

9109L775-WES-224

TASK# 91-019

Custody Transfer Record/Lab Work Request



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WESTON Analytics Use Only
9109L775

Client Westinghouse Hanford Co.		Refrigerator #	SML#51 poly cooler										
Est. Final Proj. Sampling Date	01-019 6/68-02-01-0000	#/Type Container	Liquid	← Glass →									
Work Order #	01-019 6/68-02-01-0000		Solid										
Project Contact/Phone #	WS Thompson (509) 376-2153	Volume	Liquid	125 950 1000 ml									
AD Project Manager	Peg Beatty / Jim Kroy		Solid										
QC	CLP Del CLP TAT 35	Preservatives	← 4°C →										
Date Rec'd	9-21-91	ANALYSES REQUESTED →	ORGANIC			INORG							
Date Due As specified	As specified		VOA	BNA	Pest/PCB	Herb	1	2	3	Metal	CN	ANIONS	NO2/NO3
Account #	45-HANFORD												

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)	Matrix	Date Collected	VOA	BNA	Pest/PCB	Herb	1	2	3	Metal	CN	ANIONS
S - Soil															
SE - Sediment															
SO - Solid															
SL - Sludge															
W - Water	001	B00X76 RAD		S	9/19/91	X	X			X	X	X	X	X	X
O - Oil	002	B00XD1 RAD		S	9/18/91	X	X			X	X	X	X	X	X
A - Air	003	B00XD3 RAD		S	9/19/91	X	X			X	X	X	X	X	X
DS - Drum Solids															
DL - Drum Liquids															
L - EP/TCLP Leachate															
WI - Wipe															
X - Other															
F - Fish															
ANALYSES REQUESTED															
1. VOA (CLP)															
2. Semi-VOA, Pesticides, PCB's, TOC, ICP/AA Metals, Bismuth, Cyanide (CLP); IC Anions NO2/NO3															
3. Total alpha/beta, GE, Sr-90, Cs-137, Co-60, Pu-238, Pu-239/240, Ru-106, Total Uranium															



Special Instructions: **Te99**
 Please call to confirm receipt and condition of sample
ANIONS = ICCL, ICFL, ICPO2, ICPO3, ICPO4, ICPO4
MS/MSD REQUIRED ON EACH BATCH & EACH MATRIX

DATE/REVISIONS:

10-3-91: Radiations updated to record

2. _____

3. _____

4. _____

5. _____

6. _____

WESTON Analytics Use Only

Samples were: 1) Shipped or Hand Delivered Airbill # _____

2) Ambient or Chilled 3) Received in Good Condition or N

4) Properly Preserved or N

5) Received Within Holding Times 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

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
See WHC C of C				MRS		9-21-91	10:30
						9-23-91	10:30

Discrepancies Between Samples Labels and COC Record? Y or N N

NOTES:

Sample Information	Cust ID:	B00X76	B00XD1	B00XD1	B00XD1	B00XD3	VBLK
	RFW#:	001	002	002 MS	002 MSD	003	91LVQ051-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.02	1.00	0.943	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate	Toluene-d8	105 %	101 %	91 %	98 %	97 %	100 %
Recovery	Bromofluorobenzene	102 %	96 %	92 %	95 %	93 %	96 %
	1,2-Dichloroethane-d4	109 %	107 %	104 %	105 %	107 %	99 %
-----f -----f -----f -----f -----f -----f -----f -----f							
Chloromethane		10 U	11 U	11 U	11 U	10 U	10 U
Bromomethane		10 U	11 U	11 U	11 U	10 U	10 U
Vinyl Chloride		10 U	11 U	11 U	11 U	10 U	10 U
Chloroethane		10 U	11 U	11 U	11 U	10 U	10 U
Methylene Chloride		3 JB	2 JB	6 B	3 JB	2 JB	1 J
Acetone		6 JB	15 B	1 JB	5 JB	9 JB	5 J
Carbon Disulfide		5 U	6 U	6 U	6 U	5 U	5 U
1,1-Dichloroethene		5 U	6 U	108 %	90 %	5 U	5 U
1,1-Dichloroethane		5 U	6 U	6 U	6 U	5 U	5 U
1,2-Dichloroethene (total)		5 U	6 U	6 U	6 U	5 U	5 U
Chloroform		5 U	6 U	6 U	6 U	5 U	5 U
1,2-Dichloroethane		5 U	6 U	6 U	6 U	5 U	5 U
2-Butanone		10 U	11 U	11 U	11 U	10 U	10 U
1,1,1-Trichloroethane		5 U	6 U	6 U	6 U	5 U	5 U
Carbon Tetrachloride		5 U	6 U	6 U	6 U	5 U	5 U
Vinyl Acetate		10 U	11 U	11 U	11 U	10 U	10 U
Bromodichloromethane		5 U	6 U	6 U	6 U	5 U	5 U
1,2-Dichloropropane		5 U	6 U	6 U	6 U	5 U	5 U
cis-1,3-Dichloropropene		5 U	6 U	6 U	6 U	5 U	5 U
Trichloroethene		5 U	6 U	103 %	102 %	5 U	5 U
Dibromochloromethane		5 U	6 U	6 U	6 U	5 U	5 U
1,1,2-Trichloroethane		5 U	6 U	6 U	6 U	5 U	5 U
Benzene		5 U	6 U	99 %	87 %	5 U	5 U
Trans-1,3-Dichloropropene		5 U	6 U	6 U	6 U	5 U	5 U
Bromoform		5 U	6 U	6 U	6 U	5 U	5 U
4-Methyl-2-pentanone		10 U	11 U	11 U	11 U	10 U	10 U
2-Hexanone		10 U	11 U	11 U	11 U	10 U	10 U
Tetrachloroethene		5 U	6 U	6 U	6 U	5 U	5 U
1,1,2,2-Tetrachloroethane		5 U	6 U	6 U	6 U	5 U	5 U

*= Outside of EPA CLP QC Limits.

