START 9713506.2821 0000013 9209L880 - WES-896

852

0045875

**ROY F. WESTON, INC.**
**LIONVILLE ANALYTICAL LABORATORY**
**ANALYTICAL CASE NARRATIVE**

**Client:** WESTINGHOUSE HANFORD
**RFW #:** 9209L880

**W.O. #:** 06168-002-001-9999-00
**Date Received:** 09-15-92

NOV 1996 RECEIVED LIMS

**GC/MS VOLATILE**

The set of samples consisted of three (3) soil samples collected on 09-10,11-92.

The samples were analyzed according to criteria set forth in CLP SOW 03/90 for TCL Volatile target compounds on 09-21,23,24-92.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. Non-target compounds were not detected in these samples.

2. One (1) of twenty-seven (27) system monitoring compound (surrogate) recoveries was outside EPA QC limits. The analysis of samples B07244 and B07244 MSD fulfilled the re-analysis requirement for sample B07244 MS.

3. All matrix spike recoveries were within EPA QC limits.

4. The laboratory blanks contained the common contaminants Methylene Chloride and Acetone at levels less than 2x the CRQL.

5. Internal standard areas were outside QC limits for sample B07232. This sample was re-analyzed on 09-21-92 and reported.

J. Peter Hershey, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

10.30.92
Date

sma/voa/09-880v.cn

WESTON

**ADDENDUM**

I certify that this data package is in compliance with the terms and conditions of this 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: [signature] Name: SOM N. BASUTHAKUR

Date: 10.30.92 Title: UNIT-LEADER

pas\4-92\addendum

WDP-2206 2066 100-KR1 9209 8880

# OFFICE OF SAMPLE MANAGEMENT

# RECORD OF DISPOSITION

ROD-93-0023
Record of Disposition No.

DATE: 2/1/93 | LABORATORY: WESTON

PROJECT TITLE/NO.: 100FR3, 92-307, 92-304, 100KR1, 92-294, 92-311, 100DR1 | NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS:

B075L6, B07269, B07270, B07259, B07261, B07247, B07232, B06D87, B01925, B07273, B07274, B07275

DESCRIPTION OF EVENT:

Samples contain a large percentage of rock.

DISPOSITION OF SAMPLES:

With consent by all project managers, put samples through sieve and proceed with analysis on remaining sample amounts.

APPROVAL SIGNATURES:

Clay Smith/ Clayton Smith — 2/1/93
OSM Project Coordinator (Print/Sign Name) — Date

ORIGINAL ROD LOST W. E. STROMBEN W. E. Stromben — 3/9/93

A. D. Krug A. D. Krug
~~K.T. Stankovich, A.L. Prignano, C. E. Heiden~~/ — 3/9/93
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

WESTON Analytics Use Only

9209L880

# Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

Client: Westinghouse - Hanford
Est. Final Proj. Sampling Date:
Work Order #: 6168-02-01-9999
Project Contact/Phone #:
AD Project Manager: Josie Edwards
QC: CLP Del: CLP TAT: 35 day
Date Rec'd: 9/15/92 Date Due: 10/20/92
Account #: WS-Hanford

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refrigerator # | | 1 | 6 | | | 3 | 3 | | 3 | | SUB | | | | | | |
| #/Type Container | Liquid | | | | | | | | | | | | | | | | |
| | Solid | 2/6L | 1/6L | | | 1/6L | | | 1/6L | | 1/6L | | | | | | |
| Volume | Liquid | | | | | | | | | | | | | | | | |
| | Solid | 125m | 500m | | | 500m | | | 500m | | 1000 | | | | | | |
| Preservatives | | — | — | | | | | | — | — | — | | | | | | |
| ANALYSES REQUESTED → | | ORGANIC | | | | | | | INORG | | | | | | | | |
| | | VOA | BNA | Pest/PCB | Herb | Anions | PH | | Metal | CN | Radio Chem | | | | | | |
| WESTON Analytics Use Only | | 0624H | 0625H | 0608H | | See below | IPH | | See below | ICHTD | ISUB | | | | | | |

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

| Lab ID | Client ID/Description | Matrix QC Chosen (✓) MS | MSD | Matrix | Date Collected | Time Collected | 0624H | 0625H | 0608H | | See below | IPH | | See below | ICHTD | ISUB | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | B07247 | | | S | 9/11/92 | 0945 | X | X | X | | X | X | | X | X | X | | | | | | |
| 002 | B07232 | | | S | 9/10/92 | 0930 | X | X | X | | X | X | | X | X | X | | | | | | |
| 003 | B07244 | | | S | 9/10/92 | 0830 | X | | | | | | | | | | | | | | | |
| | metals = Ag, Al, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K-, Mg, Mn, Na, Ni, Pb, Sb, V-, Zn, As, Se, Tl | | | | | | | | | | | | | | | | | | | | | |
| | Anions = ICCL, ICFL, ICSO4, ICPO4, ICNO3, ICNO2 | | | | | | | | | | | | | | | | | | | | | |

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:
SAF #92-289

DATE/REVISIONS:
9/17/92 1. Add As, Se, Tl to sample #1
2. & 2 - Client is requesting
3. full HSL Metals
10/22/92 4. Radio chem subbed to Eco-Tek
5.
6.

WESTON Analytics Use Only

Samples were:
1) Shipped X or Hand Delivered ___
Airbill #
2) Ambient or Chilled
3) Received in Good Condition (Y) or N
4) Labels Indicate Properly Preserved (Y) or N
5) Received Within Holding Times (Y) or N

COC Tape was:
1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample (Y) or N
4) Unbroken on Sample (Y) or N

COC Record Present Upon Sample Rec't (Y) or N

Discrepancies Between Samples Labels and COC Record? Y or (N)
NOTES:

| Relinquished by | Received by | Date | Time |
|---|---|---|---|
| Emery | Brian Shaff BES 9/15/92 | 9/15/92 | 2:32 pm |

| Relinquished by | Received by | Date | Time |
|---|---|---|---|
| | BES 9/15/92 | | |

RFW 21-21-001/A-7/91 ___ L372 ___ L373 ___ L375 ___ L377 ___ L378 Ref# N/A Cooler# N/A 381-596a

9209L880

9209L880

Westinghouse Hanford Company 8713506.2825

# CHAIN OF CUSTODY

002906

Custody Form Initiator KB Hulse

Company Contact MT Stankovich / KN Pool

Telephone 376-2493/373-3137

Project Designation/Sampling Locations SAF #92-289 100-KR-1 Vadose Test Pits

Collection Date 9-4-92

Ice Chest No.

Field Logbook No. WHC-N-205 #15 pg 61

Bill of Lading/Airbill No.

Offsite Property No. W92-0-0622#

Method of Shipment Emery Air Express AIR OVERNIGHT

Shipped to Weston Lab 208 Welsh Pool Rd. Lionville, PA 19341

Possible Sample Hazards/Remarks none known

Sample Identification

B07247 6 Bottles

B07232 6 Bottles

B07244 2 Bottles

Total 14 Bottles

KB Hulse 9-14-92

KB Hulse 9-14-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

| Relinquished by: | Received by: | Date/Time: |
|---|---|---|
| KB Hulse KB Hulse | | |
| Relinquished by: | Received by: | Date/Time: |
| Relinquished by: | Received by: | Date/Time: |
| Relinquished by: Emery | Received by: Brian E. [illegible] | Date/Time: 9/15/92 2:30 pm |

Final Sample Disposition

| Disposal Method: | Disposed by: | Date/Time: |
|---|---|---|

Comments:

A-6000-407 (12/90)

9213506.2826 0100004

Westinghouse Hanford Company

# SAMPLE ANALYSIS REQUEST COC 29

Collector KB Hulse Date 9-14-92

Company Contact K. N. Pool Telephone ( 509 ) 373-3137

| Sample Number | * | Date Collected | Time Collected | Number and Type of Sample Containers/Analysis Requeste |
|---|---|---|---|---|
| B07247 | S | 9-11-92 | 0945 | 2-120ml aG VOA (CLP) |
| | | | | 1-500ml aG SEMI-VOA PCB's/Pest. (CLP) |
| | | | | 1-500ml aG Anions/IC pH (300.0, 353.2, 9040) |
| | | | | 1-250ml aG ICP/AA Metals, Hg, CN (CLP) |
| | | | | 1-1000ml G Radionuclides (Lab SOP) |
| B07232 | | 9-10-92 | 0930 | 2-120ml aG VOA (CLP) |
| | | | | 1-500ml aG SEMI-VOA PCB's/Pest. (CLP) |
| | | | | 1-500ml aG Anions/IC pH (300.0, 353.2, 9040) |
| | | | | 1-250ml aG ICP/AA Metals, Hg, CN (CLP) |
| | | | | 1-1000ml G Radionuclides (Lab SOP) |
| B07244 | | 9-10-92 | 0800 | 2-120ml aG VOA (CLP) |
| | | | | 14 ~~Bottels~~ KBH 9-14-92 Bottles Total |

KB Hulse 9-14-92

*Type of Sample

| | | | | |
|---|---|---|---|---|
| A = Air | L = Liquid | SE = Sediment | T = Tissue | X = |
| DL = Drum Liquids | O = Oil | SL = Sludge | W = Water | |
| DS = Drum Solids | S = Soil | SO = Solid | WI = Wipe | |

Field Information WATCH THE HOLD TIMES

Special Handling and/or Storage Stored at 4°C and shipped on WET ICE WATCH HOLD TIMES

Possible Sample Hazards NONE KNOWN

A-600

AIR OVERNIGHT 9209L880 0000005

| Contractor | OFF-SITE PROPERTY CONTROL | CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) |
|---|---|---|
| WESTINGHOUSE HANFORD | | WHX-O-0622 #27 |

PART I – TO BE COMPLETED BY ORIGINATOR

| Department | Section | Unit |
|---|---|---|
| PROCESSING & ANALYTICAL LAB | ANALYTICAL CHEMISTRY | SAMPLING & MOBILE LAB |

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing EMERY AIR E XPRESS ☒ Contractor ☐ Vendor

| Shipped to | Off-site Custodian |
|---|---|
| WESTON LAB<br>208 Welsh Pool Road<br>Lionville PA 19341 | JOSIE KING<br>Full Title |

| Quantity | Description (Include Serial and any Government Tag Numbers) | Original Cost |
|---|---|---|
| 1 | POLYCOOLER. SAMPLES PACKED IN PLASTIC BAGS AND STORED ON WET ICE.<br><br>SAMPLE #B07247<br>B07232<br>B07244<br><br>WEIGHT 67 # COOLER # FRY | |

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property
SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THISSSITE.

