

START

9613403.2132

0000008

9111L447-WES-225

1130

0043127

WESTON

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

CLIENT: WESTINGHOUSE HANFORD **SAMPLES RECEIVED:** 11-15-91
RFW #: 9111L447, GC/MS VOLATILE
W.O. #: 6168-02-01

NARRATIVE

The set of samples consisted of two (2) soil samples collected on 11-11-91.

The samples were analyzed according to criteria set forth in CLP SOW 2/88 (Rev. 5/89) for TCL Volatile target compounds on 11-19,20-91.

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

1. Non-target compounds were not detected in these samples.
2. All surrogate recoveries were within EPA QC limits.
3. The laboratory blank contained the common contaminant methylene chloride at a level less than the CRQL.
4. Internal standard area and retention time criteria were met for all samples and blanks.



Margaret M. Sealy fw
 Jack R. Tuschall, Ph.D.
 Laboratory Manager
 Lionville Analytical Laboratory

12/26/91
 Date

9613403.2134

0000003

FORM OF PAYMENT		SERVICES	
ASH <input type="checkbox"/> GBL <input type="checkbox"/> CBL <input type="checkbox"/>	FCCOD <input type="checkbox"/>	UNITED STATES / CANADA	INTERNATIONAL
PPD <input checked="" type="checkbox"/> COL <input type="checkbox"/> OTH <input type="checkbox"/> COMAT <input type="checkbox"/>		<input type="checkbox"/> Same Day	Express <input type="checkbox"/>
Shipper's Account Number 850281585		<input checked="" type="checkbox"/> AM	<input type="checkbox"/> PM
		<input type="checkbox"/> Second Day	Saturday Delivery <input type="checkbox"/>
		Date	Origin
		11-14-91	PSC
		Shipment Number 247425442	

EMERY
WORLDWIDE



From: WESTINGHOUSE SHIPPING DEPT (509) 376-6665 US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD BLDG 1163 355 STEVENS DRIVE ICHLAND WA		To: MS PEG BEATY RF WESTON INC. 208 WELSH POOL ROAD LIONVILLE PA	Tariff Dest. Gateway
Customer's Reference Numbers W81241 PC2EF W92-0-0081#2 99352		Consignee's Account Number E 19341-1313	Check to Shipper \$

EMERY WORLDWIDE will collect consignee check made payable only to the shipper for the value of the goods in the amount shown above.

Description	Pcs	Dimensions (L x W x H)	Total Pieces	Total Weight
1 IGLOO SML 57 COOLER SOIL SAMPLES B014W9, B014T3	1	16 x 17	1	51

OVERNIGHT DELIVERY

11/15/91 4:35 PM

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

3-PHL-A

Terms and Conditions on Back

Free Domicile <input type="checkbox"/>	Commodity Code	Third party Account Number mandatory for Third party billing	Third Party Account Number
Use Charge	International Customs Value	International Insurance	Other Charges/Advance at Origin
	Total Transportation Charges		OC/AC \$:

Sample Information	Cust ID:	BO14W9	BO14T3	BO14T3	BO14T3	VBLK	VBLK
	RFW#:	001	002	002 MS	002 MSD	91LVB436-MB1	91LVB437-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.02	1.00	1.02	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg

Surrogate Recovery	Toluene-d8	100 %	99 %	108 %	113 %	97 %	107 %
Bromofluorobenzene	95 %	94 %	100 %	107 %	90 %	100 %	
1,2-Dichloroethane-d4	109 %	112 %	108 %	115 %	99 %	103 %	

	fl	fl	fl	fl	fl	fl	fl
Chloromethane	14 U	11 U	12 U	11 U	10 U	10 U	10 U
Bromomethane	14 U	11 U	12 U	11 U	10 U	10 U	10 U
Vinyl Chloride	14 U	11 U	12 U	11 U	10 U	10 U	10 U
Chloroethane	14 U	11 U	12 U	11 U	10 U	10 U	10 U
Methylene Chloride	35 B	14 B	22 B	21 B	2 J	2 J	2 J
Acetone	62	45	35	26	10 U	10 U	10 U
Carbon Disulfide	7 U	6 U	6 U	6 U	5 U	5 U	5 U
1,1-Dichloroethene	7 U	6 U	121 %	116 %	5 U	5 U	5 U
1,1-Dichloroethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	7 U	6 U	6 U	6 U	5 U	5 U	5 U
Chloroform	7 U	6 U	6 U	6 U	5 U	5 U	5 U
1,2-Dichloroethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
2-Butanone	14 U	11 U	12 U	11 U	10 U	10 U	10 U
1,1,1-Trichloroethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
Carbon Tetrachloride	7 U	6 U	6 U	6 U	5 U	5 U	5 U
Vinyl Acetate	14 U	11 U	12 U	11 U	10 U	10 U	10 U
Bromodichloromethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
1,2-Dichloropropane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	7 U	6 U	6 U	6 U	5 U	5 U	5 U
Trichloroethene	7 U	6 U	122 %	127 %	5 U	5 U	5 U
Dibromochloromethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
1,1,2-Trichloroethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U
Benzene	7 U	6 U	115 %	119 %	5 U	5 U	5 U
Trans-1,3-Dichloropropene	7 U	6 U	6 U	6 U	5 U	5 U	5 U
Bromoform	7 U	6 U	6 U	6 U	5 U	5 U	5 U
4-Methyl-2-pentanone	14 U	11 U	12 U	11 U	10 U	10 U	10 U
2-Hexanone	14 U	11 U	12 U	11 U	10 U	10 U	10 U
Tetrachloroethene	7 U	6 U	6 U	6 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	7 U	6 U	6 U	6 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