000004

9613403.1929

Cust ID:	BOOX76	BOOXD1	BOOXD1	BOOXD1	BOOXD1	BOOXD3	VBLK
RFW#:	001	002	002 MS	002 MSD		003	91LVQ051-MB1

Toluene	5 U	6 U	95 %	96 %	5 U	5 U
Chlorobenzene	5 U	6 U	105 %	111 %	5 U	5 U
Ethylbenzene	5 U	6 U	6 U	6 U	5 U	5 U
Styrene	5 U	6 U	6 U	6 U	5 U	5 U
Xylene (total)	5 U	6 U	6 U	6 U	5 U	5 U

*= Outside of EPA CLP QC Limits.

0000005

9613403.1930



ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD SAMPLES RECEIVED: 09-21-91
RFW #: 9109L775, GC/MS VOLATILE
W.O. #: 6168-02-01

NARRATIVE

The set of samples consisted of three (3) soil samples collected on 09-18,19-91.

The samples were analyzed according to criteria set forth in CLP SOW 02/88 (Rev. 05/89) for TCL Volatile target compounds on 10-01-91.

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

1. A non-target compound was detected in sample B00XD3.
2. All surrogate recoveries were within EPA QC limits.
3. All matrix spike recoveries were within EPA QC limits.
4. The laboratory blank contained the common contaminants methylene chloride and acetone at levels less than the CRQL.
5. Internal standard areas were outside QC limits for sample B00XD1. The associated matrix spike and spike duplicate analyses of this sample fulfilled its re-analysis requirement.

 10.29.91

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

Date

9612A03 1932
VOLATILE ORGANICS ANALYSIS SHEET

0000016

CLIENT SAMPLE NO.

B00X76

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-001

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

Lab File ID: Q100105

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 0

Date Analyzed: 10/01/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

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	3	JB
67-64-1	-----Acetone	6	JB
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----Trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

9613403 1933 0000017
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B00X76

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-001

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

Lab File ID: Q100105

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 0

Date Analyzed: 10/01/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

06/11/91 103U 0000026
 VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

BOOXD1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-002

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

Lab File ID: Q100106

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 6

Date Analyzed: 10/01/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

74-87-3	-----Chloromethane	11	U
74-83-9	-----Bromomethane	11	U
75-01-4	-----Vinyl Chloride	11	U
75-00-3	-----Chloroethane	11	U
75-09-2	-----Methylene Chloride	2	JB
67-64-1	-----Acetone	15	B
75-15-0	-----Carbon Disulfide	6	U
75-35-4	-----1,1-Dichloroethene	6	U
75-34-3	-----1,1-Dichloroethane	6	U
540-59-0	-----1,2-Dichloroethene (total)	6	U
67-66-3	-----Chloroform	6	U
107-06-2	-----1,2-Dichloroethane	6	U
78-93-3	-----2-Butanone	11	U
71-55-6	-----1,1,1-Trichloroethane	6	U
56-23-5	-----Carbon Tetrachloride	6	U
108-05-4	-----Vinyl Acetate	11	U
75-27-4	-----Bromodichloromethane	6	U
78-87-5	-----1,2-Dichloropropane	6	U
10061-01-5	-----cis-1,3-Dichloropropene	6	U
79-01-6	-----Trichloroethene	6	U
124-48-1	-----Dibromochloromethane	6	U
79-00-5	-----1,1,2-Trichloroethane	6	U
71-43-2	-----Benzene	6	U
10061-02-6	-----Trans-1,3-Dichloropropene	6	U
75-25-2	-----Bromoform	6	U
108-10-1	-----4-Methyl-2-pentanone	11	U
591-78-6	-----2-Hexanone	11	U
127-18-4	-----Tetrachloroethene	6	U
79-34-5	-----1,1,2,2-Tetrachloroethane	6	U
108-88-3	-----Toluene	6	U
108-90-7	-----Chlorobenzene	6	U
100-41-4	-----Ethylbenzene	6	U
100-42-5	-----Styrene	6	U
1330-20-7	-----Xylene (total)	6	U

96/10/91 1975 0000027
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOXD1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-002

Sample wt/vol: 5.00 (g/mL) G Lab File ID: Q100106

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 6 Date Analyzed: 10/01/91

Column: (pack/cap) PACK Dilution Factor: 1.00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

B00XD3

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-003

Sample wt/vol: 5.30 (g/mL) G

Lab File ID: 0100107

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 3

Date Analyzed: 10/01/91

Column: (pack/cap) PACK

Dilution Factor: 0.943

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

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	2	JB
67-64-1	Acetone	9	JB
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

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 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOXD3