SHF # 12-289
COC 002406

BILL OF LADING # 2521567488

*CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.*

| RM Clearance for Public Release | RM Survey No. | Date |
|---|---|---|
| * [illegible] | 115366 | 9-14-92 |

| Location of Property (Area & Bldg.) | Contact | Phone |
|---|---|---|
| 200 WEST AREA/202-S | K. B. Hulse | 373-1907 |

| Date Ready for Shipment | Cost Code to be Charged | Approximate Date This Property will be Returned |
|---|---|---|
| 09/14/92 | PB63C/ORG CODE: 12410 | N/A |

| Originated By | Date | Authorized By | Date |
|---|---|---|---|
| K. B. Hulse K. B. Hulse | 09/14/92 | R. A. Meznarich RA Meznarich | 09/14/92 |

| Signature and Name of Property Control | Custodian Date | Property Management Approval | Date |
|---|---|---|---|
| | | [illegible] | 9/14/92 |

PART II – TO BE COMPLETED BY SHIPPING

| Signature of Recipient | Return Order No. | Date Issued | Purchase Order No. | Date Issued |
|---|---|---|---|---|
| [illegible] | | | | |
| Date [illegible] | | | | |

DISTRIBUTION

| By Originator | Shipping Operation – Sign all Copies and Forward |
|---|---|
| White, Green, Yellow, Pink – Property Management<br>Goldenrod – Retain | White – Property Management – Green – Property Control Custodian (Issuing Office)<br>Yellow – Retain – Pink – Originator |

54-3000-479 (09/88)

FORM OF PAYMENT

Check ☐ GBL ☐ | COD ☐

Bill to Shipper ☒ Bill to Consignee ☐ Third Party Billing ☐

92ML880

EMERY WORLDWIDE

A CF Company

SERVICES

Same Day (Extra Charges) ☐ AM ☐ PM ☐ Second Day ☐

Express ☐ Standard Plus ☐ Preferred ☐ Standard ☐

Business Documents ☐ Customs Clearance ☐ Delivery ☐

PULL FOR SHPT. NO. TAB

E Shipper's Account Number 850281585

Date 09-14-92 Origin PSC Payment No. 252156748 8

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U.S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA ☐ ☐

To:
JOSIE KING
rf weston inc
208 WELSH POOL ROAD
LIONVILLE PA

Hold for Pick Up ☐ Canada ☐ ☐

Tariff Dest. Gateway

$

Customer's Reference Numbers
W12410 PB63C W92-0-0622#27 97352

E Consignee's Account Number 19341

Description: 1 COOLER # FRY SAMPLES B07247, B07232 B07244

| Pcs | L | W | H | Total Pieces | Total Weight |
|---|---|---|---|---|---|
| 1 | 21 | 16 | 17 | 1 | 67 |

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

2 5 2 1 5 6 7 4 8 8

Remarks: OVERNIGHT DELIVERY

Zip Ship ☐
For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used
Urgent Letter 9X12 ☒ Urgent Pack 12X15 ☒

Shipper's Signature X 9/16

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing E Third Party Account Number

International Customs Value International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin ☐ OC/AO- $

3-PhL-A

Terms and Conditions on Back

CONSIGNEE — PACKAGE COPY — 4

9713506.2828

000006

Volatiles by GC/MS, HSL List

Report Date: 10/20/92 10:54

RFW Batch Number: 9209L880 Client: WESTINGHOUSE HANFORD Work Order: ~~6168-02-0-~~ 06167-002-001-9999-00 MS 10/28/92 Page: 1a

| | Cust ID: | B07247 | B07232 | B07232 | B07244 | B07244 | B07244 |
|---|---|---|---|---|---|---|---|
| Sample Information | RFW#: | 001 | 002 | 002 | 003 | 003 MS | 003 MSD |
| | Matrix: | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| | D.F.: | 1.02 | 1.00 | 1.00 | 1.00 | 0.980 | 0.962 |
| | Units: | UG/KG | UG/KG | UG/KG REPREP | UG/KG | UG/KG | UG/KG |
| Surrogate Recovery | Toluene-d8 | 99 % | 101 % | 105 % | 101 % | 81 * % | 93 % |
| | Bromofluorobenzene | 87 % | 88 % | 94 % | 99 % | 84 % | 97 % |
| | 1,2-Dichloroethane-d4 | 107 % | 117 % | 113 % | 87 % | 76 % | 89 % |
| Chloromethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromomethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Vinyl Chloride | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene Chloride | | 27 B | 28 B | 12 B | 17 B | 12 B | 12 B |
| Acetone | | 24 B | 28 B | 7 JB | 26 B | 16 B | 19 B |
| Carbon Disulfide | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1-Dichloroethene | | 10 U | 10 U | 10 U | 10 U | 93 % | 104 % |
| 1,1-Dichloroethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dichloroethene (total) | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Chloroform | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dichloroethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Butanone | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,1-Trichloroethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon Tetrachloride | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromodichloromethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,2-Dichloropropane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| cis-1,3-Dichloropropene | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Trichloroethene | | 10 U | 10 U | 10 U | 10 U | 97 % | 102 % |
| Dibromochloromethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,2-Trichloroethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Benzene | | 10 U | 10 U | 10 U | 10 U | 103 % | 109 % |
| trans-1,3-Dichloropropene | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromoform | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-pentanone | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 2-Hexanone | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Tetrachloroethene | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| 1,1,2,2-Tetrachloroethane | | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | | 10 U | 8 J | 7 J | 10 U | 102 % | 114 % |

*= Outside of EPA CLP QC limits.

000003

9213506.2829

| Cust ID: | B07247 | B07232 | B07232 | B07244 | B07244 | B07244 |
|---|---|---|---|---|---|---|
| RFW#: | 001 | 002 | 002 REPREP | 003 | 003 MS | 003 MSD |
| Chlorobenzene | 10 U | 10 U | 10 U | 10 U | 104 % | 115 % |
| Ethylbenzene | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Styrene | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Xylene (total) | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |

*= Outside of EPA CLP QC limits.

000009
97150628

9715506.2851

1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

0000033

CLIENT SAMPLE NO.

B07247

06168-002-001-9999-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 4.90 (g/mL) G

Lab File ID: B092106

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 2

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.02

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 27 | B |
| 67-64-1 | Acetone | 24 | B |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 10 | U |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

9713506.2832 0 0 0 0 3 2

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B07247

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~ 06168-002-001-0000-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 4.90 (g/mL) G

Lab File ID: B092106

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 2

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.02

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 |
|---|---|---|---|---|
| 1. | | | | |

9713506.2833 0 0 0 0 4 0

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~ 06163-002-001-9000-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: B092107

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 1

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 28 | B |
| 67-64-1 | Acetone | 28 | B |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 8 | J |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

9213506.2854 000047 14292

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~ 06168-002-001-0099-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: B092107

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 1

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

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 |
|---|---|---|---|---|
| 1. | | | | |

9713506.2835 1A 0 0 0 0 4 3

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232RE

06163-002-001-9090-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: B092111

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 1

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

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

9213506.2856 LA 0 0 0 0 0 5 5

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07244

06168-002-001-9990-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-003

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: AX9007

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 4

Date Analyzed: 09/24/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 17 | B |
| 67-64-1 | Acetone | 26 | B |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 10 | U |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

10/22/92

CLIENT SAMPLE NO.

B07244

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~ 6168-002-001-9999-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-003

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: AX9007

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 4

Date Analyzed: 09/24/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

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 |
|---|---|---|---|---|
| 1. | | | | |

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**ROY F. WESTON, INC.**
**LIONVILLE ANALYTICAL LABORATORY**
**ANALYTICAL CASE NARRATIVE**

**Client:** WESTINGHOUSE HANFORD
**RFW #:** 9209L880

**W.O. #:**06168-002-001-9999-00
**Date Received:** 09-15-92

**SEMIVOLATILE**

The set of samples consisted of two (2) soil samples collected on 09-10,11-92.

The samples were extracted on 09-17-92 and analyzed according to criteria set forth in CLP SOW 03/90 for TCL Semivolatile target compounds on 10-09,12-92.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. Non-target compounds were detected in these samples.

2. All surrogate recoveries were within EPA QC limits.

3. Two (2) of twenty-two (22) matrix spike recoveries were outside EPA QC limits.

4. All blank spike recoveries were within EPA QC limits.

5. The laboratory blank 92LE1613-MB1 contained the common contaminant Di-n-butylphthalate at a level less than the CRQL.

6. All internal standard area and retention time criteria were met.

Margaret M. Beatyke

J. Peter Hershey, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

11/11/92
Date

kls/09-880b.cn

Roy F. Weston, Inc. - Lionville Laboratory
Semivolatiles by GC/MS, HSL List

RFW Batch Number: 9209L880 Client: WESTINGHOUSE HANFORD Work Order: 6168-02-0 Report Date: 11/08/92 14:36 Page: 1a

| | Cust ID: | B07247 | | B07247 | | B07247 | | B07232 | | SBLK | | SBLK BS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Information | RFW#: | 001 | | 001 MS | | 001 MSD | | 002 | | 92LE1613-MB1 | | 92LE1613-MB1 | |
| | Matrix: | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | D.F.: | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | Units: | ug/Kg | | ug/Kg | | ug/Kg | | ug/Kg | | ug/Kg | | ug/Kg | |
| Surrogate Recovery | Nitrobenzene-d5 | 70 | % | 58 | % | 40 | % | 59 | % | 75 | % | 68 | % |
| | 2-Fluorobiphenyl | 70 | % | 63 | % | 46 | % | 69 | % | 75 | % | 73 | % |
| | Terphenyl-d14 | 96 | % | 95 | % | 92 | % | 94 | % | 113 | % | 124 | % |
| | Phenol-d5 | 71 | % | 60 | % | 43 | % | 66 | % | 74 | % | 68 | % |
| | 2-Fluorophenol | 72 | % | 56 | % | 39 | % | 60 | % | 74 | % | 67 | % |
| | 2,4,6-Tribromophenol | 92 | % | 99 | % | 91 | % | 102 | % | 85 | % | 85 | % |
| | 2-Chlorophenol-d4 | 74 | % | 58 | % | 40 | % | 63 | % | 74 | % | 69 | % |
| | 1,2-Dichlorobenzene-d4 | 72 | % | 53 | % | 39 | % | 53 | % | 76 | % | 68 | % |
| | | fl | | fl | | fl | | fl | | fl | | fl | |
| Phenol | | 330 | U | 56 | % | 38 | % | 330 | U | 330 | U | 62 | % |
| bis(2-Chloroethyl)ether | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2-Chlorophenol | | 330 | U | 55 | % | 39 | % | 330 | U | 330 | U | 63 | % |
| 1,3-Dichlorobenzene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 1,4-Dichlorobenzene | | 330 | U | 52 | % | 38 | % | 330 | U | 330 | U | 65 | % |
| 1,2-Dichlorobenzene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2-Methylphenol | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2,2'-oxybis(2-Chloropropane) | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 4-Methylphenol | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| N-Nitroso-di-n-propylamine | | 330 | U | 62 | % | 43 | % | 330 | U | 330 | U | 67 | % |
| Hexachloroethane | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Nitrobenzene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Isophorone | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2-Nitrophenol | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2,4-Dimethylphenol | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| bis(2-Chloroethoxy)methane | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2,4-Dichlorophenol | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 1,2,4-Trichlorobenzene | | 330 | U | 54 | % | 39 | % | 330 | U | 330 | U | 67 | % |
| Naphthalene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 4-Chloroaniline | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Hexachlorobutadiene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 4-Chloro-3-methylphenol | | 330 | U | 74 | % | 55 | % | 330 | U | 330 | U | 69 | % |
| 2-Methylnaphthalene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Hexachlorocyclopentadiene | | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |

*= Outside of EPA CLP QC limits.