0000005

9613401.2135

Cust ID:

BO14W9

BO14T3

BO14T3

BO14T3

VBLK

VBLK

RFW#:

001

002

002 MS

002 MSD

91LVB436-MB1

91LVB437-MB1

	001	002	002 MS	002 MSD	91LVB436-MB1	91LVB437-MB1
Toluene	7 U	6 U	123 %	124 %	5 U	5 U
Chlorobenzene	7 U	6 U	118 %	122 %	5 U	5 U
Ethylbenzene	7 U	6 U	6 U	6 U	5 U	5 U
Styrene	7 U	6 U	6 U	6 U	5 U	5 U
Xylene (total)	7 U	6 U	6 U	6 U	5 U	5 U

*= Outside of EPA CLP QC limits.

00000006

9613401.2136

0000019

VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

BO14W9

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

Matrix: SOIL Lab Sample ID: 9111L447-001
 Sample wt/vol: 4.90 (g/mL) G Lab File ID: B111911
 Level: (low/med) LOW Date Received: 11/15/91
 % Moisture: not dec. 28 Date Analyzed: 11/19/91
 Column: (pack/cap) CAP Dilution Factor: 1.02

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

74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	35	B
67-64-1	Acetone	62	
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Xylene (total)	7	U

9613401-2138
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

0000020

CLIENT SAMPLE NO.

BO14W9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9111L447-001

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

Lab File ID: B111911

Level: (low/med) LOW

Date Received: 11/15/91

% Moisture: not dec. 28

Date Analyzed: 11/19/91

Column: (pack/cap) CAP

Dilution Factor: 1.02

Number TICs found: 0

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

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

0000028

CLIENT SAMPLE NO.

9613907 2139
VOLATILE ORGANICS ANALYSIS SHEET

BO14T3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9111L447-002

Sample wt/vol: 5.00 (g/mL) G Lab File ID: B111912

Level: (low/med) LOW Date Received: 11/15/91

% Moisture: not dec. 12 Date Analyzed: 11/19/91

Column: (pack/cap) CAP 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	14	B
67-64-1	-----Acetone	45	
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

0000029

CLIENT SAMPLE NO.

9611103 2140
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BO14T3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9111L447-002

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

Lab File ID: B111912

Level: (low/med) LOW

Date Received: 11/15/91

% Moisture: not dec. 12

Date Analyzed: 11/19/91

Column: (pack/cap) CAP

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.				

Cust ID:	BO14W9	BO14T3	BO14T3	BO14T3	PBLK	PBLK BS
Sample Information	RFW#: 001	002	002 MS	002 MSD	91LE1563-MB1	91LE1563-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: Di-n-butylchlorendate	92 %	I %	I %	I %	I %	106 %
	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====
Aroclor-1016	110 U	92 U	92 U	92 U	80 U	80 U
Aroclor-1221	110 U	92 U	92 U	92 U	80 U	80 U
Aroclor-1232	110 U	92 U	92 U	92 U	80 U	80 U
Aroclor-1242	110 U	92 U	92 U	92 U	80 U	80 U
Aroclor-1248	110 U	92 U	92 U	92 U	80 U	80 U
Aroclor-1254	220 U	180 U	77 %	92 %	160 U	79 %
Aroclor-1260	220 U	180 U	180 U	180 U	160 U	160 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

0000005

9613401.2142

9615403-2143 6A



ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD
RFW #: 9111L447, PCB
W.O. #: 6168-02-01

SAMPLES RECEIVED: 11-15-91

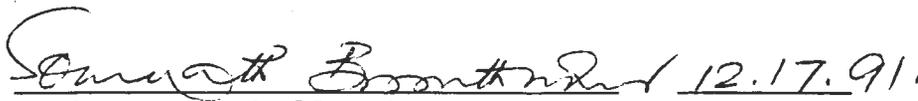
NARRATIVE

The set of samples consisted of two (2) soil samples collected on 11-11-91.