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-003

Sample wt/vol: 5.30 (g/mL) G

Lab File ID: Q100107

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 3

Date Analyzed: 10/01/91

Column: (pack/cap) PACK

Dilution Factor: 0.943

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	27.40	10	J

Roy F. Weston, Inc. - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

Report Date: 10/18/91 09:11

RFW Batch Number: 9109L775

Client: WESTINGHOUSE HANFORD

Work Order: 6168-02-01-0000

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Sample Information	Cust ID:	BOOX76	BOOX76	BOOX76	BOOXD1	BOOXD3	BOOXD3
	RFW#:	001	001 MS	001 MSD	002	003	003
	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
							REP/REP
Surrogate	Nitrobenzene-d5	88 %	84 %	94 %	86 %	0 * %	89 %
Recovery	2-Fluorobiphenyl	81 %	93 %	99 %	89 %	0 * %	93 %
	p-Terphenyl-d14	83 %	120 %	117 %	124 %	0 * %	92 %
	Phenol-d5	94 %	87 %	97 %	89 %	0 * %	93 %
	2-Fluorophenol	89 %	83 %	90 %	92 %	0 * %	99 %
	2,4,6-Tribromophenol	111 %	69 %	80 %	89 %	0 * %	121 %
-----f -----f -----f -----f -----f -----f -----f -----f							
000004	Phenol	360 U	81 %	83 %	340 U	350 U	360 U
	bis(2-Chloroethyl)ether	360 U	360 U	340 U	340 U	350 U	360 U
	2-Chlorophenol	360 U	86 %	95 %	340 U	350 U	360 U
	1,3-Dichlorobenzene	360 U	360 U	340 U	340 U	350 U	360 U
	1,4-Dichlorobenzene	360 U	77 %	86 %	340 U	350 U	360 U
	Benzyl alcohol	360 U	360 U	340 U	340 U	350 U	360 U
	1,2-Dichlorobenzene	360 U	360 U	340 U	340 U	350 U	360 U
	2-Methylphenol	360 U	360 U	340 U	340 U	350 U	360 U
	bis(2-Chloroisopropyl)ether	360 U	360 U	340 U	340 U	350 U	360 U
	4-Methylphenol	360 U	360 U	340 U	340 U	350 U	360 U
	N-Nitroso-Di-n-propylamine	360 U	80 %	91 %	340 U	350 U	360 U
	Hexachloroethane	360 U	360 U	340 U	340 U	350 U	360 U
	Nitrobenzene	360 U	360 U	340 U	340 U	350 U	360 U
	Isophorone	360 U	360 U	340 U	340 U	350 U	360 U
	2-Nitrophenol	360 U	360 U	340 U	340 U	350 U	360 U
	2,4-Dimethylphenol	360 U	360 U	340 U	340 U	350 U	360 U
	Benzoic acid	1800 U	1800 U	47 J	69 J	1800 U	1800 U
	bis(2-Chloroethoxy)methane	360 U	360 U	340 U	340 U	350 U	360 U
	2,4-Dichlorophenol	360 U	360 U	340 U	340 U	350 U	360 U
	1,2,4-Trichlorobenzene	360 U	86 %	96 %	340 U	350 U	360 U
	Naphthalene	360 U	360 U	340 U	340 U	350 U	360 U
	4-Chloroaniline	360 U	360 U	340 U	340 U	350 U	360 U
	Hexachlorobutadiene	360 U	360 U	340 U	340 U	350 U	360 U
	4-Chloro-3-methylphenol	360 U	77 %	91 %	340 U	350 U	360 U
	2-Methylnaphthalene	360 U	360 U	340 U	340 U	350 U	360 U
	Hexachlorocyclopentadiene	360 U	360 U	340 U	340 U	350 U	360 U

*= Outside of EPA CLP QC Limits.

9613401 1938

Cust ID: BOOX76 BOOX76 BOOX76 BOOXD1 BOOXD3 BOOXD3

RFW#: 001 001 MS 001 MSD 002 003 003
REP

2,4,6-Trichlorophenol	360 U	360 U	340 U	340 U	350 U	360 U
2,4,5-Trichlorophenol	1800 U	1800 U	1700 U	1700 U	1800 U	1800 U
2-Chloronaphthalene	360 U	360 U	340 U	340 U	350 U	360 U
2-Nitroaniline	1800 U	1800 U	1700 U	1700 U	1800 U	1800 U
Dimethylphthalate	360 U	360 U	340 U	340 U	350 U	360 U
Acenaphthylene	360 U	360 U	340 U	340 U	350 U	360 U
2,6-Dinitrotoluene	360 U	360 U	340 U	340 U	350 U	360 U
3-Nitroaniline	1800 U	1800 U	1700 U	1700 U	1800 U	1800 U
Acenaphthene	360 U	87 %	96 %	340 U	350 U	360 U
2,4-Dinitrophenol	1800 U	1800 U	1700 U	1700 U	1800 U	1800 U
4-Nitrophenol	1800 U	68 %	95 %	1700 U	1800 U	1800 U
Dibenzofuran	360 U	360 U	340 U	340 U	350 U	360 U
2,4-Dinitrotoluene	360 U	75 %	96 * %	340 U	350 U	360 U
Diethylphthalate	360 U	360 U	340 U	340 U	350 U	360 U
4-Chlorophenyl-phenylether	360 U	360 U	340 U	340 U	350 U	360 U
Fluorene	360 U	360 U	340 U	340 U	350 U	360 U
4-Nitroaniline	1800 U	1800 U	1700 U	1700 U	1800 U	1800 U
4,6-Dinitro-2-methylphenol	1800 U	1800 U	1700 U	1700 U	1800 U	1800 U
N-Nitrosodiphenylamine (1)	58 JB	140 JB	94 JB	87 JB	50 JB	48 JB
4-Bromophenyl-phenylether	360 U	360 U	340 U	340 U	350 U	360 U
Hexachlorobenzene	360 U	360 U	340 U	340 U	350 U	360 U
Pentachlorophenol	1800 U	98 %	118 * %	93 J	1800 U	1800 U
Phenanthrene	360 U	360 U	340 U	340 U	350 U	360 U
Anthracene	360 U	360 U	340 U	340 U	350 U	360 U
Di-n-Butylphthalate	220 JB	170 JB	110 JB	300 JB	350 U	230 J
Fluoranthene	360 U	360 U	340 U	340 U	350 U	360 U
Pyrene	360 U	124 %	116 %	340 U	350 U	360 U
Butylbenzylphthalate	360 U	360 U	340 U	340 U	350 U	360 U
3,3'-Dichlorobenzidine	710 U	710 U	680 U	690 U	700 U	710 U
Benzo(a)anthracene	360 U	360 U	340 U	340 U	350 U	360 U
Chrysene	360 U	360 U	340 U	340 U	350 U	360 U
bis(2-Ethylhexyl)phthalate	88 J	74 J	45 J	130 J	350 U	360 U
Di-n-Octyl phthalate	360 U	360 U	340 U	340 U	350 U	360 U
Benzo(b)fluoranthene	360 U	360 U	340 U	340 U	350 U	360 U
Benzo(k)fluoranthene	360 U	360 U	340 U	340 U	350 U	360 U
Benzo(a)pyrene	360 U	360 U	340 U	340 U	350 U	360 U
Indeno(1,2,3-cd)pyrene	360 U	360 U	340 U	340 U	350 U	360 U
Dibenzo(a,h)anthracene	360 U	360 U	340 U	340 U	350 U	360 U
Benzo(g,h,i)perylene	360 U	360 U	340 U	340 U	350 U	360 U

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

000005

9613403-1939



ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD SAMPLES RECEIVED: 09-21-91
RFW #: 9109L775, SEMIVOLATILE
W.O. #: 6168-02-01

NARRATIVE

The set of samples consisted of three (3) soil samples collected on 09-18,19-91.

The samples were extracted on 10-01,15-91 and analyzed according to criteria set forth in SW 846 Method 8270 for TCL Semivolatile target compounds on 10-09,10,16-91.

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

1. Sample BOOXD3 was re-extracted outside of holding time.
2. Non-target compounds were detected in these samples.
3. Six (6) of fifty-four (54) surrogate recoveries were outside of EPA QC limits; EPA CLP surrogate recovery criteria were not met for sample BOOXD3. This sample was re-extracted on 10-15-91, re-analyzed on 10-16-91 and reported.
4. Two (2) of twenty-two (22) matrix spike recoveries were outside EPA QC limits.
5. All blank spike recoveries were within EPA QC limits.
6. The laboratory blanks contained the target compounds N-nitrosodiphenylamine at a level less than the CRQL. Laboratory blank 91LE1239-MB1 also contained the common contaminant di-n-butylphthalate at a level less than the CRQL.

WESTON

-2-

7. Internal standard areas were outside QC limits for samples BOOXD3, BOOX76 and BOOX76 MS. Sample BOOXD3 was re-extracted on 10-15-91, re-analyzed on 10-16-91 and reported. The associated matrix spike duplicate analysis of sample BOOX76 fulfills the re-analysis requirement.



Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

10.31.91.

Date

B00X76

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V100907

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/09/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic acid	1800	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

B00X76

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V100907

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/09/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/Kg</u>	
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	58	JB
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	220	JB
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	710	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	88	J
117-84-0	Di-n-Octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenzo(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U

(I) - Cannot be separated from Diphenylamine
 FORM 1 SV-2

9613403 1944 0000025

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOK76

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V100907

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/09/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

Number TICs found: 7 CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.70	1000	JA
2.	ALDOL CONDENSATE	6.40	100	JA
3.	UNKNOWN	7.27	200	J
4.	ORGANIC ACID ESTER	18.18	1000	J
5.	PHTHALATE	21.00	100	J
6.	ADIPATE	26.50	900	J
7.	UNKNOWN	29.93	200	J

BOOXD1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-002

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V101008

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 5 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/10/91

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic acid	69	J
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U

B00XD1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-002

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V101008

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 5 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/10/91

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	87	JB
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	93	J
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	300	JB
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	130	J
117-84-0	Di-n-Octyl phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenzo(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine
 FORM 1 SV-2

9617407 1947 0000048
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOXD1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-002

Sample wt/vol: 30.7 (g/mL) G

Lab File ID: V101008

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 5 dec.

Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/10/91

GPC Cleanup: (Y/N) N pH: 6.4

Dilution Factor: 1.00

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	6.00	1000	JAB
2.	ALDOL CONDENSATE	6.65	100	JA
3.	ALDOL CONDENSATE	7.47	200	JA
4.	ORGANIC ACID ESTER	17.60	200	J
5.	PHTHALATE	21.02	400	J
6.	UNKNOWN	29.95	600	J

96131813 1949 0000072
 SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

BOOXD3

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-003

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V100911

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/09/91

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/Kg</u>	
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic acid	1800	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

06/19/91 1990 0000073
 SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

BOOXD3

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-003

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V100911

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/09/91

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/Kg</u>	
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	50	JB
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)phthalate	350	U
117-84-0	Di-n-Octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenzo(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine
 FORM 1 SV-2

12/88 Rev.

06/15/02 1990 0000074
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B00XD3

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-003

Sample wt/vol: 30.7 (g/mL) G Lab File ID: V100911

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/09/91

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.68	800	JA
2.	UNKNOWN	6.07	100	J

BOOXD3RE

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-003

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V101609

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/15/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/16/91

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/Kg</u>	
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl)ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic acid	1800	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

BOOXD3RE

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-003

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V101609

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/15/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/16/91

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/Kg</u>	
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	48	JB
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	230	J
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	710	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	360	U
117-84-0	Di-n-Octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenzo(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine
FORM 1 SV-2

9614107 1953 0000088
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOKD3RE

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-003

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V101609

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/15/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/16/91

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

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

Number TICs found: 11

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONSENDATE	5.72	2000	JAB
2.	ALDOL CONDENSATE	6.05	200	JA
3.	ALDOL CONDENSATE	6.42	200	JA
4.	ALDOL CONDENSATE	7.27	200	JA
5.	UNKNOWN	7.37	100	J
6.	UNKNOWN	8.63	100	J
7.	PHTHALATE	21.02	200	J
8.	ADIPATE	25.12	100	J
9.	ADIPATE	26.10	400	J
10.	ADIPATE	26.58	80000	J
11.	ALKENE	27.47	500	J

Sample Information	Cust ID:	BOOX76	BOOX76	BOOX76	BOOXD1	BOOXD3	PBLK
	RFW#:	001	001 MS	001 MSD	002	003	91LE1240-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	0.500	5.00	5.00	0.500	0.500	0.500
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate: Di-n-butylchlorendate		115 %	132 %	140 %	122 %	128 %	131 %
Alpha-BHC		4.3 U	43 U	41 U	4.2 U	4.2 U	4.0 U
Beta-BHC		4.3 U	43 U	41 U	4.2 U	4.2 U	4.0 U
Delta-BHC		4.3 U	43 U	41 U	4.2 U	4.2 U	4.0 U
gamma-BHC (Lindane)		4.3 U	84 %	93 %	4.2 U	4.2 U	4.0 U
Heptachlor		4.3 U	84 %	94 %	4.2 U	4.2 U	4.0 U
Aldrin		4.3 U	90 %	99 %	4.2 U	4.2 U	4.0 U
Heptachlor epoxide		4.3 U	43 U	41 U	4.2 U	4.2 U	4.0 U
Endosulfan I		4.3 U	43 U	41 U	4.2 U	4.2 U	4.0 U
Dieldrin		8.5 U	90 %	95 %	8.5 U	8.5 U	8.0 U
4,4'-DDE		8.5 U	86 U	82 U	8.5 U	8.5 U	8.0 U
Endrin		8.5 U	96 %	102 %	8.5 U	8.5 U	8.0 U
Endosulfan II		8.5 U	86 U	82 U	8.5 U	8.5 U	8.0 U
4,4'-DDD		8.5 U	86 U	82 U	8.5 U	8.5 U	8.0 U
Endosulfan sulfate		8.5 U	86 U	82 U	8.5 U	8.5 U	8.0 U
4,4'-DDT		8.5 U	101 %	107 %	8.5 U	8.5 U	8.0 U
Methoxychlor		43 U	430 U	410 U	42 U	42 U	40 U
Endrin ketone		8.5 U	86 U	82 U	8.5 U	8.5 U	8.0 U
alpha-Chlordane		43 U	430 U	410 U	42 U	42 U	40 U
gamma-Chlordane		43 U	430 U	410 U	42 U	42 U	40 U
Toxaphene		85 U	860 U	820 U	85 U	85 U	80 U
Aroclor-1016		43 U	430 U	410 U	42 U	42 U	40 U
Aroclor-1221		43 U	430 U	410 U	42 U	42 U	40 U
Aroclor-1232		43 U	430 U	410 U	42 U	42 U	40 U
Aroclor-1242		43 U	430 U	410 U	42 U	42 U	40 U
Aroclor-1248		43 U	430 U	410 U	42 U	42 U	40 U
Aroclor-1254		85 U	860 U	820 U	85 U	85 U	80 U
Aroclor-1260		85 U	860 U	820 U	85 U	85 U	80 U

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

96302.195 000005



ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD SAMPLES RECEIVED: 09-21-91
RFW #: 9109L775, PEST/PCB
W.O. #: 6168-02-01

NARRATIVE

The set of samples consisted of three (3) soil samples collected on 09-18,19-91.

The samples were extracted on 10-01-91 and analyzed according to criteria set forth in the Contract Laboratory Program for Pesticide and PCB target compounds on 11-07,08-91.

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 the primary column.
2. Continuing calibration criteria were exceeded for endosulfan sulfate on the primary column on 11-08-91 at 04:28; however this occurred after the sample extracts, so there were no re-analysis requirements.
3. Retention time criteria were met for all compounds on the primary column.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.
6. Target compounds were not identified in the sample extracts, so a confirmation analysis was not required.
7. The matrix spike samples required ten-fold dilutions to maintain the pesticide concentrations within the linear range of the instrument.
8. A blank spike sample was prepared with this extraction batch, but a technical problem was encountered during the analysis. The problem was not investigated further because all matrix spike recoveries were within EPA QC limits, and there were no target compounds identified in the accompanying samples.

11.21.91.

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

Date

BOOK76

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-001

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 11079124.13

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 7 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/07/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 0.500

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

319-84-6	Alpha-BHC	4.3	U
319-85-7	Beta-BHC	4.3	U
319-86-8	Delta-BHC	4.3	U
58-89-9	gamma-BHC (Lindane)	4.3	U
76-44-8	Heptachlor	4.3	U
309-00-2	Aldrin	4.3	U
1024-57-3	Heptachlor epoxide	4.3	U
959-98-8	Endosulfan I	4.3	U
60-57-1	Dieldrin	8.5	U
72-55-9	4,4'-DDE	8.5	U
72-20-8	Endrin	8.5	U
33213-65-9	Endosulfan II	8.5	U
72-54-8	4,4'-DDD	8.5	U
1031-07-8	Endosulfan sulfate	8.5	U
50-29-3	4,4'-DDT	8.5	U
72-43-5	Methoxychlor	43	U
53494-70-5	Endrin ketone	8.5	U
5103-71-9	alpha-Chlordane	43	U
5103-74-2	gamma-Chlordane	43	U
8001-35-2	Toxaphene	85	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	85	U
11096-82-5	Aroclor-1260	85	U

KL
 11/4/91

9613403 1958 0000016
 PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

BOOKD1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9109L775-002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 11079124.14

Level: (low/med) LOW Date Received: 09/21/91

% Moisture: not dec. 5 dec. Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/07/91

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 0.500

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

319-84-6	Alpha-BHC	4.2	U
319-85-7	Beta-BHC	4.2	U
319-86-8	Delta-BHC	4.2	U
58-89-9	gamma-BHC (Lindane)	4.2	U
76-44-8	Heptachlor	4.2	U
309-00-2	Aldrin	4.2	U
1024-57-3	Heptachlor epoxide	4.2	U
959-98-8	Endosulfan I	4.2	U
60-57-1	Dieldrin	8.5	U
72-55-9	4,4'-DDE	8.5	U
72-20-8	Endrin	8.5	U
33213-65-9	Endosulfan II	8.5	U
72-54-8	4,4'-DDD	8.5	U
1031-07-8	Endosulfan sulfate	8.5	U
50-29-3	4,4'-DDT	8.5	U
72-43-5	Methoxychlor	42	U
53494-70-5	Endrin ketone	8.5	U
5103-71-9	alpha-Chlordane	42	U
5103-74-2	gamma-Chlordane	42	U
8001-35-2	Toxaphene	85	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	85	U
11096-82-5	Aroclor-1260	85	U

PL
 11/14/91

BOOKD3

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9109L775-003

Sample wt/vol: 30.5 (g/mL) G

Lab File ID: 11079124.15

Level: (low/med) LOW

Date Received: 09/21/91

% Moisture: not dec. 7 dec.

Date Extracted: 10/01/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 11/08/91

GPC Cleanup: (Y/N) N pH: 6.5

Dilution Factor: 0.500

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/Kg

319-84-6	Alpha-BHC	4.2	U
319-85-7	Beta-BHC	4.2	U
319-86-8	Delta-BHC	4.2	U
58-89-9	gamma-BHC (Lindane)	4.2	U
76-44-8	Heptachlor	4.2	U
309-00-2	Aldrin	4.2	U
1024-57-3	Heptachlor epoxide	4.2	U
959-98-8	Endosulfan I	4.2	U
60-57-1	Dieldrin	8.5	U
72-55-9	4,4'-DDE	8.5	U
72-20-8	Endrin	8.5	U
33213-65-9	Endosulfan II	8.5	U
72-54-8	4,4'-DDD	8.5	U
1031-07-8	Endosulfan sulfate	8.5	U
50-29-3	4,4'-DDT	8.5	U
72-43-5	Methoxychlor	42	U
53494-70-5	Endrin ketone	8.5	U
5103-71-9	alpha-Chlordane	42	U
5103-74-2	gamma-Chlordane	42	U
8001-35-2	Toxaphene	85	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	85	U
11096-82-5	Aroclor-1260	85	U

Handwritten: 11/14/91

9613403.1960



ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD
RFW #: 9109L775
W.O. #: 6168-02-01-0000

SAMPLES RECEIVED: 09-21-91

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 preparation blank results were below the required detection limit.
2. All laboratory control standards (blank spikes) were within the control limits of 80-120%. All %RPD were within the 20% guidance limit.
3. All calibration verification checks were within the required control limits of 90-110%. Calibration verification is performed using independent standards.
4. Matrix spike recoveries are summarized on the Inorganic Accuracy Report contained within this document. All applicable recoveries were within the 75-125% guidance limits with the exception of nitrate by IC, nitrite by IC and chloride by IC. All %RPD were within the 20% guidance limit.
5. Replicate results are summarized on the Inorganic Precision Report contained within this document. Results were within the 20% RPD guidance limit with the exception of TOC for sample -001.
6. 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).