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0006 0034 0

| Cust ID: | B07247 | | B07247 | | B07247 | | B07232 | | SBLK | | SBLK BS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RFW#: | 001 | | 001 MS | | 001 MSD | | 002 | | 92LE1613-MB1 | | 92LE1613-MB1 | |
| 2,4,6-Trichlorophenol | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2,4,5-Trichlorophenol | 820 | U | 840 | U | 840 | U | 820 | U | 840 | U | 840 | U |
| 2-Chloronaphthalene | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2-Nitroaniline | 820 | U | 840 | U | 840 | U | 820 | U | 840 | U | 840 | U |
| Dimethylphthalate | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Acenaphthylene | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2,6-Dinitrotoluene | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 3-Nitroaniline | 820 | U | 840 | U | 840 | U | 820 | U | 840 | U | 840 | U |
| Acenaphthene | 330 | U | 67 | % | 52 | % | 330 | U | 330 | U | 71 | % |
| 2,4-Dinitrophenol | 820 | U | 840 | U | 840 | U | 820 | U | 840 | U | 840 | U |
| 4-Nitrophenol | 820 | U | 90 | % | 90 | % | 820 | U | 840 | U | 68 | % |
| Dibenzofuran | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 2,4-Dinitrotoluene | 330 | U | 80 | % | 75 | % | 330 | U | 330 | U | 74 | % |
| Diethylphthalate | 330 | U | 340 | U | 330 | U | 23 | J | 330 | U | 330 | U |
| 4-Chlorophenyl-phenylether | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Fluorene | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 4-Nitroaniline | 820 | U | 840 | U | 840 | U | 820 | U | 840 | U | 840 | U |
| 4,6-Dinitro-2-methylphenol | 820 | U | 840 | U | 840 | U | 820 | U | 840 | U | 840 | U |
| N-Nitrosodiphenylamine (1) | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 4-Bromophenyl-phenylether | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Hexachlorobenzene | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Pentachlorophenol | 820 | U | 126 * | % | 126 * | % | 820 | U | 840 | U | 95 | % |
| Phenanthrene | 330 | U | 340 | U | 330 | U | 93 | J | 330 | U | 330 | U |
| Anthracene | 330 | U | 340 | U | 330 | U | 18 | J | 330 | U | 330 | U |
| Carbazole | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Di-n-butylphthalate | 28 | JB | 28 | JB | 28 | JB | 28 | JB | 12 | J | 15 | JB |
| Fluoranthene | 330 | U | 340 | U | 330 | U | 990 | | 330 | U | 330 | U |
| Pyrene | 330 | U | 84 | % | 85 | % | 1200 | | 330 | U | 113 | % |
| Butylbenzylphthalate | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| 3,3'-Dichlorobenzidine | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Benzo(a)anthracene | 330 | U | 340 | U | 330 | U | 530 | | 330 | U | 330 | U |
| Chrysene | 330 | U | 340 | U | 330 | U | 680 | | 330 | U | 330 | U |
| bis(2-Ethylhexyl)phthalate | 330 | U | 340 | U | 330 | U | 19 | J | 330 | U | 330 | U |
| Di-n-octyl phthalate | 330 | U | 340 | U | 330 | U | 330 | U | 330 | U | 330 | U |
| Benzo(b)fluoranthene | 330 | U | 340 | U | 330 | U | 380 | | 330 | U | 330 | U |
| Benzo(k)fluoranthene | 330 | U | 340 | U | 330 | U | 360 | | 330 | U | 330 | U |
| Benzo(a)pyrene | 330 | U | 340 | U | 330 | U | 140 | J | 330 | U | 330 | U |
| Indeno(1,2,3-cd)pyrene | 330 | U | 340 | U | 330 | U | 140 | J | 330 | U | 330 | U |
| Dibenz(a,h)anthracene | 330 | U | 340 | U | 330 | U | 65 | J | 330 | U | 330 | U |
| Benzo(g,h,i)perylene | 330 | U | 340 | U | 330 | U | 63 | J | 330 | U | 330 | U |

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

000009

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: S100908

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 2 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 330 | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 330 | U |
| 95-57-8 | 2-Chlorophenol | 330 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 330 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 330 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 330 | U |
| 95-48-7 | 2-Methylphenol | 330 | U |
| 108-60-1 | 2,2'-oxybis(2-Chloropropane) | 330 | U |
| 106-44-5 | 4-Methylphenol | 330 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 330 | U |
| 67-72-1 | Hexachloroethane | 330 | U |
| 98-95-3 | Nitrobenzene | 330 | U |
| 78-59-1 | Isophorone | 330 | U |
| 88-75-5 | 2-Nitrophenol | 330 | U |
| 105-67-9 | 2,4-Dimethylphenol | 330 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 330 | U |
| 120-83-2 | 2,4-Dichlorophenol | 330 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 330 | U |
| 91-20-3 | Naphthalene | 330 | U |
| 106-47-8 | 4-Chloroaniline | 330 | U |
| 87-68-3 | Hexachlorobutadiene | 330 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 330 | U |
| 91-57-6 | 2-Methylnaphthalene | 330 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 330 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 330 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 820 | U |
| 91-58-7 | 2-Chloronaphthalene | 330 | U |
| 88-74-4 | 2-Nitroaniline | 820 | U |
| 131-11-3 | Dimethylphthalate | 330 | U |
| 208-96-8 | Acenaphthylene | 330 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 330 | U |
| 99-09-2 | 3-Nitroaniline | 820 | U |
| 83-32-9 | Acenaphthene | 330 | U |

CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: S100908

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 2 decanted: (Y/N)

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 820 | U |
| 100-02-7 | 4-Nitrophenol | 820 | U |
| 132-64-9 | Dibenzofuran | 330 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 330 | U |
| 84-66-2 | Diethylphthalate | 330 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 330 | U |
| 86-73-7 | Fluorene | 330 | U |
| 100-01-6 | 4-Nitroaniline | 820 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 820 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 330 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 330 | U |
| 118-74-1 | Hexachlorobenzene | 330 | U |
| 87-86-5 | Pentachlorophenol | 820 | U |
| 85-01-8 | Phenanthrene | 330 | U |
| 120-12-7 | Anthracene | 330 | U |
| 86-74-8 | Carbazole | 330 | U |
| 84-74-2 | Di-n-butylphthalate | 28 | JB |
| 206-44-0 | Fluoranthene | 330 | U |
| 129-00-0 | Pyrene | 330 | U |
| 85-68-7 | Butylbenzylphthalate | 330 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 330 | U |
| 56-55-3 | Benzo(a)anthracene | 330 | U |
| 218-01-9 | Chrysene | 330 | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 330 | U |
| 117-84-0 | Di-n-octyl phthalate | 330 | U |
| 205-99-2 | Benzo(b)fluoranthene | 330 | U |
| 207-08-9 | Benzo(k)fluoranthene | 330 | U |
| 50-32-8 | Benzo(a)pyrene | 330 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 330 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 330 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 330 | U |

(1) - Cannot be separated from Diphenylamine

9213586.2843 0000027 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: S100908

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 2 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 4

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | ALDOL CONDENSATE | 5.55 | 200 | AJ |
| 2. | ALDOL CONDENSATE | 7.28 | 100 | AJ |
| 3. | UNKNOWN | 25.38 | 200 | J |
| 4. | ALKANE | 26.25 | 70 | J |

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: S100911

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 1 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 330 | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 330 | U |
| 95-57-8 | 2-Chlorophenol | 330 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 330 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 330 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 330 | U |
| 95-48-7 | 2-Methylphenol | 330 | U |
| 108-60-1 | 2,2'-oxybis(2-Chloropropane) | 330 | U |
| 106-44-5 | 4-Methylphenol | 330 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 330 | U |
| 67-72-1 | Hexachloroethane | 330 | U |
| 98-95-3 | Nitrobenzene | 330 | U |
| 78-59-1 | Isophorone | 330 | U |
| 88-75-5 | 2-Nitrophenol | 330 | U |
| 105-67-9 | 2,4-Dimethylphenol | 330 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 330 | U |
| 120-83-2 | 2,4-Dichlorophenol | 330 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 330 | U |
| 91-20-3 | Naphthalene | 330 | U |
| 106-47-8 | 4-Chloroaniline | 330 | U |
| 87-68-3 | Hexachlorobutadiene | 330 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 330 | U |
| 91-57-6 | 2-Methylnaphthalene | 330 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 330 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 330 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 820 | U |
| 91-58-7 | 2-Chloronaphthalene | 330 | U |
| 88-74-4 | 2-Nitroaniline | 820 | U |
| 131-11-3 | Dimethylphthalate | 330 | U |
| 208-96-8 | Acenaphthylene | 330 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 330 | U |
| 99-09-2 | 3-Nitroaniline | 820 | U |
| 83-32-9 | Acenaphthene | 330 | U |

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: S100911

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 1 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 820 | U |
| 100-02-7 | 4-Nitrophenol | 820 | U |
| 132-64-9 | Dibenzofuran | 330 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 330 | U |
| 84-66-2 | Diethylphthalate | 23 | J |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 330 | U |
| 86-73-7 | Fluorene | 330 | U |
| 100-01-6 | 4-Nitroaniline | 820 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 820 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 330 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 330 | U |
| 118-74-1 | Hexachlorobenzene | 330 | U |
| 87-86-5 | Pentachlorophenol | 820 | U |
| 85-01-8 | Phenanthrene | 93 | J |
| 120-12-7 | Anthracene | 18 | J |
| 86-74-8 | Carbazole | 330 | U |
| 84-74-2 | Di-n-butylphthalate | 28 | JB |
| 206-44-0 | Fluoranthene | 990 | |
| 129-00-0 | Pyrene | 1200 | |
| 85-68-7 | Butylbenzylphthalate | 330 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 330 | U |
| 56-55-3 | Benzo(a)anthracene | 530 | |
| 218-01-9 | Chrysene | 680 | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 19 | J |
| 117-84-0 | Di-n-octyl phthalate | 330 | U |
| 205-99-2 | Benzo(b)fluoranthene | 380 | |
| 207-08-9 | Benzo(k)fluoranthene | 360 | |
| 50-32-8 | Benzo(a)pyrene | 140 | J |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 140 | J |
| 53-70-3 | Dibenz(a,h)anthracene | 65 | J |
| 191-24-2 | Benzo(g,h,i)perylene | 63 | J |

(1) - Cannot be separated from Diphenylamine

9713506.2846 000042

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: S100911

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 1 decanted: (Y/N)

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y

pH: 6.7

Number TICs found: 17

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | ALDOL CONDENSATE | 5.55 | 200 | AJ |
| 2. | ALDOL CONDENSATE | 6.07 | 100 | AJ |
| 3. | ALDOL CONDENSATE | 6.80 | 200 | AJ |
| 4. | ALDOL CONDENSATE | 7.20 | 80 | AJ |
| 5. | ALDOL CONDENSATE | 7.85 | 100 | AJ |
| 6. | ORGANIC ACID | 19.42 | 100 | J |
| 7. | PNA | 20.72 | 100 | J |
| 8. | PAH | 21.62 | 80 | J |
| 9. | PNA | 22.80 | 100 | J |
| 10. | UNKNOWN | 22.90 | 100 | J |
| 11. | PNA | 23.03 | 80 | J |
| 12. | PNA | 23.23 | 80 | J |
| 13. | UNKNOWN | 25.38 | 400 | J |
| 14. | ALKANE | 26.27 | 400 | J |
| 15. | PAH | 27.92 | 300 | J |
| 16. | ALKANE | 28.52 | 200 | J |
| 17. | ALKANE | 29.13 | 600 | J |

**ROY F. WESTON, INC.**
**LIONVILLE ANALYTICAL LABORATORY**
**ANALYTICAL CASE NARRATIVE**

**Client:** WESTINGHOUSE HANFORD
**RFW #:** 9209L880

**W.O. #:** 06168-002-001-9999-00
**Date Received:** 09-15-92

**PESTICIDE/PCB**

The set of samples consisted of two (2) soil samples collected on 09-10,11-92.

The samples were extracted on 09-21-92 and analyzed according to criteria set forth in the Contract Laboratory Program 03/90 SOW for Pesticide and PCB target compounds on 10-20,21-92.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. Linearity and breakdown criteria were met for each of the analytical columns.

2. Retention time criteria were met for all compounds on both analytical columns.

3. Resolution of all pesticides in the Resolution Check Standard were within EPA QC limits.

4. The RPDs of the pesticides in the individual mixes analyzed for calibration verification were within 25% for both analytical columns.

5. The RPDs of the pesticides in the Performance Evaluation Mixes analyzed for calibration verification were within 25% for both analytical columns.

6. One (1) of twenty-four (24) surrogate recoveries was outside the EPA QC limits. The following surrogate recovery was outside the EPA QC limits of 60%-150%.

| | % Recoveries | | | |
|---|---|---|---|---|
| Sample ID | TCX1 | TCX2 | DCB1 | DCB2 |
| B07232 | - | 55 | - | - |

WESTON
MANAGERS DESIGNERS/CONSULTANTS

7. All blank spike recoveries were within EPA QC limits

8. All matrix spike recoveries were within EPA QC limits.

9. Recoveries of pesticides for the Florisil Cartridge Check were within EPA QC limits.

10. Recoveries of pesticides for the GPC calibration check were within EPA QC limits.

Margaret M. Beatty for

J. Peter Hershey, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

11/18/92
Date

sma/pcb/09-880pp.cn

Roy F. Weston, Inc. - Lionville Laboratory
Pesticide/PCBs by GC, CLP List

Report Date: 10/23/92 16:21

RFW Batch Number: 9209L880 Client: WESTINGHOUSE HANFORD Work Order: 06168-002-001-9999-00 

| | Cust ID: | B07247 | | B07247 | | B07247 | | B07247 | | B07247 | | B07247 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Information | RFW#: | 001 | | 001 | | 001 MS | | 001 MS | | 001 MSD | | 001 MSD | |
| | Matrix: | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | D.F.: | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | Units: | ug/Kg | | ug/Kg | | ug/Kg | | ug/Kg | | ug/Kg | | ug/Kg | |
| | | | | CONFIRM | | | | CONFIRM | | | | CONFIRM | |
| Surrogate: Tetrachloro-m-xylene | | 82 | % | 72 | % | 62 | % | 60 | % | 70 | % | 68 | % |
| ~~Surrogate: Decachlorobiphenyl~~ | | ~~98~~ | ~~%~~ | ~~92~~ | ~~%~~ | ~~75~~ | ~~%~~ | ~~68~~ | ~~%~~ | ~~82~~ | ~~%~~ | ~~78~~ | ~~%~~ |
| | | | fl | | fl | | fl | | fl | | fl | | fl |
| Alpha-BHC | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| Beta-BHC | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| Delta-BHC | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| gamma-BHC (Lindane) | | 1.7 | U | NA | | 68 | % | 66 | % | 76 | % | 74 | % |
| Heptachlor | | 1.7 | U | NA | | 64 | % | 58 | % | 68 | % | 64 | % |
| Aldrin | | 2.0 | B | 1.7 | U | 56 | % | 56 | % | 58 | % | 62 | % |
| Heptachlor epoxide | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| Endosulfan I | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| Dieldrin | | 3.4 | U | NA | | 74 | % | 69 | % | 84 | % | 78 | % |
| 4,4'-DDE | | 3.4 | U | NA | | 3.4 | U | NA | | 3.4 | U | NA | |
| Endrin | | 3.4 | U | NA | | 81 | % | 69 | % | 90 | % | 77 | % |
| Endosulfan II | | 3.4 | U | NA | | 3.4 | U | NA | | 3.4 | U | NA | |
| 4,4'-DDD | | 3.4 | U | NA | | 3.4 | U | NA | | 3.4 | U | NA | |
| Endosulfan sulfate | | 3.4 | U | NA | | 3.4 | U | NA | | 3.4 | U | NA | |
| 4,4'-DDT | | 3.4 | U | NA | | 85 | % | 73 | % | 96 | % | 82 | % |
| Methoxychlor | | 17 | U | NA | | 17 | U | NA | | 17 | U | NA | |
| Endrin ketone | | 3.4 | U | NA | | 3.4 | U | NA | | 3.4 | U | NA | |
| Endrin aldehyde | | 3.4 | U | NA | | 3.4 | U | NA | | 3.4 | U | NA | |
| alpha-Chlordane | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| gamma-Chlordane | | 1.7 | U | NA | | 1.7 | U | NA | | 1.7 | U | NA | |
| Toxaphene | | 170 | U | NA | | 170 | U | NA | | 170 | U | NA | |
| Aroclor-1016 | | 34 | U | NA | | 34 | U | NA | | 34 | U | NA | |
| Aroclor-1221 | | 68 | U | NA | | 68 | U | NA | | 68 | U | NA | |
| Aroclor-1232 | | 34 | U | NA | | 34 | U | NA | | 34 | U | NA | |
| Aroclor-1242 | | 34 | U | NA | | 34 | U | NA | | 34 | U | NA | |
| Aroclor-1248 | | 34 | U | NA | | 34 | U | NA | | 34 | U | NA | |
| Aroclor-1254 | | 34 | U | NA | | 34 | U | NA | | 34 | U | NA | |
| Aroclor-1260 | | 34 | U | NA | | 34 | U | NA | | 34 | U | NA | |

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. Z= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

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Roy F. Weston, Inc. - Lionville Laboratory
Pesticide/PCBs by GC, CLP List

RFW Batch Number: 9209L880 Client: WESTINGHOUSE HANFORD Work Order: 06168-002-001-9999-00 Report Date: 10/23/92 16:21 Page: 2

| | Cust ID: | B07232 | B07232 | PBLK | PBLK | PBLK BS | PBLK BS |
|---|---|---|---|---|---|---|---|
| Sample Information | RFW#: | 002 | 002 | 92LE1621-MB1 | 92LE1621-MB1 | 92LE1621-MB1 | 92LE1621-MB1 |
| | Matrix: | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| | D.F.: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | Units: | ug/Kg | ug/Kg | ug/Kg | ug/Kg | ug/Kg | ug/Kg |
| | | | CONFIRM | | CONFIRM | | CONFIRM |
| Surrogate: Tetrachloro-m-xylene | | 62 % | 55 * % | 75 % | 62 % | 70 % | 62 % |
| ~~Surrogate: Decachlorobiphenyl~~ | | ~~72 %~~ | ~~65 %~~ | ~~82 %~~ | ~~75 %~~ | ~~78 %~~ | ~~72 %~~ |
| | | fl | fl | fl | fl | fl | fl |
| Alpha-BHC | | 1.7 U | NA | 1.7 U | NA | 1.7 U | NA |
| Beta-BHC | | 1.7 U | NA | 1.7 U | NA | 1.7 U | NA |
| Delta-BHC | | 1.7 U | NA | 1.7 | 1.7 U | 1.7 U | NA |
| gamma-BHC (Lindane) | | 1.7 U | NA | 1.7 U | NA | 70 % | 66 % |
| Heptachlor | | 1.7 U | NA | 1.7 U | NA | 64 % | 60 % |
| Aldrin | | 1.7 B | 1.7 U | 6.3 | 1.7 U | 36 % | 60 % |
| Heptachlor epoxide | | 1.7 U | NA | 1.7 U | NA | 1.7 U | NA |
| Endosulfan I | | 1.7 U | NA | 1.7 U | NA | 1.7 U | NA |
| Dieldrin | | 3.4 U | NA | 3.3 U | NA | 76 % | 71 % |
| 4,4'-DDE | | 3.4 U | NA | 3.3 U | NA | 3.3 U | NA |
| Endrin | | 3.4 U | NA | 3.3 U | NA | 81 % | 73 % |
| Endosulfan II | | 3.4 U | NA | 3.3 U | NA | 3.3 U | NA |
| 4,4'-DDD | | 3.4 U | NA | 3.3 U | NA | 3.3 U | NA |
| Endosulfan sulfate | | 3.4 U | NA | 3.3 U | NA | 3.3 U | NA |
| 4,4'-DDT | | 3.4 U | NA | 3.3 U | NA | 82 % | 69 % |
| Methoxychlor | | 17 U | NA | 17 U | NA | 17 U | NA |
| Endrin ketone | | 3.4 U | NA | 3.3 U | NA | 3.3 U | NA |
| Endrin aldehyde | | 3.4 U | NA | 3.3 U | NA | 3.3 U | NA |
| alpha-Chlordane | | 1.7 U | NA | 1.7 U | NA | 1.7 U | NA |
| gamma-Chlordane | | 1.7 U | NA | 1.7 U | NA | 1.7 U | NA |
| Toxaphene | | 170 U | NA | 170 U | NA | 170 U | NA |
| Aroclor-1016 | | 34 U | NA | 33 U | NA | 33 U | NA |
| Aroclor-1221 | | 68 U | NA | 67 U | NA | 67 U | NA |
| Aroclor-1232 | | 34 U | NA | 33 U | NA | 33 U | NA |
| Aroclor-1242 | | 34 U | NA | 33 U | NA | 33 U | NA |
| Aroclor-1248 | | 34 U | NA | 33 U | NA | 33 U | NA |
| Aroclor-1254 | | 34 U | NA | 33 U | NA | 33 U | NA |
| Aroclor-1260 | | 34 U | NA | 33 U | NA | 33 U | NA |

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. Z= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

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# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 06168-002-001-9999-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: 10199235.37

% Moisture: 2.2 decanted: (Y/N)

Date Received: 09/15/92

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 09/21/92

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 10/21/92

Injection Volume: 0.5(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 319-84-6 | Alpha-BHC | 1.7 | U |
| 319-85-7 | Beta-BHC | 1.7 | U |
| 319-86-8 | Delta-BHC | 1.7 | U |
| 58-89-9 | gamma-BHC (Lindane) | 1.7 | U |
| 76-44-8 | Heptachlor | 1.7 | U |
| 309-00-2 | Aldrin | 1.7 | U |
| 1024-57-3 | Heptachlor epoxide | 1.7 | U |
| 959-98-8 | Endosulfan I | 1.7 | U |
| 60-57-1 | Dieldrin | 3.4 | U |
| 72-55-9 | 4,4'-DDE | 3.4 | U |
| 72-20-8 | Endrin | 3.4 | U |
| 33213-65-9 | Endosulfan II | 3.4 | U |
| 72-54-8 | 4,4'-DDD | 3.4 | U |
| 1031-07-8 | Endosulfan sulfate | 3.4 | U |
| 50-29-3 | 4,4'-DDT | 3.4 | U |
| 72-43-5 | Methoxychlor | 17 | U |
| 53494-70-5 | Endrin ketone | 3.4 | U |
| 7421934 | Endrin aldehyde | 3.4 | U |
| 5103-71-9 | alpha-Chlordane | 1.7 | U |
| 5103-74-2 | gamma-Chlordane | 1.7 | U |
| 8001-35-2 | Toxaphene | 170 | U |
| 12674-11-2 | Aroclor-1016 | 34 | U |
| 11104-28-2 | Aroclor-1221 | 68 | U |
| 11141-16-5 | Aroclor-1232 | 34 | U |
| 53469-21-9 | Aroclor-1242 | 34 | U |
| 12672-29-6 | Aroclor-1248 | 34 | U |
| 11097-69-1 | Aroclor-1254 | 34 | U |
| 11096-82-5 | Aroclor-1260 | 34 | U |

B.M
11/16/92

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 06168-002-001-9999-001

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: 10199235.36

% Moisture: 1.3 decanted: (Y/N)

Date Received: 09/15/92

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 09/21/92

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 10/21/92

Injection Volume: 0.5 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 319-84-6 | Alpha-BHC | 1.7 | U |
| 319-85-7 | Beta-BHC | 1.7 | U |
| 319-86-8 | Delta-BHC | 1.7 | U |
| 58-89-9 | gamma-BHC (Lindane) | 1.7 | U |
| 76-44-8 | Heptachlor | 1.7 | U |
| 309-00-2 | Aldrin | 1.7 | U |
| 1024-57-3 | Heptachlor epoxide | 1.7 | U |
| 959-98-8 | Endosulfan I | 1.7 | U |
| 60-57-1 | Dieldrin | 3.4 | U |
| 72-55-9 | 4,4'-DDE | 3.4 | U |
| 72-20-8 | Endrin | 3.4 | U |
| 33213-65-9 | Endosulfan II | 3.4 | U |
| 72-54-8 | 4,4'-DDD | 3.4 | U |
| 1031-07-8 | Endosulfan sulfate | 3.4 | U |
| 50-29-3 | 4,4'-DDT | 3.4 | U |
| 72-43-5 | Methoxychlor | 17 | U |
| 53494-70-5 | Endrin ketone | 3.4 | U |
| 7421934 | Endrin aldehyde | 3.4 | U |
| 5103-71-9 | alpha-Chlordane | 1.7 | U |
| 5103-74-2 | gamma-Chlordane | 1.7 | U |
| 8001-35-2 | Toxaphene | 170 | U |
| 12674-11-2 | Aroclor-1016 | 34 | U |
| 11104-28-2 | Aroclor-1221 | 68 | U |
| 11141-16-5 | Aroclor-1232 | 34 | U |
| 53469-21-9 | Aroclor-1242 | 34 | U |
| 12672-29-6 | Aroclor-1248 | 34 | U |
| 11097-69-1 | Aroclor-1254 | 34 | U |
| 11096-82-5 | Aroclor-1260 | 34 | U |

B M 11/16/92

9713506.2853

**ROY F. WESTON, INC.**
**Lionville Laboratory**

**CLIENT:** WESTINGHOUSE HANFORD **SAMPLE(S) RECEIVED:** 09-15-92
**RFW #:** 9209L880
**W.O. #:** 6168-02-01-9999

## INORGANIC NARRATIVE

The following is a summary of the quality control results and a description of any problems encountered during the analysis of this batch of samples:

1. All sample holding times as required by 40CFR136 were met.

2. All preparation blank results were below the required detection limit.

3. All laboratory control standards (blank spikes) were within the control limits of 80-120%. All %RPD were within the 20% guidance limit.

4. All calibration verification checks were within the required control limits of 90-110%. Calibration verification is performed using independent standards.

5. Matrix spike recoveries are summarized on the Inorganic Accuracy Report contained within this document. All recoveries were within the 75-125% guidance limits. All %RPD were within the 20% guidance limit.

6. Replicate results are summarized on the Inorganic Precision Report contained within this document. All results were within the 20% RPD guidance limit.

7. The analytical methods applied by the laboratory, unless otherwise requested, for all inorganic analyses are derived from the USEPA Method for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020) and Standard Methods for the Examination of Water and Wastewater 16 ed. Methods for the analysis of solid samples are derived from Test Methods for Evaluating Solid Waste (USEPA SW846).

RECORD COPY

Margaret M. Beaty for 10/14/92
J. Peter Hershey, Ph.D. Date
Laboratory Manager
Lionville Analytical Laboratory

DEC 1992
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7/24/96 Kdb

9713506.2854

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 10/09/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-9999

WESTON BATCH #: 9209L880

| SAMPLE | SITE ID | ANALYTE | RESULT | | UNITS | REPORTING LIMIT |
|---|---|---|---|---|---|---|
| -001 | B07247 | % Solids | 97.8 | | % | 0.10 |
| | | Chloride by IC | 16.7 | | MG/KG | 1.3 |
| | | Fluoride by IC | 2.6 | u | MG/KG | 2.6 |
| | | Nitrite by IC | 1.3 | u | MG/KG | 1.3 |
| | | Nitrate by IC | 1.3 | u | MG/KG | 1.3 |
| | | Cyanide, Total | 1.0 | u | MG/KG | 1.0 |
| | | Phosphate by IC | 1.3 | u | MG/KG | 1.3 |
| | | Sulfate by IC | 3.9 | | MG/KG | 1.3 |
| | | pH | 8.5 | | PH UNITS | 0.010 |
| -002 | B07232 | % Solids | 98.7 | | % | 0.10 |
| | | Chloride by IC | 16.8 | | MG/KG | 1.3 |
| | | Fluoride by IC | 2.5 | u | MG/KG | 2.5 |
| | | Nitrite by IC | 1.3 | u | MG/KG | 1.3 |
| | | Nitrate by IC | 27.8 | | MG/KG | 1.3 |
| | | Cyanide, Total | 1.0 | u | MG/KG | 1.0 |
| | | Phosphate by IC | 4.2 | | MG/KG | 1.3 |
| | | Sulfate by IC | 6.4 | | MG/KG | 1.3 |
| | | pH | 7.8 | | PH UNITS | 0.010 |
| -003 | B07244 | % Solids | 96.3 | | % | 0.10 |

7/24/96 KDB

WESTON MANAGERS DESIGNERS/CONSULTANTS

**ROY F. WESTON, INC.**
**LIONVILLE ANALYTICAL LABORATORY**
**ANALYTICAL CASE NARRATIVE**

**Client** : WESTINGHOUSE HANFORD
**RFW#** : 9209L880

**W.O. #:** 06168-002-001-9999-00
**Date Received:** 09-15-92

**CLP METALS**

The set of samples consisted of two (2) soil samples collected on 09-10 and 09-11-92.

The samples were analyzed according to criteria set forth in CLP SOW 3/90.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analysis:

1. ICVs, CCVs, and LCSs stock standards were purchased from Inorganic Ventures Laboratory.

2. All ICV and CCV values were within control limits.

3. All ICB and CCB values were within control limits.

4. All preparation blank values were within control limits.

5. All LCS results were within the 80-120% control limits.

6. All matrix spike recoveries were within the 75-125% control limits with the exceptions of arsenic, lead and mercury. All exceptions are flagged with a "N" on the CLP forms.

7. All duplicate analyses were within the 20% RPD control limit with the exception of manganese. All exceptions are flagged with a "*" on the CLP forms.

8. Arsenic sample results were calculated by the method of standard addition (MSA). All corresponding samples were flagged with a "S" according to CLP protocol.

9. For MSA, results reported on Form 8 are calculated from absorbance values. Results reported on other forms are based on concentration. As indicated in the SOWILM01.0, page B-32, differences due to rounding may be found between the MSA values on Form 8 and the results reported on the other forms.

WESTON

10. The code CV is currently in use by the laboratory for both mercury instruments in operation (HG1 and HG2). HG1 is complete with autosampler and software, but still requires manual digestion; HG2 is operated by the analyst, produces a strip chart and also requires manual digestion.

11. HG1 requires less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionally scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 ml. For soils, 0.1 gram of sample is taken to a final volume of 50 ml (including all reagents).

12. Quarterly Detection Limits, ICP Interelement Correction Factors and ICP Linear Ranges for IC3 are included in this package, but do not appear on EDD.

13. The graphite furnace time that appears on form XIV is the time of the first injection. The time that appears on the data is the print time.

14. The matrix spike for batch #92L2378 was not added to the sample during preparation, a matrix spike was reprepared in batch #92L2722. However, the spike was prepared with the laboratory control standard solution.

J. Peter Hershey, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

12.10.92
Date

mlj/clp-met.nar

**ROY F. WESTON, INC.**
**LIONVILLE ANALYTICAL LABORATORY**
**ANALYTICAL CASE NARRATIVE**

**Client:** WESTINGHOUSE HANFORD
**RFW #:** 9209L880

**W.O. #:** 06168-002-001-9999-00
**Date Received:** 09-15-92

## CLP METALS ADDENDUM

1. Following Exhibit E, Section V, Item 10, page E-23 of the USEPA Statement of Work for Inorganics Analysis, Document Number ILM02.0 ICP Instrument Detection Limits (IDLs) are reported for two (2) ICP instruments. The instrument identification numbers are "IC1" and "IC3". The highest IDL for the two instruments is used for reporting concentration values in this sample data package.

2. A discrepancy exists between raw data and Form XIVs analytical spikes recovery calculations performed for graphite furnace AA analytes. Instrument software calculates spike recoveries based on absolute values below the IDL for sample results. This is hard-coded by the vendor and is currently not correctable. CLP convention (SOW ILM02.0, Exhibit E, Section V, Item 6, page E-20) requires that when values fall below the IDL, the sample result is equal to zero (0) for the purposes of calculating the percent recovery. The Form XIVs contain the correct calculation.

for

J. Peter Hershey, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

12, 10, 92
Date

mlj\clp-met.nar

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 12/07/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 06168-002-001-9999-00

WESTON BATCH #: 9209L880

| SAMPLE | SITE ID | ANALYTE | RESULT | | UNITS | REPORTING LIMIT |
|---|---|---|---|---|---|---|
| -001 | B07247 | Silver, Total | 2.0 | u | MG/KG | 2.0 |
| | | Aluminum, Total | 4840 | | MG/KG | 40.9 |
| | | Arsenic, Total | 2.2 | | MG/KG | 2.0 |
| | | Barium, Total | 52.0 | | MG/KG | 40.9 |
| | | Beryllium, Total | 1.0 | u | MG/KG | 1.0 |
| | | Calcium, Total | 7750 | | MG/KG | 1020 |
| | | Cadmium, Total | 1.0 | u | MG/KG | 1.0 |
| | | Cobalt, Total | 10.2 | u | MG/KG | 10.2 |
| | | Chromium, Total | 9.2 | | MG/KG | 2.0 |
| | | Copper, Total | 13.3 | | MG/KG | 5.1 |
| | | Iron, Total | 9960 | | MG/KG | 20.4 |
| | | Mercury, Total | 0.10 | u | MG/KG | 0.10 |
| | | Potassium, Total | 1210 | | MG/KG | 1020 |
| | | Magnesium, Total | 3930 | | MG/KG | 1020 |
| | | Manganese, Total | 202 | | MG/KG | 3.1 |
| | | Sodium, Total | 1020 | u | MG/KG | 1020 |
| | | Nickel, Total | 11.6 | | MG/KG | 8.2 |
| | | Lead, Total | 5.6 | | MG/KG | 0.61 |
| | | Antimony, Total | 12.3 | u | MG/KG | 12.3 |
| | | Selenium, Total | 1.0 | u | MG/KG | 1.0 |
| | | Thallium, Total | 2.0 | u | MG/KG | 2.0 |
| | | Vanadium, Total | 15.5 | | MG/KG | 10.2 |
| | | Zinc, Total | 34.7 | | MG/KG | 4.1 |

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 12/07/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 06168-002-001-9999-00

WESTON BATCH #: 9209L880

| SAMPLE | SITE ID | ANALYTE | RESULT | | UNITS | REPORTING LIMIT |
|---|---|---|---|---|---|---|
| -002 | B07232 | Silver, Total | 2.0 | u | MG/KG | 2.0 |
| | | Aluminum, Total | 4710 | | MG/KG | 40.5 |
| | | Arsenic, Total | 2.0 | u | MG/KG | 2.0 |
| | | Barium, Total | 54.4 | | MG/KG | 40.5 |
| | | Beryllium, Total | 1.0 | u | MG/KG | 1.0 |
| | | Calcium, Total | 4170 | | MG/KG | 1010 |
| | | Cadmium, Total | 1.0 | u | MG/KG | 1.0 |
| | | Cobalt, Total | 10.1 | u | MG/KG | 10.1 |
| | | Chromium, Total | 12.7 | | MG/KG | 2.0 |
| | | Copper, Total | 14.1 | | MG/KG | 5.1 |
| | | Iron, Total | 12200 | | MG/KG | 20.2 |
| | | Mercury, Total | 0.11 | | MG/KG | 0.10 |
| | | Potassium, Total | 1420 | | MG/KG | 1010 |
| | | Magnesium, Total | 3430 | | MG/KG | 1010 |
| | | Manganese, Total | 248 | | MG/KG | 3.0 |
| | | Sodium, Total | 1010 | u | MG/KG | 1010 |
| | | Nickel, Total | 11.2 | | MG/KG | 8.1 |
| | | Lead, Total | 14.3 | | MG/KG | 6.0 |
| | | Antimony, Total | 12.1 | u | MG/KG | 12.1 |
| | | Selenium, Total | 1.0 | u | MG/KG | 1.0 |
| | | Thallium, Total | 2.0 | u | MG/KG | 2.0 |
| | | Vanadium, Total | 18.3 | | MG/KG | 10.1 |
| | | Zinc, Total | 50.7 | | MG/KG | 4.0 |

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07247

Lab Name: ROY F. WESTON, INC - L372 Contract: 6168-02-01

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP880

Matrix (soil/water): SOIL Lab Sample ID: 920988001

Level (low/med): LOW Date Received: 9/15/92

% Solids: 97.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4840.00 | | | P |
| 7440-36-0 | Antimony | 12.30 | U | | P |
| 7440-38-2 | Arsenic | 2.20 | | NS | F |
| 7440-39-3 | Barium | 52.00 | | | P |
| 7440-41-7 | Beryllium | .33 | B | | P |
| 7440-43-9 | Cadmium | 1.43 | U | | P |
| 7440-70-2 | Calcium | 7750.00 | | | P |
| 7440-47-3 | Chromium | 9.20 | | | P |
| 7440-48-4 | Cobalt | 7.00 | B | | P |
| 7440-50-8 | Copper | 13.30 | | | P |
| 7439-89-6 | Iron | 9960.00 | | | P |
| 7439-92-1 | Lead | 5.60 | | N | F |
| 7439-95-4 | Magnesium | 3930.00 | | | P |
| 7439-96-5 | Manganese | 202.00 | | * | P |
| 7439-97-6 | Mercury | .05 | U | N | CV |
| 7440-02-0 | Nickel | 11.60 | | | P |
| 7440-09-7 | Potassium | 1210.00 | | | P |
| 7782-49-2 | Selenium | .41 | U | W | F |
| 7440-22-4 | Silver | 2.04 | U | | P |
| 7440-23-5 | Sodium | 147.00 | B | | P |
| 7440-28-0 | Thallium | .41 | U | W | F |
| 7440-62-2 | Vanadium | 15.50 | | | P |
| 7440-66-6 | Zinc | 34.70 | | | P |
| | Cyanide | 1.02 | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07232

Lab Name: ROY F. WESTON, INC - L372 Contract: 6168-02-01

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP880

Matrix (soil/water): SOIL Lab Sample ID: 920988002

Level (low/med): LOW Date Received: 9/15/92

% Solids: 98.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4710.00 | | | P |
| 7440-36-0 | Antimony | 12.10 | U | | P |
| 7440-38-2 | Arsenic | 1.60 | B | NS | F |
| 7440-39-3 | Barium | 54.40 | | | P |
| 7440-41-7 | Beryllium | .20 | U | | P |
| 7440-43-9 | Cadmium | 1.42 | U | | P |
| 7440-70-2 | Calcium | 4170.00 | | | P |
| 7440-47-3 | Chromium | 12.70 | | | P |
| 7440-48-4 | Cobalt | 7.70 | B | | P |
| 7440-50-8 | Copper | 14.10 | | | P |
| 7439-89-6 | Iron | 12200.00 | | | P |
| 7439-92-1 | Lead | 14.30 | | N | F |
| 7439-95-4 | Magnesium | 3430.00 | | | P |
| 7439-96-5 | Manganese | 248.00 | | * | P |
| 7439-97-6 | Mercury | .11 | | N | CV |
| 7440-02-0 | Nickel | 11.20 | | | P |
| 7440-09-7 | Potassium | 1420.00 | | | P |
| 7782-49-2 | Selenium | .40 | U | W | F |
| 7440-22-4 | Silver | 2.03 | U | | P |
| 7440-23-5 | Sodium | 126.00 | B | | P |
| 7440-28-0 | Thallium | .40 | U | W | F |
| 7440-62-2 | Vanadium | 18.30 | | | P |
| 7440-66-6 | Zinc | 50.70 | | | P |
| | Cyanide | 1.01 | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

9213506.2862 1A 000040

VOLATILE ORGANICS ANALYSIS DATA SHEET 10/22/92

CLIENT SAMPLE NO.

B07232

06163-002-001-9999-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: B092107

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 1

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 28 | ~~B~~ |
| 67-64-1 | Acetone | 28 | ~~B~~ |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 8 | J |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

NV 4-12-93S

RB 5/18/93

9213506.2865 1F 070004 1/29/92

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~ 06163-002-001-9999-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: B092107

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 1

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53 (mm)

Dilution Factor: 1.00

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 |
|---|---|---|---|---|
| 1. | | | | |

NV
4-12-93SC

9715506.2864 1A 000004 CLIENT SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET 10/22/92

06163-002-001-9000-00

B07232RE

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: B092111

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 1

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 12 | ~~B~~ |
| 67-64-1 | Acetone | 7 | ~~JB~~ |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 7 | J |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

NV 4-12-93

RB 5/18/93

9214506.2865 000055

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07244

06168-002-001-9990-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-003

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: AX9007

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 4

Date Analyzed: 09/24/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 17 | ~~B~~ |
| 67-64-1 | Acetone | 26 | ~~B~~ |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 10 | U |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

RB 5/18/93

NV 4-12-93

9213506.2866 0000056

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

10/22/92

CLIENT SAMPLE NO.

B07244

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~ 0663-002-001-9999-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-003

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: AX9007

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 4

Date Analyzed: 09/24/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.00

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 |
|---|---|---|---|---|
| 1. | | | | |

NV
4-12-93 SC

9213506.2867 0 0 0 0 0 3 CLIENT SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B07247

06168-002-001-9999-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 4.90 (g/mL) G

Lab File ID: B092106

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 2

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.02

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 27 | ~~B~~ |
| 67-64-1 | Acetone | 24 | ~~B~~ |
| 75-15-0 | Carbon Disulfide | 10 | U |
| 75-35-4 | 1,1-Dichloroethene | 10 | U |
| 75-34-3 | 1,1-Dichloroethane | 10 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 10 | U |
| 67-66-3 | Chloroform | 10 | U |
| 107-06-2 | 1,2-Dichloroethane | 10 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 10 | U |
| 56-23-5 | Carbon Tetrachloride | 10 | U |
| 75-27-4 | Bromodichloromethane | 10 | U |
| 78-87-5 | 1,2-Dichloropropane | 10 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 10 | U |
| 79-01-6 | Trichloroethene | 10 | U |
| 124-48-1 | Dibromochloromethane | 10 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 10 | U |
| 71-43-2 | Benzene | 10 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 10 | U |
| 75-25-2 | Bromoform | 10 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 10 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 10 | U |
| 108-88-3 | Toluene | 10 | U |
| 108-90-7 | Chlorobenzene | 10 | U |
| 100-41-4 | Ethylbenzene | 10 | U |
| 100-42-5 | Styrene | 10 | U |
| 1330-20-7 | Xylene (total) | 10 | U |

RB 5/18/9
NV
4-12-9

9213506.2868 1E 0 0 0 0 3 7 1423/92

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B07247

06163-002-001-9999-00

Lab Name: Roy F. Weston, Inc. Work Order: ~~6168-02-0~~

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 4.90 (g/mL) G

Lab File ID: B092106

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: not dec. 2

Date Analyzed: 09/21/92

GC Column: DB624 ID: .53(mm)

Dilution Factor: 1.02

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 |
|---|---|---|---|---|
| 1. | | | | |

NU
4-12-93 SC

CLIENT SAMPLE NO.

B07232

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: S100911

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 1 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 330 | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 330 | U |
| 95-57-8 | 2-Chlorophenol | 330 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 330 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 330 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 330 | U |
| 95-48-7 | 2-Methylphenol | 330 | U |
| 108-60-1 | 2,2'-oxybis(2-Chloropropane) | 330 | U |
| 106-44-5 | 4-Methylphenol | 330 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 330 | U |
| 67-72-1 | Hexachloroethane | 330 | U |
| 98-95-3 | Nitrobenzene | 330 | U |
| 78-59-1 | Isophorone | 330 | U |
| 88-75-5 | 2-Nitrophenol | 330 | U |
| 105-67-9 | 2,4-Dimethylphenol | 330 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 330 | U |
| 120-83-2 | 2,4-Dichlorophenol | 330 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 330 | U |
| 91-20-3 | Naphthalene | 330 | U |
| 106-47-8 | 4-Chloroaniline | 330 | U |
| 87-68-3 | Hexachlorobutadiene | 330 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 330 | U |
| 91-57-6 | 2-Methylnaphthalene | 330 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 330 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 330 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 820 | U |
| 91-58-7 | 2-Chloronaphthalene | 330 | U |
| 88-74-4 | 2-Nitroaniline | 820 | U |
| 131-11-3 | Dimethylphthalate | 330 | U |
| 208-96-8 | Acenaphthylene | 330 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 330 | U |
| 99-09-2 | 3-Nitroaniline | 820 | U |
| 83-32-9 | Acenaphthene | 330 | U |

NV 4-12-93

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: S100911

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 1 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 820 | U |
| 100-02-7 | 4-Nitrophenol | 820 | U |
| 132-64-9 | Dibenzofuran | 330 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 330 | U |
| 84-66-2 | Diethylphthalate | 23 | J |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 330 | U |
| 86-73-7 | Fluorene | 330 | U |
| 100-01-6 | 4-Nitroaniline | 820 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 820 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 330 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 330 | U |
| 118-74-1 | Hexachlorobenzene | 330 | U |
| 87-86-5 | Pentachlorophenol | 820 | U |
| 85-01-8 | Phenanthrene | 93 | J |
| 120-12-7 | Anthracene | 18 | J |
| 86-74-8 | Carbazole | 330 | U |
| 84-74-2 | Di-n-butylphthalate | 28 | JB |
| 206-44-0 | Fluoranthene | 990 | |
| 129-00-0 | Pyrene | 1200 | |
| 85-68-7 | Butylbenzylphthalate | 330 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 330 | U |
| 56-55-3 | Benzo(a)anthracene | 530 | |
| 218-01-9 | Chrysene | 680 | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 19 | J |
| 117-84-0 | Di-n-octyl phthalate | 330 | U |
| 205-99-2 | Benzo(b)fluoranthene | 380 | |
| 207-08-9 | Benzo(k)fluoranthene | 360 | |
| 50-32-8 | Benzo(a)pyrene | 140 | J |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 140 | J |
| 53-70-3 | Dibenz(a,h)anthracene | 65 | J |
| 191-24-2 | Benzo(g,h,i)perylene | 63 | J |

(1) - Cannot be separated from Diphenylamine

NV 4-12-93

9213506.2871

000042

1

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: S100911

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 1 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

Number TICs found: 17

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | ALDOL CONDENSATE | 5.55 | 200 | AJ |
| 2. | ALDOL CONDENSATE | 6.07 | 100 | AJ |
| 3. | ALDOL CONDENSATE | 6.80 | 200 | AJ |
| 4. | ALDOL CONDENSATE | 7.20 | 80 | AJ |
| 5. | ALDOL CONDENSATE | 7.85 | 100 | AJ |
| 6. | ORGANIC ACID | 19.42 | 100 | J |
| 7. | PNA | 20.72 | 100 | J |
| 8. | PAH | 21.62 | 80 | J |
| 9. | PNA | 22.80 | 100 | J |
| 10. | UNKNOWN | 22.90 | 100 | J |
| 11. | PNA | 23.03 | 80 | J |
| 12. | PNA | 23.23 | 80 | J |
| 13. | UNKNOWN | 25.38 | 400 | J |
| 14. | ALKANE | 26.27 | 400 | J |
| 15. | PAH | 27.92 | 300 | J |
| 16. | ALKANE | 28.52 | 200 | J |
| 17. | ALKANE | 29.13 | 600 | J |

NV 4-12-93 SC

9216506.2872 0000025

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: S100908

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 2 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 330 | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 330 | U |
| 95-57-8 | 2-Chlorophenol | 330 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 330 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 330 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 330 | U |
| 95-48-7 | 2-Methylphenol | 330 | U |
| 108-60-1 | 2,2'-oxybis(2-Chloropropane) | 330 | U |
| 106-44-5 | 4-Methylphenol | 330 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 330 | U |
| 67-72-1 | Hexachloroethane | 330 | U |
| 98-95-3 | Nitrobenzene | 330 | U |
| 78-59-1 | Isophorone | 330 | U |
| 88-75-5 | 2-Nitrophenol | 330 | U |
| 105-67-9 | 2,4-Dimethylphenol | 330 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 330 | U |
| 120-83-2 | 2,4-Dichlorophenol | 330 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 330 | U |
| 91-20-3 | Naphthalene | 330 | U |
| 106-47-8 | 4-Chloroaniline | 330 | U |
| 87-68-3 | Hexachlorobutadiene | 330 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 330 | U |
| 91-57-6 | 2-Methylnaphthalene | 330 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 330 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 330 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 820 | U |
| 91-58-7 | 2-Chloronaphthalene | 330 | U |
| 88-74-4 | 2-Nitroaniline | 820 | U |
| 131-11-3 | Dimethylphthalate | 330 | U |
| 208-96-8 | Acenaphthylene | 330 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 330 | U |
| 99-09-2 | 3-Nitroaniline | 820 | U |
| 83-32-9 | Acenaphthene | 330 | U |

NU 4-12-93

9213506.2875 1C 000026 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL Lab Sample ID: 9209L880-001

Sample wt/vol: 30.9 (g/mL) G Lab File ID: S100908

Level: (low/med) LOW Date Received: 09/15/92

% Moisture: 2 decanted: (Y/N)__ Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL) Date Analyzed: 10/09/92

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 51-28-5 | 2,4-Dinitrophenol | 820 | U |
| 100-02-7 | 4-Nitrophenol | 820 | U |
| 132-64-9 | Dibenzofuran | 330 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 330 | U |
| 84-66-2 | Diethylphthalate | 330 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 330 | U |
| 86-73-7 | Fluorene | 330 | U |
| 100-01-6 | 4-Nitroaniline | 820 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 820 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 330 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 330 | U |
| 118-74-1 | Hexachlorobenzene | 330 | U |
| 87-86-5 | Pentachlorophenol | 820 | U |
| 85-01-8 | Phenanthrene | 330 | U |
| 120-12-7 | Anthracene | 330 | U |
| 86-74-8 | Carbazole | 330 | U |
| 84-74-2 | Di-n-butylphthalate | 28 | JB |
| 206-44-0 | Fluoranthene | 330 | U |
| 129-00-0 | Pyrene | 330 | U |
| 85-68-7 | Butylbenzylphthalate | 330 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 330 | U |
| 56-55-3 | Benzo(a)anthracene | 330 | U |
| 218-01-9 | Chrysene | 330 | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 330 | U |
| 117-84-0 | Di-n-octyl phthalate | 330 | U |
| 205-99-2 | Benzo(b)fluoranthene | 330 | U |
| 207-08-9 | Benzo(k)fluoranthene | 330 | U |
| 50-32-8 | Benzo(a)pyrene | 330 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 330 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 330 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 330 | U |

NV 472-13

(1) - Cannot be separated from Diphenylamine

9746506.2874 0000027 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-0

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: S100908

Level: (low/med) LOW

Date Received: 09/15/92

% Moisture: 2 decanted: (Y/N)__

Date Extracted: 09/17/92

Concentrated Extract Volume: 500(uL)

Date Analyzed: 10/09/92

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 4

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | ALDOL CONDENSATE | 5.55 | 200 | AJ |
| 2. | ALDOL CONDENSATE | 7.28 | 100 | AJ |
| 3. | UNKNOWN | 25.38 | 200 | J |
| 4. | ALKANE | 26.25 | 70 | J |

NV-H-12-93SC

9213506.2875 0000025

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07232

Lab Name: Roy F. Weston, Inc. Work Order: 06168-002-001-9999-001

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-002

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: 10199235.36

% Moisture: 1.3 decanted: (Y/N)

Date Received: 09/15/92

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 09/21/92

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 10/21/92

Injection Volume: 0.5(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 319-84-6 | Alpha-BHC | 1.7 | U |
| 319-85-7 | Beta-BHC | 1.7 | U |
| 319-86-8 | Delta-BHC | 1.7 | U |
| 58-89-9 | gamma-BHC (Lindane) | 1.7 | U |
| 76-44-8 | Heptachlor | 1.7 | U |
| 309-00-2 | Aldrin | 1.7 | U |
| 1024-57-3 | Heptachlor epoxide | 1.7 | U |
| 959-98-8 | Endosulfan I | 1.7 | U |
| 60-57-1 | Dieldrin | 3.4 | U |
| 72-55-9 | 4,4'-DDE | 3.4 | U |
| 72-20-8 | Endrin | 3.4 | U |
| 33213-65-9 | Endosulfan II | 3.4 | U |
| 72-54-8 | 4,4'-DDD | 3.4 | U |
| 1031-07-8 | Endosulfan sulfate | 3.4 | U |
| 50-29-3 | 4,4'-DDT | 3.4 | U |
| 72-43-5 | Methoxychlor | 17 | U |
| 53494-70-5 | Endrin ketone | 3.4 | U |
| 7421934 | Endrin aldehyde | 3.4 | U |
| 5103-71-9 | alpha-Chlordane | 1.7 | U |
| 5103-74-2 | gamma-Chlordane | 1.7 | U |
| 8001-35-2 | Toxaphene | 170 | U |
| 12674-11-2 | Aroclor-1016 | 34 | U |
| 11104-28-2 | Aroclor-1221 | 68 | U |
| 11141-16-5 | Aroclor-1232 | 34 | U |
| 53469-21-9 | Aroclor-1242 | 34 | U |
| 12672-29-6 | Aroclor-1248 | 34 | U |
| 11097-69-1 | Aroclor-1254 | 34 | U |
| 11096-82-5 | Aroclor-1260 | 34 | U |

B M
11/16/92

9413506.2876 000022

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B07247

Lab Name: Roy F. Weston, Inc. Work Order: 06168-002-001-9999-00

Client: WESTINGHOUSE HANFORD

Matrix: (soil/water) SOIL

Lab Sample ID: 9209L880-001

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: 10199235.37

% Moisture: 2.2 decanted: (Y/N)

Date Received: 09/15/92

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 09/21/92

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 10/21/92

Injection Volume: 0.5(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.3

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg | Q |
|---|---|---|---|
| 319-84-6 | Alpha-BHC | 1.7 | U |
| 319-85-7 | Beta-BHC | 1.7 | U |
| 319-86-8 | Delta-BHC | 1.7 | U |
| 58-89-9 | gamma-BHC (Lindane) | 1.7 | U |
| 76-44-8 | Heptachlor | 1.7 | U |
| 309-00-2 | Aldrin | 1.7 | U |
| 1024-57-3 | Heptachlor epoxide | 1.7 | U |
| 959-98-8 | Endosulfan I | 1.7 | U |
| 60-57-1 | Dieldrin | 3.4 | U |
| 72-55-9 | 4,4'-DDE | 3.4 | U |
| 72-20-8 | Endrin | 3.4 | U |
| 33213-65-9 | Endosulfan II | 3.4 | U |
| 72-54-8 | 4,4'-DDD | 3.4 | U |
| 1031-07-8 | Endosulfan sulfate | 3.4 | U |
| 50-29-3 | 4,4'-DDT | 3.4 | U |
| 72-43-5 | Methoxychlor | 17 | U |
| 53494-70-5 | Endrin ketone | 3.4 | U |
| 7421934 | Endrin aldehyde | 3.4 | U |
| 5103-71-9 | alpha-Chlordane | 1.7 | U |
| 5103-74-2 | gamma-Chlordane | 1.7 | U |
| 8001-35-2 | Toxaphene | 170 | U |
| 12674-11-2 | Aroclor-1016 | 34 | U |
| 11104-28-2 | Aroclor-1221 | 68 | U |
| 11141-16-5 | Aroclor-1232 | 34 | U |
| 53469-21-9 | Aroclor-1242 | 34 | U |
| 12672-29-6 | Aroclor-1248 | 34 | U |
| 11097-69-1 | Aroclor-1254 | 34 | U |
| 11096-82-5 | Aroclor-1260 | 34 | U |

B.M 11/16/92

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07232

Lab Name: ROY F. WESTON, INC - L372 Contract: 6168-02-01

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP880

Matrix (soil/water): SOIL Lab Sample ID: 920988002

Level (low/med): LOW Date Received: 9/15/92

% Solids: 98.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4710.00 | | | P |
| 7440-36-0 | Antimony | 12.10 | U | | P |
| 7440-38-2 | Arsenic | 1.60 | ~~B~~ | ~~NS~~ | F |
| 7440-39-3 | Barium | 54.40 | | | P |
| 7440-41-7 | Beryllium | .20 | U | | P |
| 7440-43-9 | Cadmium | 1.42 | U | | P |
| 7440-70-2 | Calcium | 4170.00 | | | P |
| 7440-47-3 | Chromium | 12.70 | | | P |
| 7440-48-4 | Cobalt | 7.70 | ~~B~~ | | P |
| 7440-50-8 | Copper | 14.10 | | | P |
| 7439-89-6 | Iron | 12200.00 | | | P |
| 7439-92-1 | Lead | 14.30 | | ~~N~~ | F |
| 7439-95-4 | Magnesium | 3430.00 | | | P |
| 7439-96-5 | Manganese | 248.00 | | ~~*~~ | P |
| 7439-97-6 | Mercury | .11 | | ~~N~~ | CV |
| 7440-02-0 | Nickel | 11.20 | | | P |
| 7440-09-7 | Potassium | 1420.00 | | | P |
| 7782-49-2 | Selenium | .40 | U | ~~W~~ | F |
| 7440-22-4 | Silver | 2.03 | U | | P |
| 7440-23-5 | Sodium | 126.00 | ~~B~~ | | P |
| 7440-28-0 | Thallium | .40 | U | ~~W~~ | F |
| 7440-62-2 | Vanadium | 18.30 | | | P |
| 7440-66-6 | Zinc | 50.70 | | | P |
| | Cyanide | 1.01 | U | | C |

RB 5/18/93

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07247

Lab Name: ROY F. WESTON, INC - L372 Contract: 6168-02-01

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP880

Matrix (soil/water): SOIL Lab Sample ID: 920988001

Level (low/med): LOW Date Received: 9/15/92

% Solids: 97.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4840.00 | | | P |
| 7440-36-0 | Antimony | 12.30 | U | | P |
| 7440-38-2 | Arsenic | 2.20 | | NS | F |
| 7440-39-3 | Barium | 52.00 | | | P |
| 7440-41-7 | Beryllium | .33 | B | | P |
| 7440-43-9 | Cadmium | 1.43 | U | | P |
| 7440-70-2 | Calcium | 7750.00 | | | P |
| 7440-47-3 | Chromium | 9.20 | | | P |
| 7440-48-4 | Cobalt | 7.00 | B | | P |
| 7440-50-8 | Copper | 13.30 | | | P |
| 7439-89-6 | Iron | 9960.00 | | | P |
| 7439-92-1 | Lead | 5.60 | | N | F |
| 7439-95-4 | Magnesium | 3930.00 | | | P |
| 7439-96-5 | Manganese | 202.00 | | * | P |
| 7439-97-6 | Mercury | .05 | U | N | CV |
| 7440-02-0 | Nickel | 11.60 | | | P |
| 7440-09-7 | Potassium | 1210.00 | | | P |
| 7782-49-2 | Selenium | .41 | U | W | F |
| 7440-22-4 | Silver | 2.04 | U | | P |
| 7440-23-5 | Sodium | 147.00 | B | | P |
| 7440-28-0 | Thallium | .41 | U | W | F |
| 7440-62-2 | Vanadium | 15.50 | | | P |
| 7440-66-6 | Zinc | 34.70 | | | P |
| | Cyanide | 1.02 | U | | C |

RB 5/18/93

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

9213506.2829

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 10/09/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-9999

WESTON BATCH #: 9209L880

| SAMPLE | SITE ID | ANALYTE | RESULT | | UNITS | REPORTING LIMIT |
|---|---|---|---|---|---|---|
| -001 | B07247 | % Solids | 97.8 | | % | 0.10 |
| | | Chloride by IC | 16.7 | | MG/KG | 1.3 |
| | | Fluoride by IC | 2.6 | u | MG/KG | 2.6 |
| | | Nitrite by IC | 1.3 | u | MG/KG | 1.3 |
| | RB 5/18/93 | Nitrate by IC | 1.3 | u | MG/KG | 1.3 |
| | | Cyanide, Total | 1.0 | u | MG/KG | 1.0 |
| | | Phosphate by IC | 1.3 | u | MG/KG | 1.3 |
| | | Sulfate by IC | 3.9 | | MG/KG | 1.3 |
| | | pH | 8.5 | | PH UNITS | 0.010 |
| -002 | B07232 | % Solids | 98.7 | | % | 0.10 |
| | | Chloride by IC | 16.8 | | MG/KG | 1.3 |
| | | Fluoride by IC | 2.5 | u | MG/KG | 2.5 |
| | | Nitrite by IC | 1.3 | u | MG/KG | 1.3 |
| | RB 5/18/93 | Nitrate by IC | 27.8 | | MG/KG | 1.3 |
| | | Cyanide, Total | 1.0 | u | MG/KG | 1.0 |
| | | Phosphate by IC | 4.2 | | MG/KG | 1.3 |
| | | Sulfate by IC | 6.4 | | MG/KG | 1.3 |
| | | pH | 7.8 | | PH UNITS | 0.010 |
| -003 | B07244 | % Solids | 96.3 | | % | 0.10 |

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5/18/93