The samples were extracted on 11-21-91 and analyzed according to criteria set forth in the Contract Laboratory Program for PCB target compounds on 12-10-91.

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 on the primary column.
2. Deviation of calibration factors exceeded 15% prior to the sample extracts for the non-target compound endrin on 12-09-91 at 20:01 and on 12-10-91 at 11:30.
3. Retention time criteria were met for all compounds on both the primary and confirmation columns.
4. All obtainable surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within laboratory control limits.
6. The blank spike recovery was within laboratory control limits.

 12.17.91

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

Date

9613403.2144 0000014

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

BO14W9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9111L447-001

Sample wt/vol: 29.8 (g/mL) G

Lab File ID: 12089103.49

Level: (low/med) LOW

Date Received: 11/15/91

% Moisture: not dec. 28 dec.

Date Extracted: 11/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 12/10/91

GPC Cleanup: (Y/N) Y pH: 8.7

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
12674-11-2-----	Aroclor-1016	110	U
11104-28-2-----	Aroclor-1221	110	U
11141-16-5-----	Aroclor-1232	110	U
53469-21-9-----	Aroclor-1242	110	U
12672-29-6-----	Aroclor-1248	110	U
11097-69-1-----	Aroclor-1254	220	U
11096-82-5-----	Aroclor-1260	220	U

Handwritten: 12/13/91

PESTICIDE ORGANICS ANALYSIS SHEET

9613403 2145

0000019

CLIENT SAMPLE NO.

BO14T3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9111L447-002

Sample wt/vol: 29.8 (g/mL) G Lab File ID: 12089103.50

Level: (low/med) LOW Date Received: 11/15/91

% Moisture: not dec. 12 dec. Date Extracted: 11/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 12/10/91

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:
12674-11-2-----	Aroclor-1016	92 U
11104-28-2-----	Aroclor-1221	92 U
11141-16-5-----	Aroclor-1232	92 U
53469-21-9-----	Aroclor-1242	92 U
12672-29-6-----	Aroclor-1248	92 U
11097-69-1-----	Aroclor-1254	180 U
11096-82-5-----	Aroclor-1260	180 U

Handwritten notes:
1/1
12/13/91



ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD
RFW #: 9111L447
W.O. #: 6168-02-01-0000

SAMPLES RECEIVED: 11-15-91

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 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%.
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 with the exception of fluoride by IC.
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).


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

12.17.91.
Date



9613403.2147

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 12/12/91

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

WESTON BATCH #: 9111L447

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
=====	=====	=====	=====	=====	=====
-001	BO14W9	% Solids	71.6	%	0.10
		Fluoride by IC	5.6	MG/KG	3.5
		Nitrite by IC	1.7	u MG/KG	1.7
		Nitrate by IC	3.7	MG/KG	1.7
		Sulfate by IC	12.3	MG/KG	1.7
		Ammonia, as N	2.4	MG/KG	1.7
		pH	9.5	PH UNITS	0.010
-002	BO14T3	% Solids	88.0	%	0.10
		Fluoride by IC	6.1	MG/KG	2.8
		Nitrite by IC	1.4	u MG/KG	1.4
		Nitrate by IC	1.4	u MG/KG	1.4
		Sulfate by IC	5.6	MG/KG	1.4
		Ammonia, as N	1.3	u MG/KG	1.3
		pH	8.6	PH UNITS	0.010



Roy F. Weston, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD
RFW #: 9111L447
W.O. #: 6168-02-01

SAMPLES RECEIVED: 11/15/91

METALS NARRATIVE

The set of samples consisted of two (2) soil samples collected on 11/11/91.

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. All corresponding samples were flagged with an "N" according to CLP protocol.
7. All duplicate analyses were within the 20% RPD control limit.
8. Pb sample results were calculated by the method of standard addition (MSA). All corresponding samples were flagged with an "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 SOW1LJM01.0, 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 for IC2 are included in this package.



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

12.26.91.
Date

9613403.2150

0000008

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 12/20/91

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

WESTON BATCH #: 9111L447

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
-001	BO14W9	Silver, Total	2.8	u MG/KG	2.8
		Aluminum, Total	5070	MG/KG	55.8
		Arsenic, Total	3.0	MG/KG	2.6
		Barium, Total	89.7	MG/KG	55.8
		Beryllium, Total	1.4	u MG/KG	1.4
		Calcium, Total	3020	MG/KG	1390
		Cadmium, Total	1.4	u MG/KG	1.4
		Cobalt, Total	13.9	u MG/KG	13.9
		Chromium, Total	13.0	MG/KG	2.8
		Copper, Total	12.3	MG/KG	7.0
		Iron, Total	12400	MG/KG	27.9
		Mercury, Total	0.14	u MG/KG	0.14
		Potassium, Total	1680	MG/KG	1390
		Magnesium, Total	3740	MG/KG	1390
		Manganese, Total	176	MG/KG	4.2
		Sodium, Total	1390	u MG/KG	1390
		Nickel, Total	11.2	u MG/KG	11.2
		Lead, Total	6.3	MG/KG	0.78
		Antimony, Total	16.7	u MG/KG	16.7
		Selenium, Total	1.3	u MG/KG	1.3
		Thallium, Total	2.6	u MG/KG	2.6
		Vanadium, Total	24.7	MG/KG	13.9
		Zinc, Total	37.0	MG/KG	5.6