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

11.18.91
Date



ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 11/14/91

CLIENT: WESTINGHOUSE HANFORD
 WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9109L775

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
=====	=====	=====	=====	=====	=====
-001	BOOX76	% Solids	100	%	0.10
		Chloride by IC	41.4	MG/KG	5.0
		Fluoride by IC	10.0	u MG/KG	10.0
		Nitrite by IC	5.0	u MG/KG	5.0
		Nitrate by IC	4040	MG/KG	25.0
		Cyanide, Total	3.2	MG/KG	1.0
		Phosphate by IC	30.8	MG/KG	5.0
		Sulfate by IC	1080	MG/KG	25.0
		Nitrate Nitrite	1050	MG/KG	100
		Total Organic Carbon	2410	MG/KG	145
-002	BOOXD1	% Solids	94.2	%	0.10
		Chloride by IC	8.1	MG/KG	1.3
		Fluoride by IC	5.0	u MG/KG	5.0
		Nitrite by IC	1.3	u MG/KG	1.3
		Nitrate by IC	555	MG/KG	13.3
		Cyanide, Total	1.1	u MG/KG	1.1
		Phosphate by IC	1.3	u MG/KG	1.3
		Sulfate by IC	97.8	MG/KG	1.3
		Nitrate Nitrite	147	MG/KG	13.3
		Total Organic Carbon	1170	MG/KG	134
-003	BOOXD3	% Solids	96.9	%	0.10
		Chloride by IC	1.8	MG/KG	1.3
		Fluoride by IC	5.0	u MG/KG	5.0
		Nitrite by IC	1.3	u MG/KG	1.3
		Nitrate by IC	163	MG/KG	13.3
		Cyanide, Total	1.0	u MG/KG	1.0
		Phosphate by IC	1.3	u MG/KG	1.3
		Sulfate by IC	4.9	MG/KG	1.3
		Nitrate Nitrite	42.1	MG/KG	5.2
		Total Organic Carbon	1230	MG/KG	138



Roy F. Weston, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD
RFW #: 9109L775
W.O. #: 6168-02-01

SAMPLES RECEIVED: 09/21/91

METALS NARRATIVE

The set of samples consisted of three (3) soil sample collected on 09/18/91 and 09/19/91.

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 exception of Sb, Pb, Mn. All corresponding samples were flagged with an "N" according to CLP protocol.
7. All duplicate analyses were within the 20% RPD control limit.
8. 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.
9. 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).

WESTON

10. Quarterly Detection Limits for IC2 are included in this package.
11. 91L2048-LC1 and 91L2048-LC2 were outside the 80 to 120% windows for silver; Weston has established a policy to redigest and reanalyze silver where LC'S fall below 40%.



Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratories

12.27.91.

Date

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ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 12/26/91

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9109L775

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
=====	=====	=====	=====	=====	=====
-001	BOOX76	Silver, Total	2.0	u MG/KG	2.0
		Aluminum, Total	6360	MG/KG	40.0
		Arsenic, Total	3.8	MG/KG	2.0
		Barium, Total	90.1	MG/KG	40.0
		Beryllium, Total	1.0	u MG/KG	1.0
		Bismuth, Total	40.0	u MG/KG	40.0
		Calcium, Total	10400	MG/KG	1000
		Cadmium, Total	1.0	u MG/KG	1.0
		Cobalt, Total	10.0	u MG/KG	10.0
		Chromium, Total	12.6	MG/KG	2.0
		Copper, Total	13.0	MG/KG	5.0
		Iron, Total	15900	MG/KG	400
		Mercury, Total	0.12	MG/KG	0.10
		Potassium, Total	1860	MG/KG	1000
		Magnesium, Total	5150	MG/KG	1000
		Manganese, Total	334	MG/KG	3.0
		Sodium, Total	4360	MG/KG	1000
		Nickel, Total	15.6	MG/KG	8.0
		Lead, Total	5.4	MG/KG	0.60
		Antimony, Total	12.0	u MG/KG	12.0
		Selenium, Total	1.0	u MG/KG	1.0
		Thallium, Total	2.0	u MG/KG	2.0
		Vanadium, Total	20.4	MG/KG	10.0
		Zinc, Total	39.8	MG/KG	4.0

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ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 12/26/91

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9109L775

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
=====	=====	=====	=====	=====	=====
-002	BOOXD1	Silver, Total	2.1	u MG/KG	2.1
		Aluminum, Total	5250	MG/KG	42.4
		Arsenic, Total	2.1	u MG/KG	2.1
		Barium, Total	90.9	MG/KG	42.4
		Beryllium, Total	1.1	u MG/KG	1.1
		Bismuth, Total	42.4	u MG/KG	42.4
		Calcium, Total	7800	MG/KG	1060
		Cadmium, Total	1.1	u MG/KG	1.1
		Cobalt, Total	10.6	u MG/KG	10.6
		Chromium, Total	10.7	MG/KG	2.1
		Copper, Total	12.3	MG/KG	5.3
		Iron, Total	14000	MG/KG	424
		Mercury, Total	0.11	u MG/KG	0.11
		Potassium, Total	1290	MG/KG	1060
		Magnesium, Total	3900	MG/KG	1060
		Manganese, Total	288	MG/KG	3.2
		Sodium, Total	1060	u MG/KG	1060
		Nickel, Total	10.1	MG/KG	8.5
		Lead, Total	4.0	MG/KG	0.64
		Antimony, Total	12.7	u MG/KG	12.7
		Thallium, Total	2.1	u MG/KG	2.1
		Vanadium, Total	15.2	MG/KG	10.6
		Zinc, Total	32.3	MG/KG	4.2

9613403.1966

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ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 12/26/91

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9109L775

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
-003	BOOXD3	Silver, Total	2.1	u MG/KG	2.1
		Aluminum, Total	4410	MG/KG	41.3
		Arsenic, Total	2.1	u MG/KG	2.1
		Barium, Total	78.4	MG/KG	41.3
		Beryllium, Total	1.0	u MG/KG	1.0
		Bismuth, Total	41.3	u MG/KG	41.3
		Calcium, Total	8220	MG/KG	1030
		Cadmium, Total	1.0	u MG/KG	1.0
		Cobalt, Total	10.3	u MG/KG	10.3
		Chromium, Total	7.7	MG/KG	2.1
		Copper, Total	11.8	MG/KG	5.2
		Iron, Total	13100	MG/KG	413
		Mercury, Total	0.10	u MG/KG	0.10
		Potassium, Total	1030	u MG/KG	1030
		Magnesium, Total	3370	MG/KG	1030
		Magnesium, Total	3370	MG/KG	1030
		Manganese, Total	239	MG/KG	3.1
		Sodium, Total	1030	u MG/KG	1030
		Nickel, Total	8.3	u MG/KG	8.3
		Lead, Total	4.0	MG/KG	0.62
		Antimony, Total	12.4	u MG/KG	12.4
		Thallium, Total	2.1	u MG/KG	2.1
		Vanadium, Total	15.2	MG/KG	10.3
		Zinc, Total	29.0	MG/KG	4.1

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U.S. EPA - CLP

EPA SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

BOOK76

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP775

Matrix (soil/water): SOIL Lab Sample ID: 910977501

Level (low/med): LOW Date Received: 9/21/91

% Solids: 100.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6360.00	-		P
7440-36-0	Antimony	4.00	U	N	P
7440-38-2	Arsenic	3.80			F
7440-39-3	Barium	90.10			P
7440-41-7	Beryllium	.38	B		P
7440-43-9	Cadmium	.60	U		P
7440-70-2	Calcium	10400.00			P
7440-47-3	Chromium	12.60			P
7440-48-4	Cobalt	8.40	B		P
7440-50-8	Copper	13.00			P
7439-89-6	Iron	15900.00			P
7439-92-1	Lead	5.40		N	F
7439-95-4	Magnesium	5150.00		E	P
7439-96-5	Manganese	334.00		N	P
7439-97-6	Mercury	.12			CV
7440-02-0	Nickel	15.60			P
7440-09-7	Potassium	1860.00			P
7782-49-2	Selenium	.46	B	W	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	4360.00		E	P
7440-28-0	Thallium	.40	U	W	F
7440-62-2	Vanadium	20.40			P
7440-66-6	Zinc	39.80			P
	Cyanide	3.18	U		C

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments:

9613403.1963

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U.S. EPA - CLP

EPA SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

BOOXD1

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP775

Matrix (soil/water): SOIL

Lab Sample ID: 910977502

Level (low/med): LOW

Date Received: 9/21/91

% Solids: 94.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5250.00			P
7440-36-0	Antimony	5.40	B	N	P
7440-38-2	Arsenic	1.70	B		F
7440-39-3	Barium	90.90			P
7440-41-7	Beryllium	.36	B		P
7440-43-9	Cadmium	.64	U		P
7440-70-2	Calcium	7800.00			P
7440-47-3	Chromium	10.70			P
7440-48-4	Cobalt	6.60	B		P
7440-50-8	Copper	12.30			P
7439-89-6	Iron	14000.00			P
7439-92-1	Lead	4.00		N	F
7439-95-4	Magnesium	3900.00		E	P
7439-96-5	Manganese	288.00		N	P
7439-97-6	Mercury	.05	U		CV
7440-02-0	Nickel	10.10			P
7440-09-7	Potassium	1290.00			P
7782-49-2	Selenium	.42	U		F
7440-22-4	Silver	2.12	U		P
7440-23-5	Sodium	661.00	B	E	P
7440-28-0	Thallium	.42	U	W	F
7440-62-2	Vanadium	15.20			P
7440-66-6	Zinc	32.30			P
	Cyanide	1.06	U		C

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments:

9613403.1969

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U.S. EPA - CLP

EPA SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

BOOXD3

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP775

Matrix (soil/water): SOIL

Lab Sample ID: 910977503

Level (low/med): LOW

Date Received: 9/21/91

% Solids: 96.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4410.00	-		P
7440-36-0	Antimony	4.13	U	N	P
7440-38-2	Arsenic	1.30	B		F
7440-39-3	Barium	78.40			P
7440-41-7	Beryllium	.25	B		P
7440-43-9	Cadmium	.62	U		P
7440-70-2	Calcium	8220.00			P
7440-47-3	Chromium	7.70			P
7440-48-4	Cobalt	5.90	B		P
7440-50-8	Copper	11.80			P
7439-89-6	Iron	13100.00			P
7439-92-1	Lead	4.00		N	F
7439-95-4	Magnesium	3370.00		E	P
7439-96-5	Manganese	239.00		N	P
7439-97-6	Mercury	.05	U		CV
7440-02-0	Nickel	7.50	B		P
7440-09-7	Potassium	738.00	B		P
7782-49-2	Selenium	.41	U		F
7440-22-4	Silver	2.06	U		P
7440-23-5	Sodium	551.00	B	E	P
7440-28-0	Thallium	.41	U		F
7440-62-2	Vanadium	15.20			P
7440-66-6	Zinc	29.00			P
	Cyanide	1.03	U		C

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments: