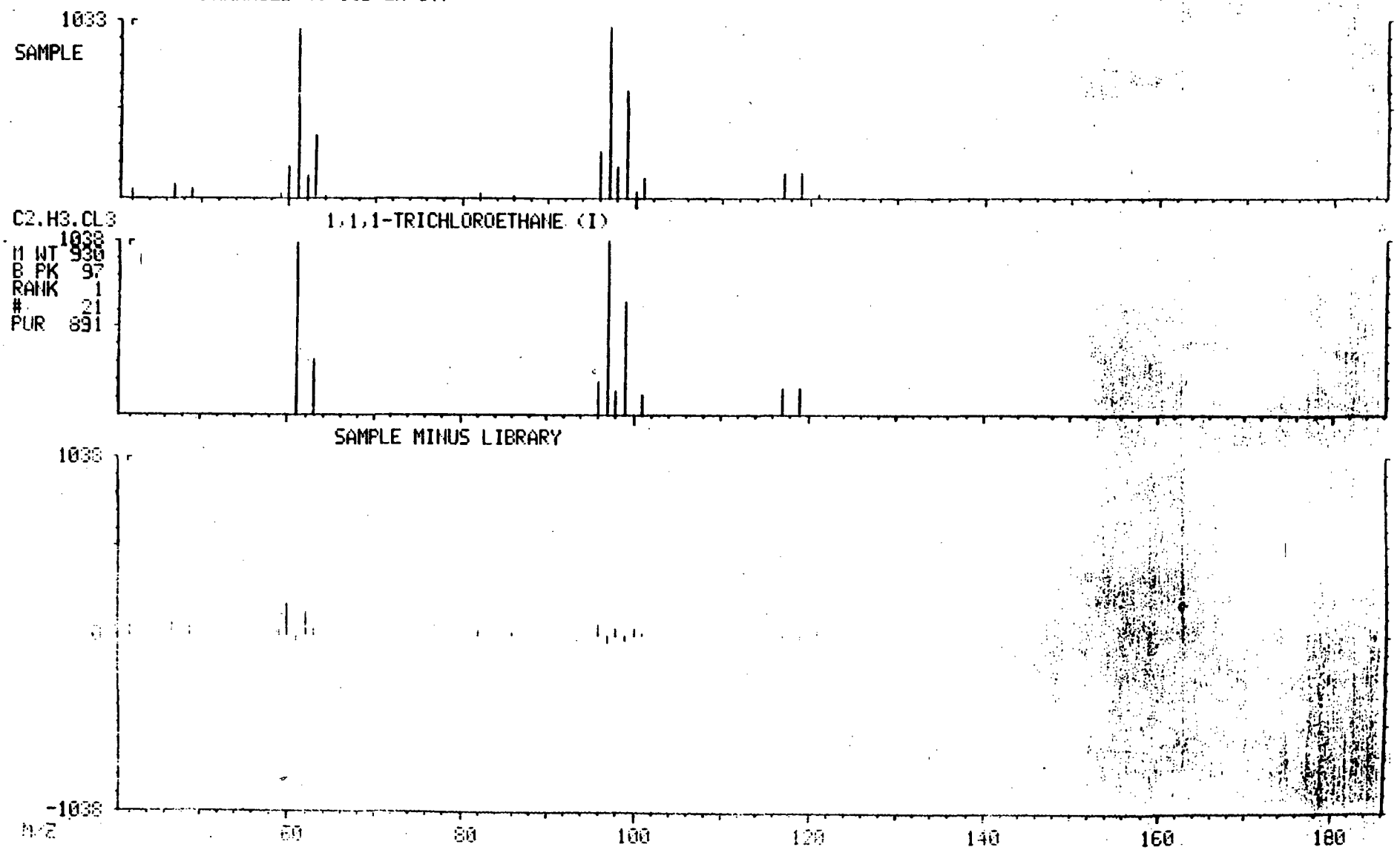
1,1,1-Trichloroethane



LIBRARY SEARCH
09/26/86 19:18:00 + 16:06
SAMPLE: 860542
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6433 # 322
CALI: PU6433 # 2

BASE M/Z: 97
RIC: 31839.

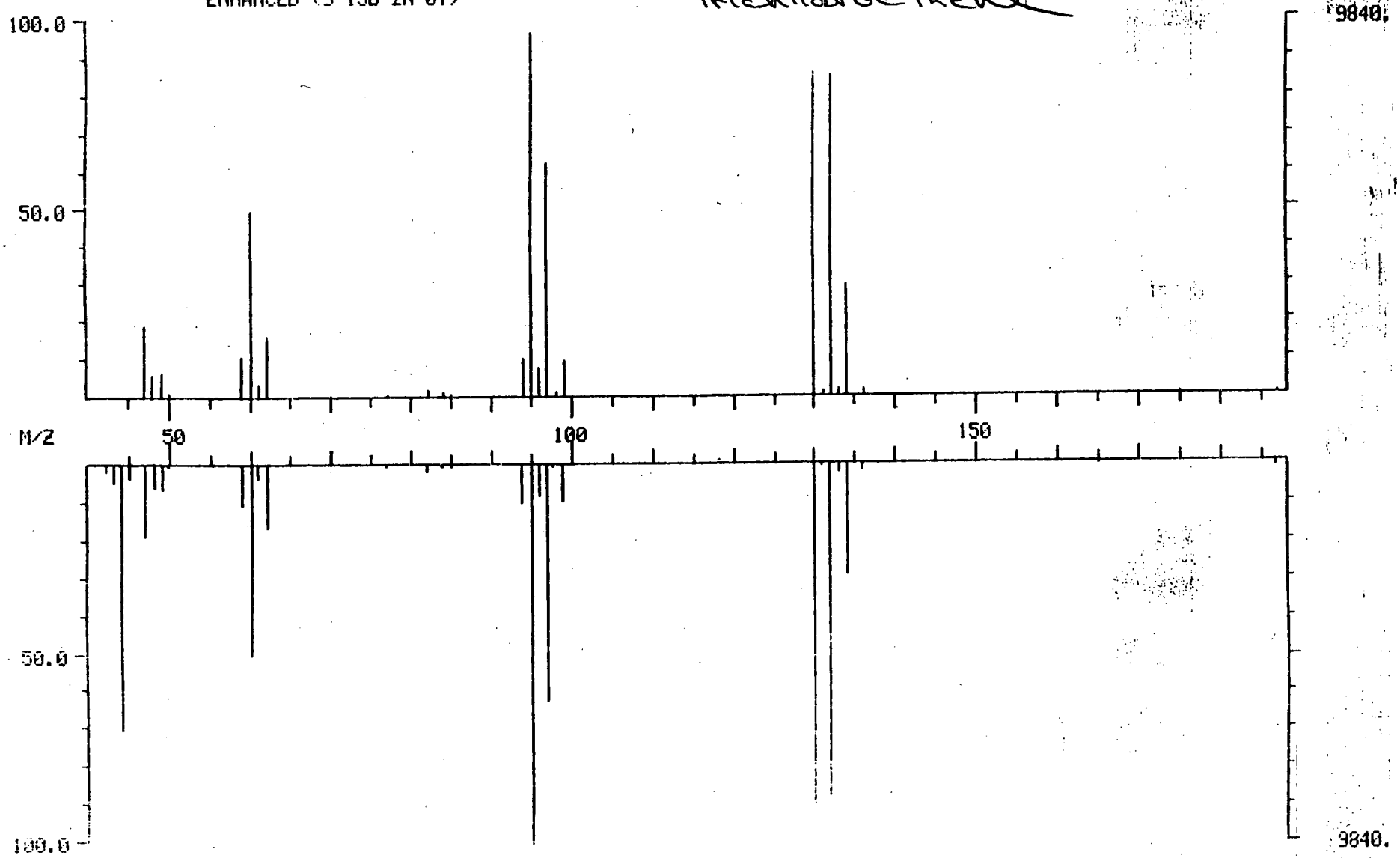


DUAL MASS SPECTRUM
09/26/86 19:18:00 + 20:27
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #409
CALI: PU6433 #2

BASE M/Z: 95/ 95
RIC: 50175./ 59879.

Trichloroethene

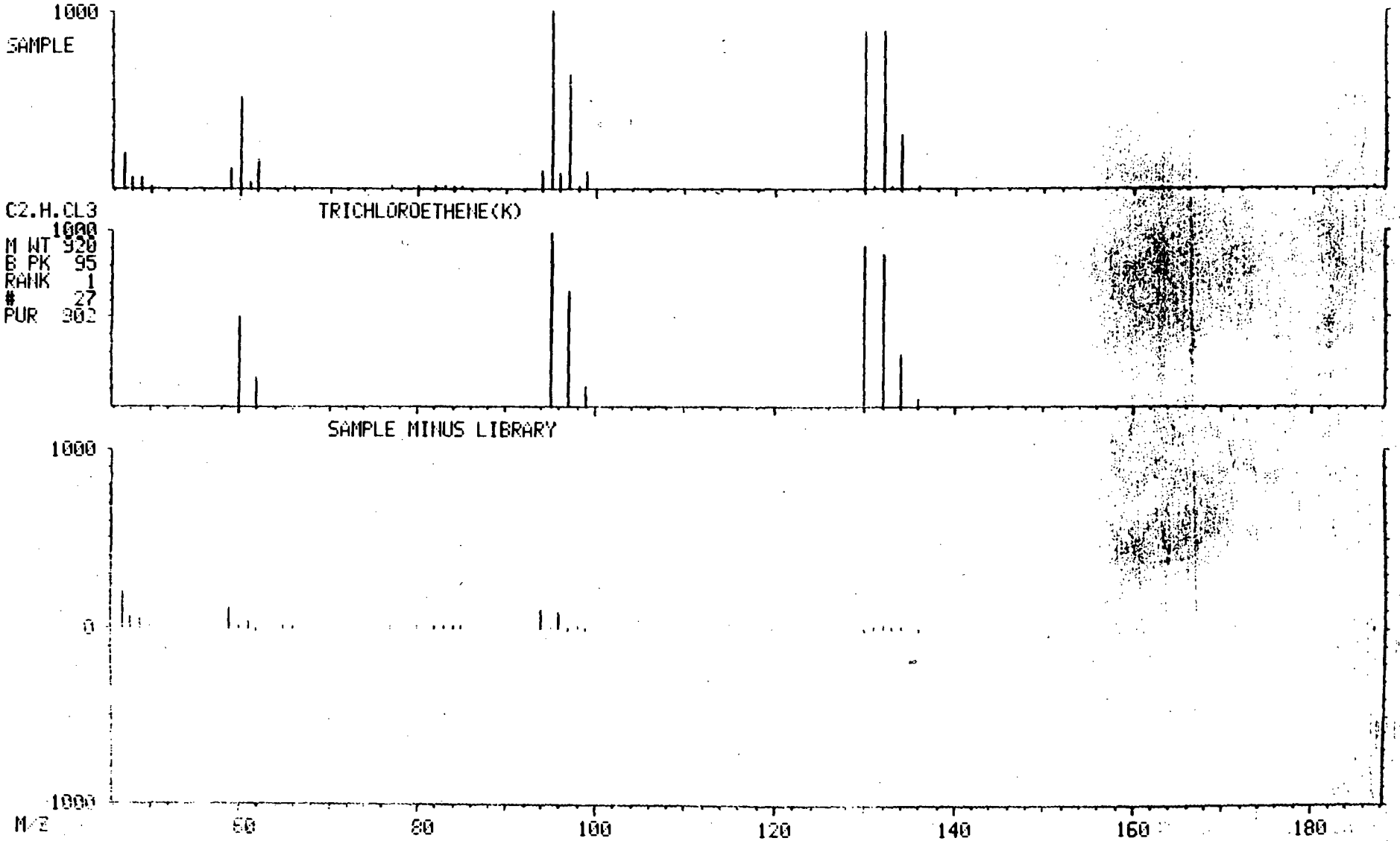



23

LIBRARY SEARCH
03/26/85 19:18:00 + 20:27
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N OT)

DATA: PU6433 # 409
CALI: PU6433 # 2

BASE M/Z: 95
RIC: 50111.

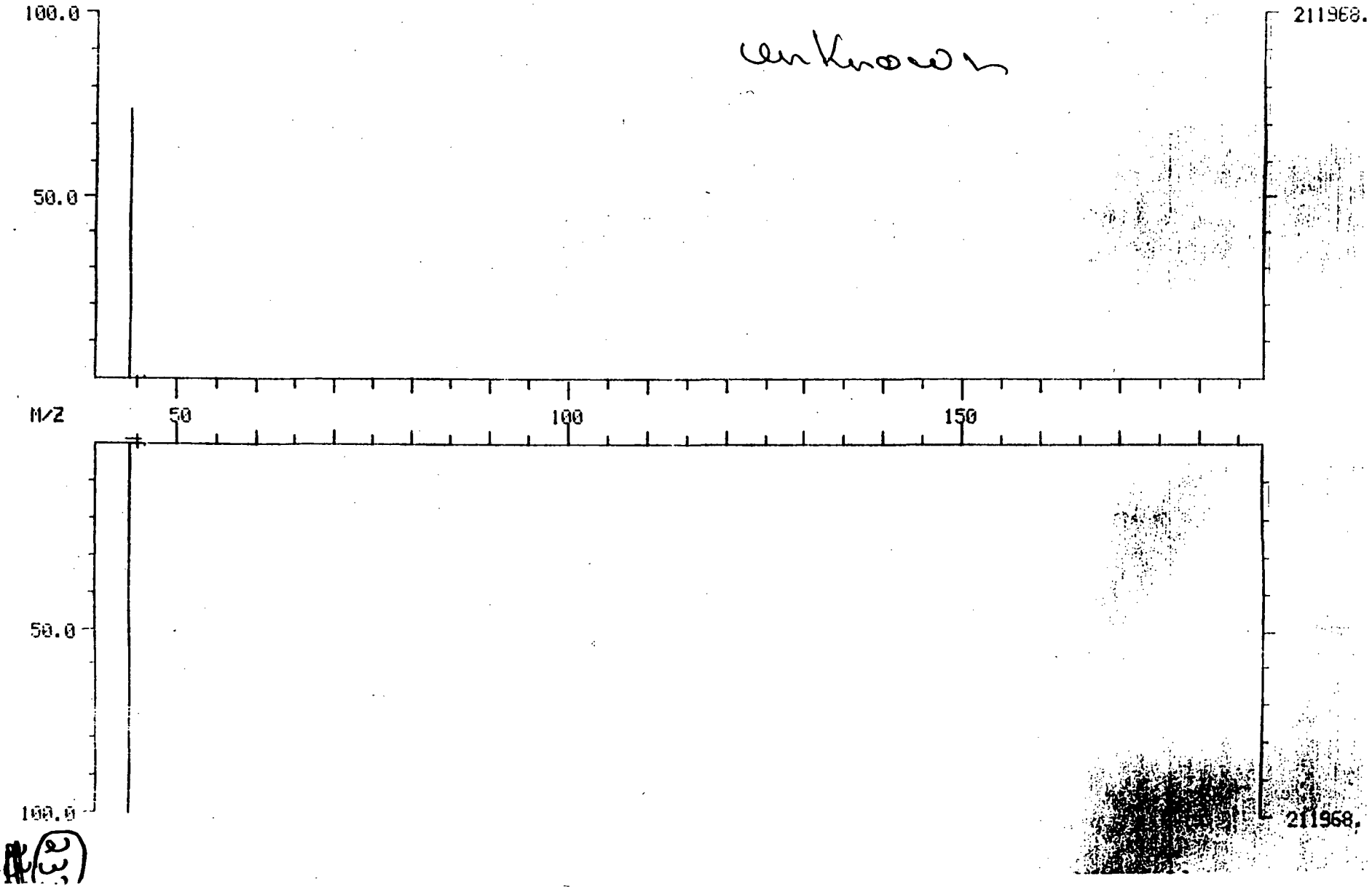



23

DUAL MASS SPECTRUM
03/26/86 13:18:00 + 0:36
SAMPLE: 660542
COMDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6439 #12
CALI: PU6433 #2

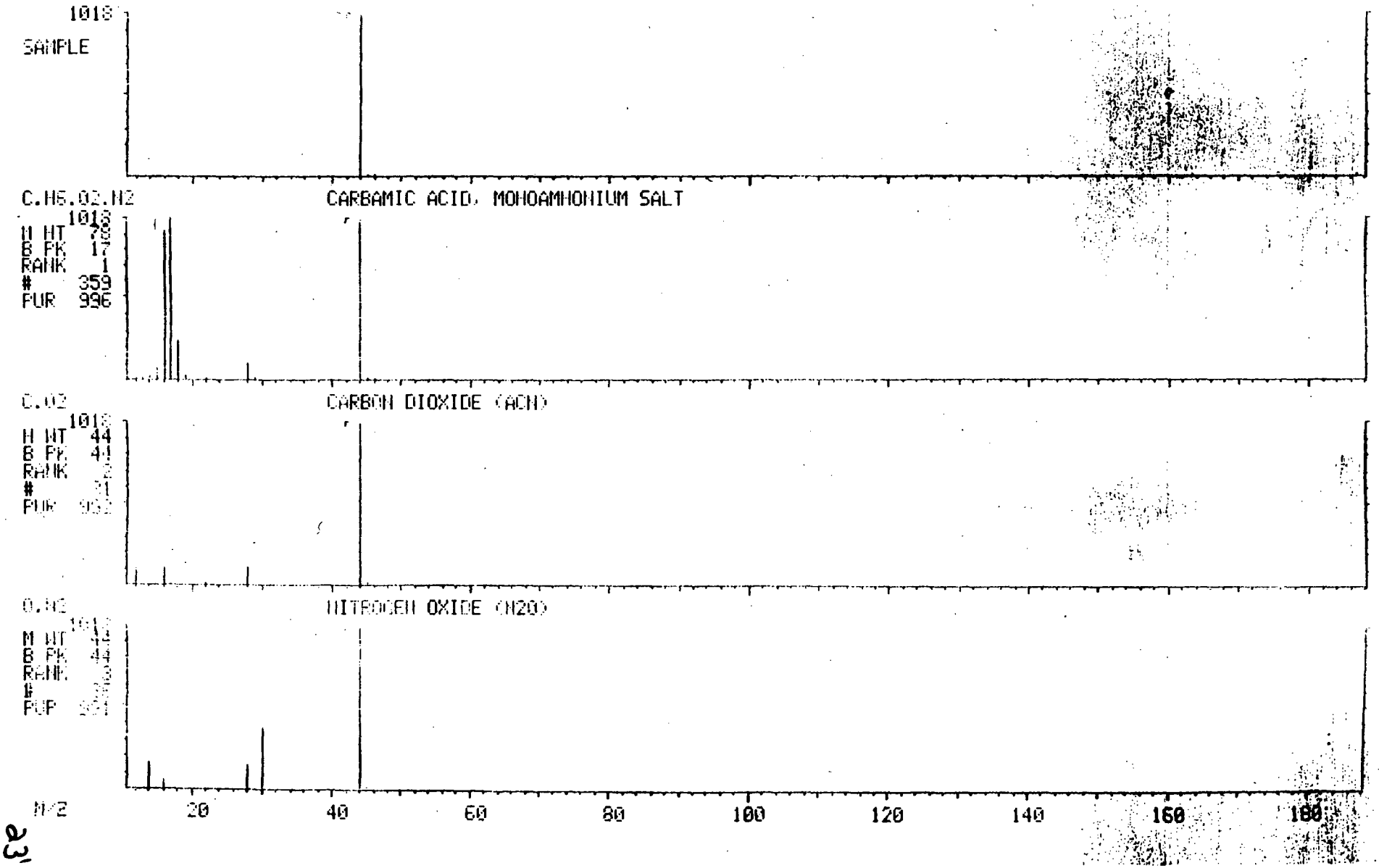
BASE M/Z: 1.44/ 44
RIC: 153743./ 216063.



LIBRARY SEARCH
09/26/88 19:13:00 + 0:36
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6433 # 12
CALI: PU6433 # 2

BASE M/Z: 44
RIC: 159743.



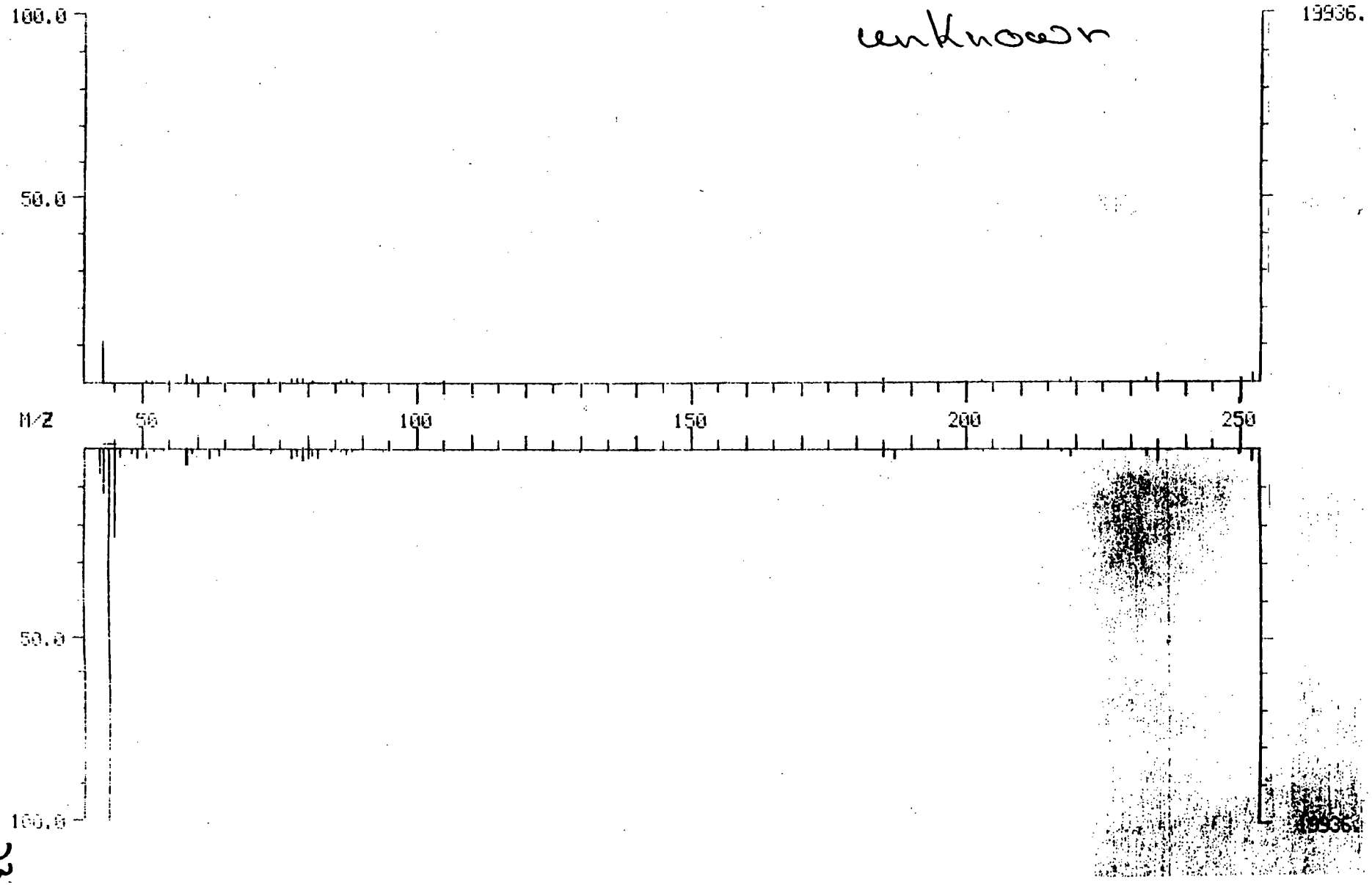

23

DUAL MASS SPECTRUM
09/26/85 19:18:00 + 11:18
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 #226
CAL1: PU6433 #2

BASE M/Z: 43/ 44
RIC: 7671./ 38311.

unknown

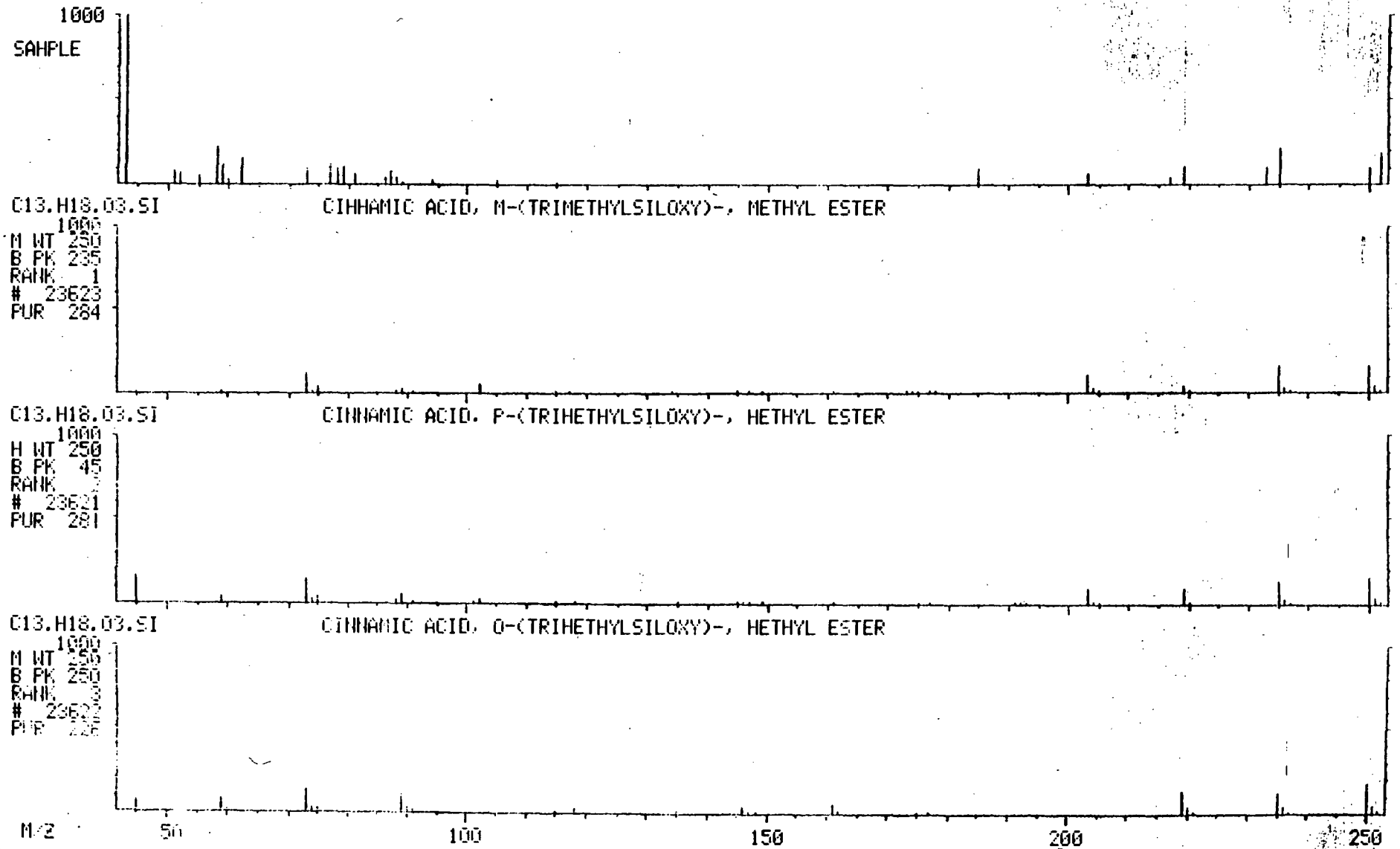



43

LIBRARY SEARCH
09/26/89 19:10:00 + 11:18
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2H OT)

DATA: PU6433 # 226
CALI: PU5433 # 2

BASE M/Z: 43
RIC: 7543.

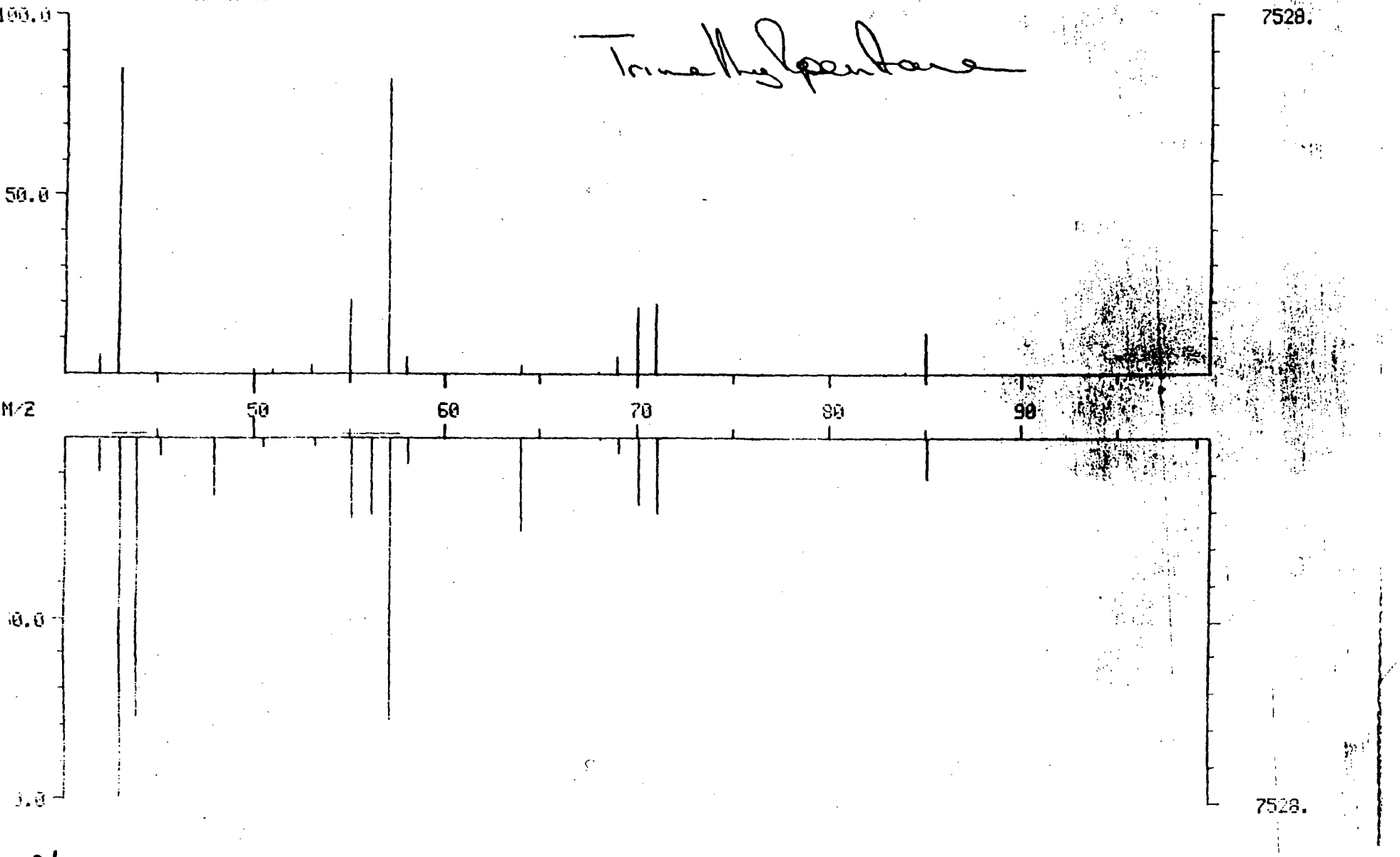



236

DUAL MASS SPECTRUM
P3:26/06 13:18:00 + 28:48
FILE: 660542
CMDS.:
ENHANCED (S 15B 2H 0T)

DATA: PU6433 #576
CALI: PM6433 #2

BASE M/Z: 43/ 43
RIC: 19679./ 32063.

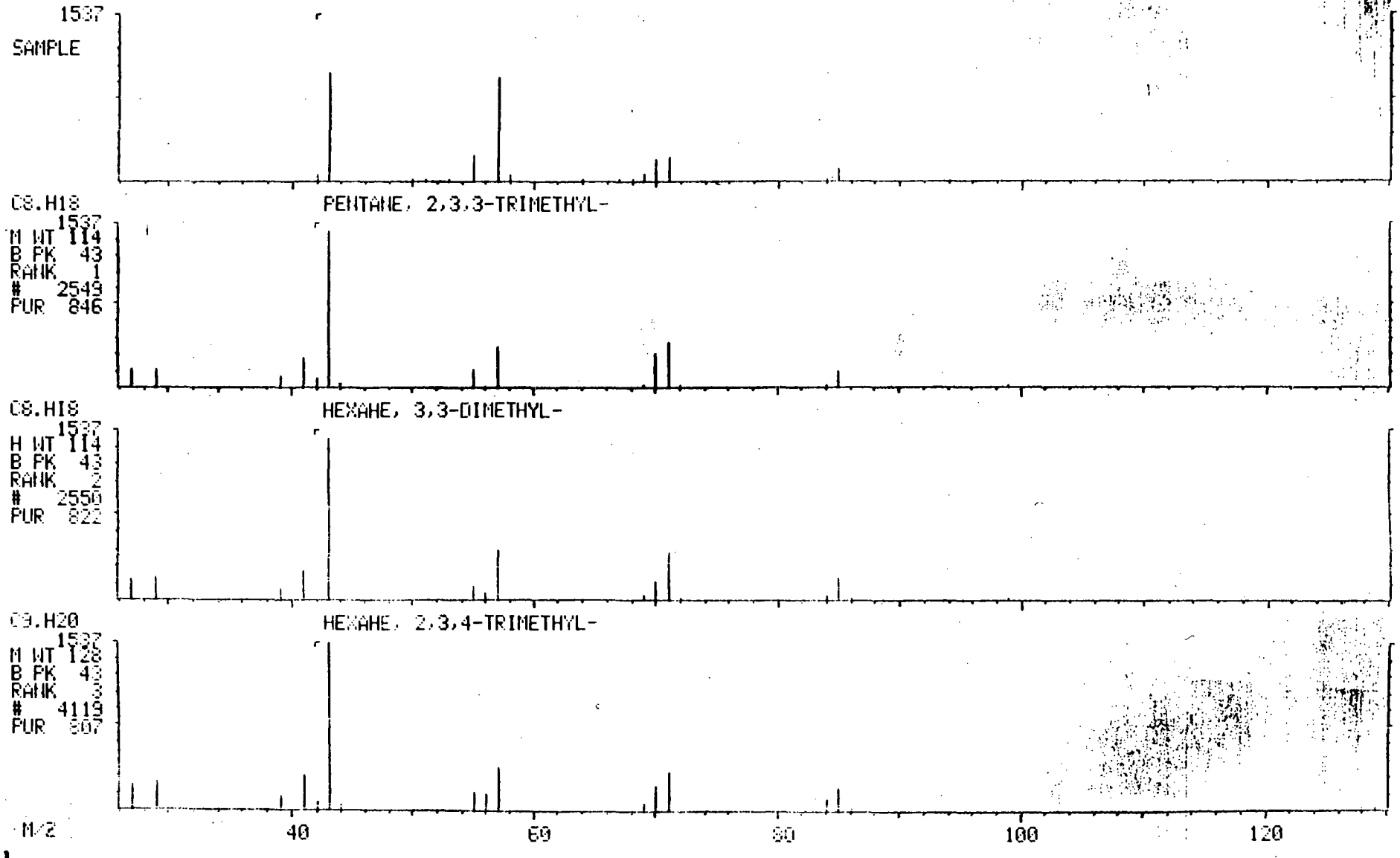



Trimethylpentane

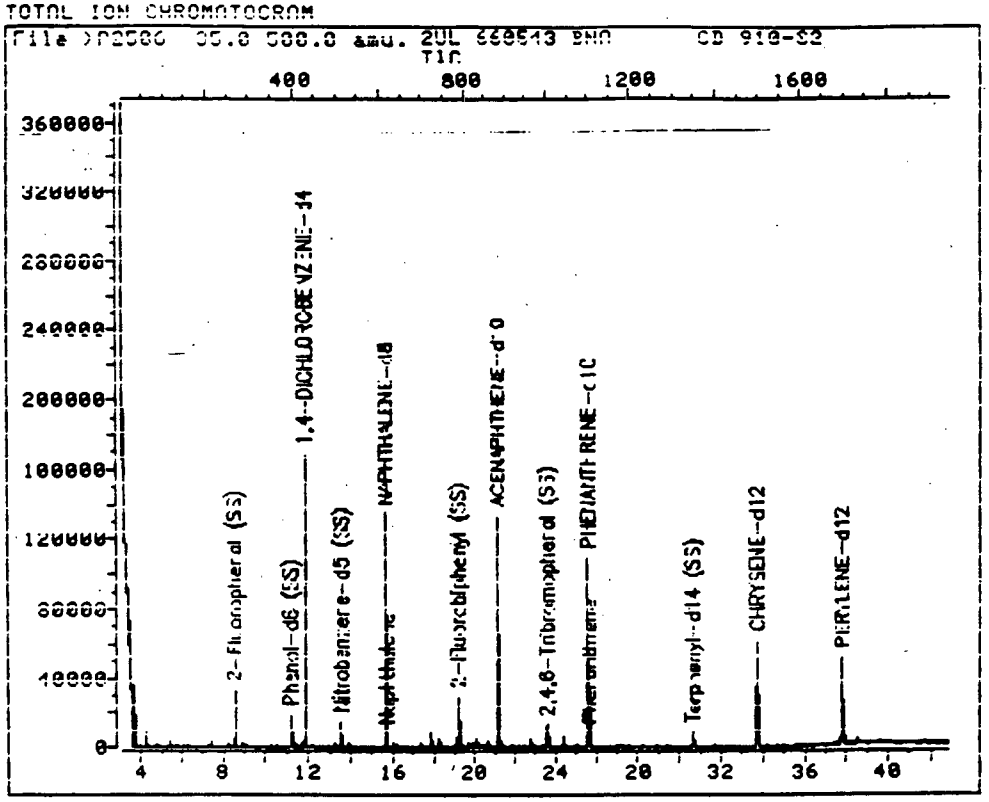
LIBRARY SEARCH
09/26/86 19:18:00 + 28:48
SAMPLE: 660542
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: PU6433 # 576
CALI: 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
Output File: ^P2506::OP
Data File: >P2506::D3
Name: 2UL 660543 BNA
Miac: CD 910-S2

Quant Rev: 4
Quant Time: 861007 00:34
Injected at: 861006 23:49
Dilution Factor: 1.00

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: STEUE  MS  10/06/86 23:49
Misc : CD 910-S2  BTL#96
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 |

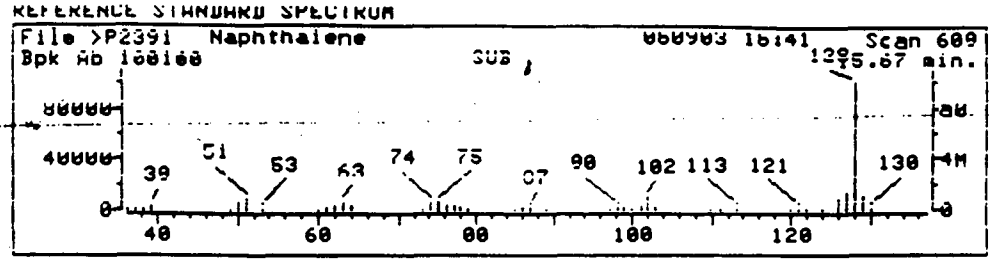
>P2506  2UL 660543 BNA  CD 910-S2
35.01 500.0 CLP ADC TIC

| 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 |

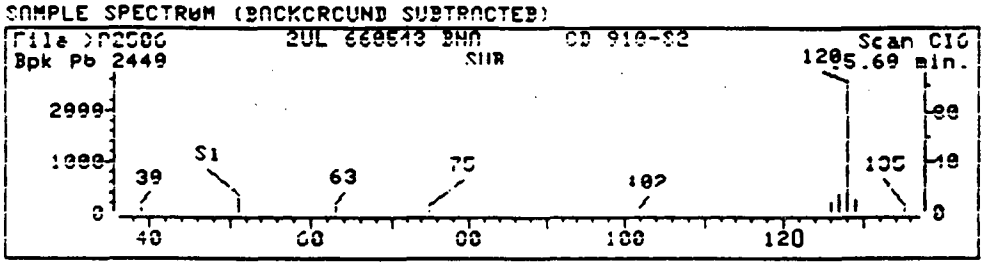
Sum of corrected areas: 1742515.

4:08 PM TUE., 7 OCT., 1986

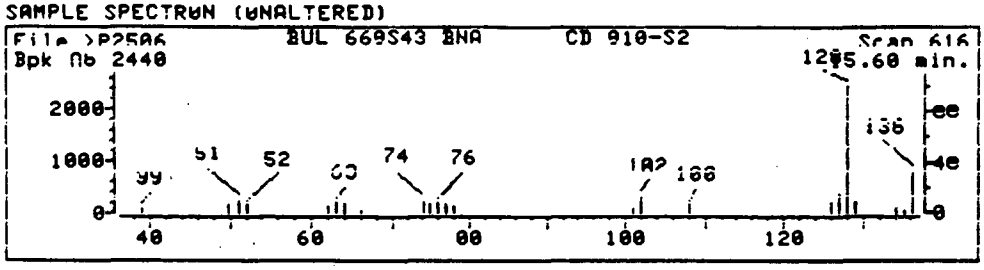
REFERENCE STANDARD SPECTRUM




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



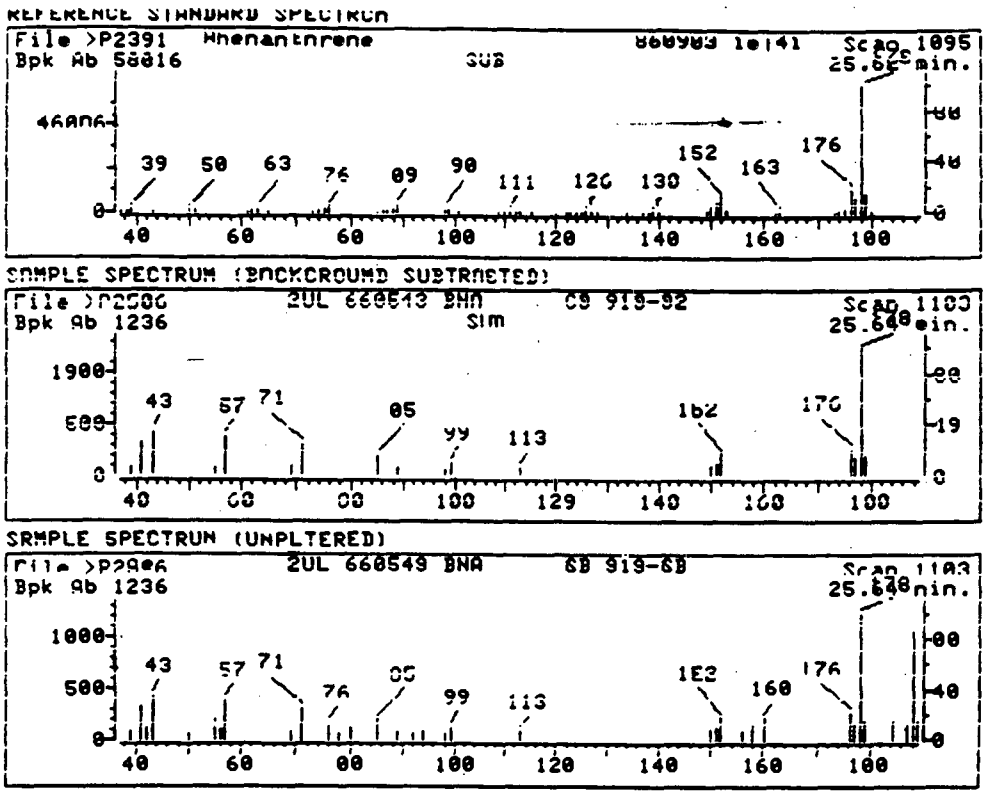

SAMPLE SPECTRUM (UNALTERED)




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: 24
Compound Name: Naphthalene
Scan Number: 616
Retention Time: 15.68 min.
Area: 4947
Concentration: .93 NG
q-value: 39




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 mg
a-value: 51

660544

CD910-S2

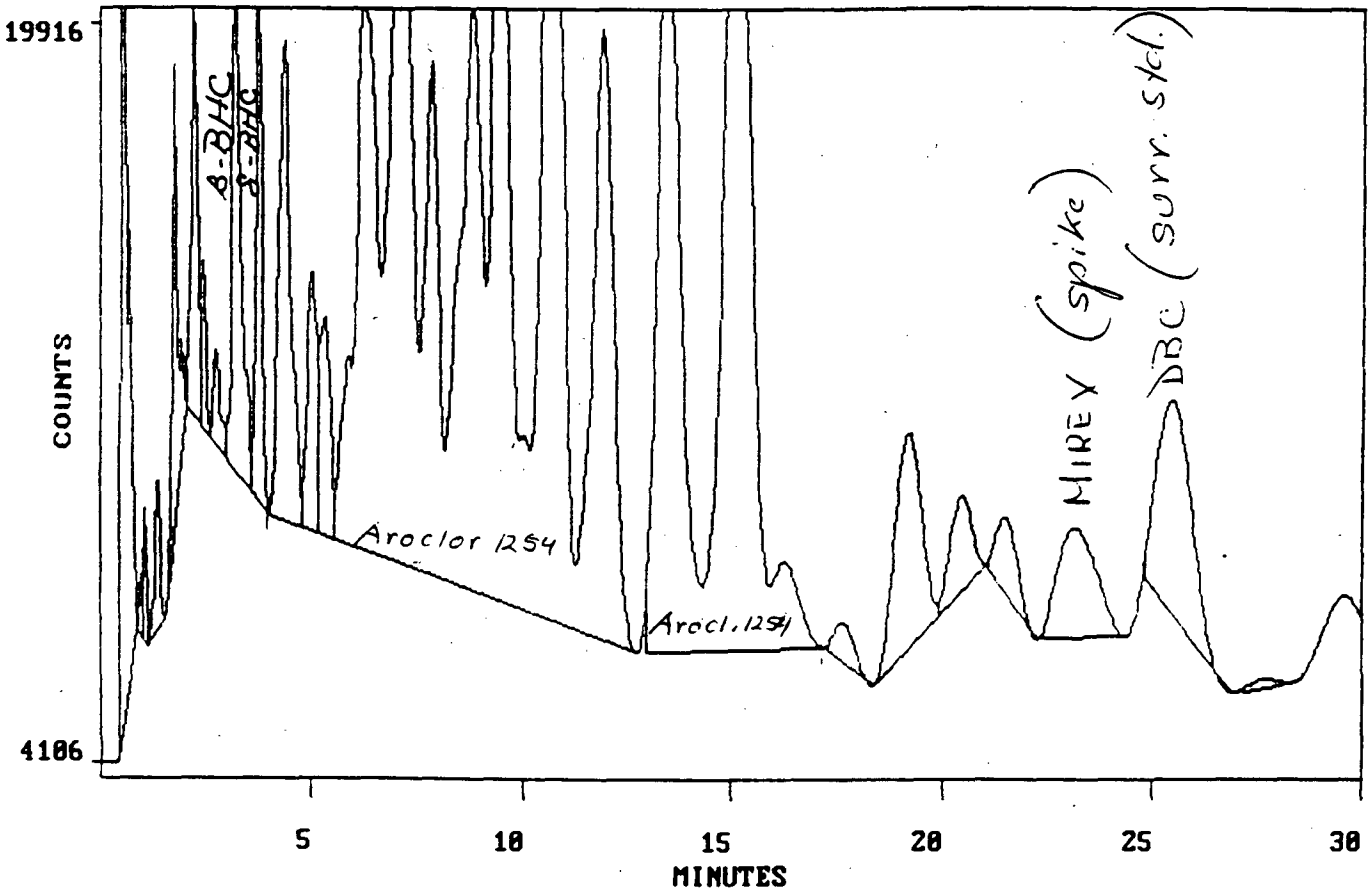
PRIMARY COLUMN

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

FILE: PEST2260 SCALE: 50 RANGE (MIN.): 0.03 TO 30.00



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 | Arsa % | Area | Peak Ht. | EL |
|---|---|---|---|---|---|---|---|
| 1 | 0.556 | | | 32.665 | 3413403 | 830538 | EE |
| 2 | 0.961 | | | 0.058 | 6072 | 1273 | BV |
| 3 | 1.074 | | | 0.117 | 12266 | 2862 | VE |
| 4 | 1.333 | | | 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 | | B-BHC | 1.664 | 173872 | 13931 | VV |
| 10 | 3.760 | | δ-BHC | 1.086 | 113470 | 11125 | VB |
| 11 | 4.390 | | unknown (not aldrin) | 1.941 | 202853 | 10271 | EV |
| 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 | 25094 | VE |
| 15 | 15.200 | | | 15.478 | 1617332 | 21163 | EB |
| 16 | 17.671 | | | 0.265 | 27684 | 849 | BB |
| 17 | 19.256 | | | 1.930 | 201696 | 4525 | EV |
| 18 | 20.493 | | | 0.703 | 73452 | 1998 | VB |
| 19 | 21.519 | | | 0.541 | 56506 | 1621 | SB |
| 20 | 23.211 | | | 1.420 | 148398 | 2314 | BB |
| 21 | 25.582 | | | 2.459 | 256927 | 4595 | BB |

245

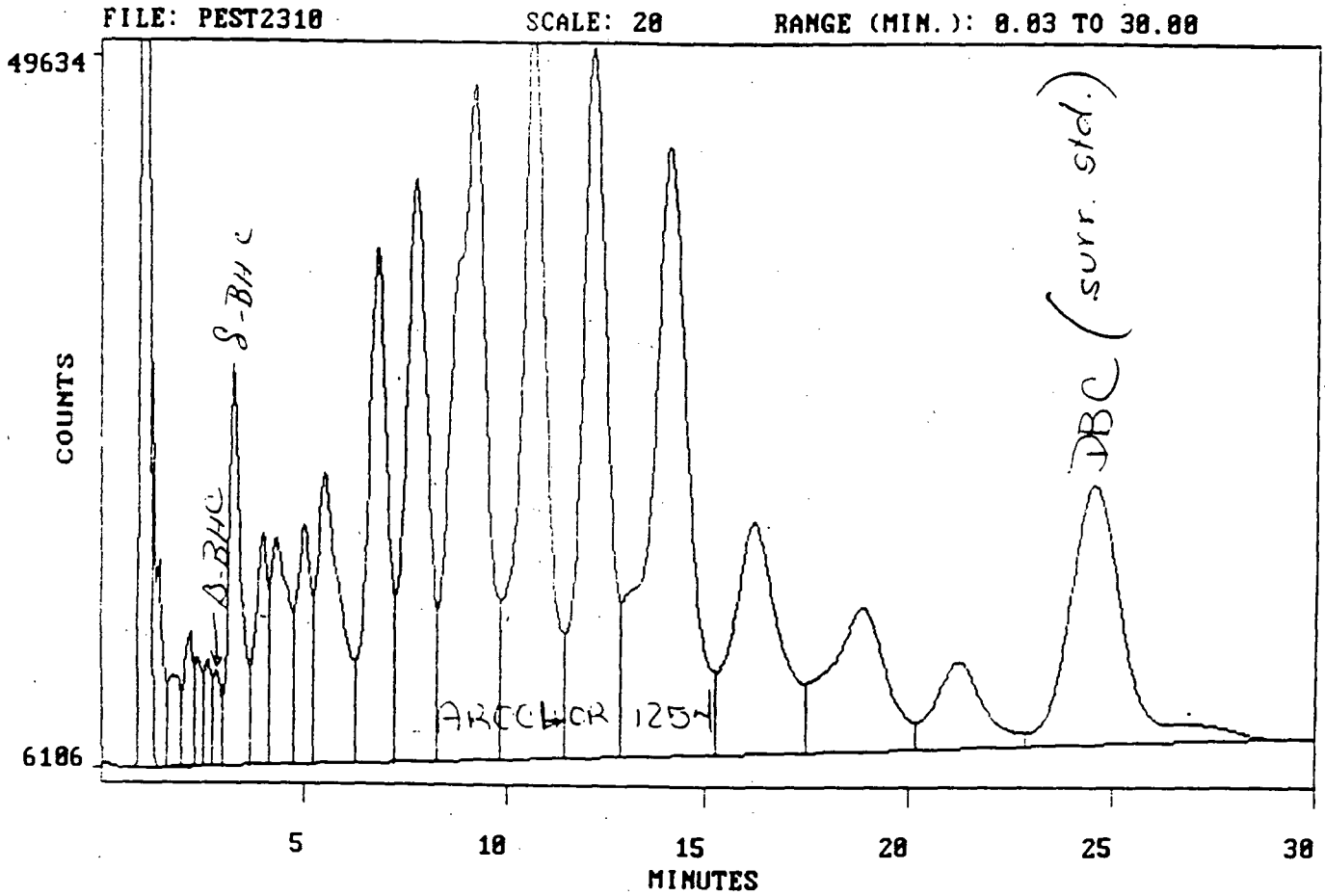
660544
CD910-S2

CONFIRMATORY COLUMN

Time 20:09:52 Date THU 09 OCT 96

RECONSTRUCT SCREEN DUMP
Data Acquisition

Time:19:27:02 Date THU 09 OCT 96
Method PEST2



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

METHOD NOT CALIBRATED!

AREA PERCENT REPORT

| 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 | | & S-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 | | | 2.725 | 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