9613403.2151

0000009

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 12/20/91

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

WESTON BATCH #: 9111L447

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
-002	BO14T3	Silver, Total	2.1	u MG/KG	2.1
		Aluminum, Total	4350	MG/KG	42.2
		Arsenic, Total	2.1	u MG/KG	2.1
		Barium, Total	59.8	MG/KG	42.2
		Beryllium, Total	1.1	u MG/KG	1.1
		Calcium, Total	2760	MG/KG	1060
		Cadmium, Total	1.1	u MG/KG	1.1
		Cobalt, Total	10.6	u MG/KG	10.6
		Chromium, Total	6.0	MG/KG	2.1
		Copper, Total	15.1	MG/KG	5.3
		Iron, Total	13200	MG/KG	21.1
		Mercury, Total	0.11	u MG/KG	0.11
		Potassium, Total	1060	u MG/KG	1060
		Magnesium, Total	3140	MG/KG	1060
		Manganese, Total	255	MG/KG	3.2
		Sodium, Total	1060	u MG/KG	1060
		Nickel, Total	8.4	u MG/KG	8.4
		Lead, Total	3.5	MG/KG	0.64
		Antimony, Total	12.7	u MG/KG	12.7
		Selenium, Total	1.1	u MG/KG	1.1
		Thallium, Total	2.1	u MG/KG	2.1
		Vanadium, Total	24.0	MG/KG	10.6
		Zinc, Total	28.8	MG/KG	4.2

1
INORGANIC ANALYSIS DATA SHEET

BO14W9

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP447

Matrix (soil/water): SOIL Lab Sample ID: 911144701

Level (low/med): LOW Date Received: 11/15/91

% Solids: 71.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5070.00	-	E	P
7440-36-0	Antimony	5.58	U	N	P
7440-38-2	Arsenic	3.00			F
7440-39-3	Barium	89.70			P
7440-41-7	Beryllium	.47	B		P
7440-43-9	Cadmium	.84	U		P
7440-70-2	Calcium	3020.00		E	P
7440-47-3	Chromium	13.00			P
7440-48-4	Cobalt	8.40	B		P
7440-50-8	Copper	12.30			P
7439-89-6	Iron	12400.00		E	P
7439-92-1	Lead	6.30		S	F
7439-95-4	Magnesium	3740.00		E	P
7439-96-5	Manganese	176.00		E	P
7439-97-6	Mercury	.07	U		CV
7440-02-0	Nickel	10.20	B		P
7440-09-7	Potassium	1680.00			P
7782-49-2	Selenium	.52	U	W	F
7440-22-4	Silver	2.79	U	N	P
7440-23-5	Sodium	205.00	B		P
7440-28-0	Thallium	.52	U	W	F
7440-62-2	Vanadium	24.70			P
7440-66-6	Zinc	37.00			P
	Cyanide	140.00	U		C

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments:

9613403.2153

0000019

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

B014T3

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP447

Matrix (soil/water): SOIL Lab Sample ID: 911144702

Level (low/med): LOW Date Received: 11/15/91

% Solids: 88.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4350.00	-	E	P
7440-36-0	Antimony	4.22	U	N	P
7440-38-2	Arsenic	1.20	B		F
7440-39-3	Barium	59.80			P
7440-41-7	Beryllium	.34	B		P
7440-43-9	Cadmium	.63	U		P
7440-70-2	Calcium	2760.00		E	P
7440-47-3	Chromium	6.00			P
7440-48-4	Cobalt	7.90	B		P
7440-50-8	Copper	15.10			P
7439-89-6	Iron	13200.00		E	P
7439-92-1	Lead	3.50			F
7439-95-4	Magnesium	3140.00		E	P
7439-96-5	Manganese	255.00		E	P
7439-97-6	Mercury	.06	U		CV
7440-02-0	Nickel	8.30	B		P
7440-09-7	Potassium	1050.00	B		P
7782-49-2	Selenium	.42	U		F
7440-22-4	Silver	2.11	U	N	P
7440-23-5	Sodium	129.00	B		P
7440-28-0	Thallium	.42	U		F
7440-62-2	Vanadium	24.00			P
7440-66-6	Zinc	28.80			P
	Cyanide	114.00	U		C

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments: