9103L985-WES-032

START 9213504.1644

0000009 - 0045754

WESTON

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD **SAMPLES RECEIVED:** 03-19-91
RFW #: 9103L985, SEMIVOLATILE
W.O. #: 6168-02-01

NARRATIVE

The set of samples consisted of three (3) soil and three (3) solid samples collected on 03-14-91.

The samples were extracted on 03-21-91 and analyzed according to criteria set forth in SW 846 Method 8270 for TCL Semivolatile target compounds on 04-23,24,25-91.

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

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

2. One (1) of forty-eight (48) surrogate recoveries was outside EPA QC limits; however, EPA CLP surrogate recovery criteria were met (i.e., no more than one outlier per fraction {acid and base neutral} and no recoveries less than 10%).

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

4. Internal standard area and retention time criteria were met for all samples and blanks.

NOV 1996 RECEIVED EDMC

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

6.18.91
Date

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Westinghouse Hanford Company

Hanford Operations and Engineering Contractor for the US Department of Energy

P.O. Box 1970 Richland, Wa. 99352

NONCONFORMANCE REPORT

Page 1 of ____

No. B 07961

1. MFR/ORG: WHC / OSM

ITEM/MATERIAL NAME: ENVIRON. SAMPLE

PART NO.: N/A

DRAWING/SPEC. NO.: N/A

REV.: N/A

PROGRAM/PROJECT: 300-FF-1

P.O./W.O. NO.: N/A

UNUSUAL OCCURRENCE REPORT REQUIRED: ☐ YES ☒ NO

SYSTEM/END USE: N/A

DATE: 4/2/92

2. DESCRIPTION OF NONCONFORMANCE

FOR SDG 9103L985 ONLY FORM I AND CASE NARRATIVE WERE PROVIDED FOR SEMI VOLATILES

3. REQUIREMENT VIOLATED | DOCUMENT | REV | ZONE/PARA

INCOMPLETE DATA PACKAGE

EII 14.1

Ron Belden — ORIGINATOR

81222 — ORGANIZATION

4/2/92 — DATE

4. ASME CODE ITEM(s): ☒ NO ☐ YES. NOTIFY AUTHORIZED INSPECTOR.

WHC QAR

5. CAUSE OF NONCONFORMANCE

☐ PROCEDURES ☒ PERSONNEL ☐ MATERIALS

☐ EQUIPMENT ☐ OTHERS

REMARKS:

SW-01 / PN-006

6. CORRECTIVE ACTION TO ELIMINATE CAUSE

HAVE LAB VERIFY THE COMPLETENESS OF DATA PACKAGES

INITIATION DATE ____ SERIAL NO. ____

J. Kessner - OSM mgr.

RESPONSIBLE ORG. REP. — TITLE — DATE

7. RECOMMENDED DISPOSITION: ☒ ACCEPT ☐ REJECT ☐ REPAIR ☐ REWORK ☐ OTHER

8A. DISPOSITION JUSTIFICATION AND INSTRUCTIONS

OSM TO OBTAIN COMPLETE ANALYSIS FROM LAB.

Data Pkg has been determined to now be complete. Missing pages are in the data pkg. This closes this NCR.

8B. SUPPLIER ENG. ____ SUPPLIER QA ____

9. ADDITIONAL REVIEWS REQUIRED (WHC ONLY) ☐ YES ☐ NO

IF YES, IDENTIFY:

10. DISPOSITION APPROVAL (WHC ONLY)

☒ APPROVED ☐ DISAPPROVED

☐ OTHER (SEE CONTINUATION SHEET)

GC Henckel — COGNIZANT ENGINEER — DATE 1-25-93

JR McCallum — COGNIZANT QA ENGINEER — DATE 1/25/93

N/A — AUTHORIZED INSPECTOR REVIEW — DATE

11. ADDITIONAL APPROVALS

NAME	TITLE	DATE	NAME	TITLE	DATE

12. DISPOSITION ACTION COMPLETE

JR McCallum — NAME — DATE 2/5/93

QTY. ACCEPT 1 QTY. REJ. 0

FOLLOW ON NCR

QA LOG NO. EQA-92-035

The issuance and acceptance of this request in no way limits or affects the warranty provisions of the order. This request shall not establish a precedent or obligation to accept similar conditions in the future.

FOLLOW-UP LEVEL: A ☐ B ☐ C ☐

(3)

Custody Transfer Record/Lab Work Request

WESTON

WESTON Analytics Use Only
9103L983 98.5 (WS-HANFORD)

Client: Westinghouse Hanford
~~Project No.~~ ~~Work Order~~ 91-013pq 6168-02-01
Date Rec'd. ~~3/20/91~~ 3/19/91 Date Due ~~4/24/91~~ 4/18/91
RFW Contact: Jourking
Client Contact/Phone: WHC-OSM (509) 373-3507

Refrigerator#	2	1		
#/Type Container	1/G	1/G		
Volume	250ml	250ml		
Preservative	N/A	N/A		
ANALYSES REQUESTED	#1 Yes (METALS)	#2 Yes (06250)		

WA Use Only Lab ID	Client ID/Description	Matrix	Date Collected	#1	#2
001 ~~009~~	BOOHY3 (2 jars each)	Soil	3/14/91	✓	✓
002 ~~10~~	BOOHY4	↓	↓	✓	✓
003 ~~11~~	BOOHY5	↓	↓	✓	✓
004 ~~12~~	BOOHY6	Fly Ash	↓	✓	✓
005 ~~13~~	BOOHY8	↓	↓	✓	✓
006	BOOHY9	↓	↓	✓	✓
00					
00					

Metals - HSL + B, U

GC/Pol = CLP
TAT 35 day

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

Special Instructions: #1 CLP Metals, Boron, Uranium
#2 CLP Semivolatiles

Item/Reason	Relinquished by	Received by	Date	Time	Item/Reason	Relinquished by	Received by	Date	Time
Emery	[signature]	[signature]	3/19/91 ~~3/20/91~~	1400 pm ~~9:30 am~~					

WESTON Analytics Use Only

Samples Were:
1 (Shipped) or Hand-Delivered
NOTES:
2 Ambient or (Chilled)
NOTES:
3 Received Broken/Leaking (Improperly Sealed) Y (N)
NOTES:
4 Properly Preserved (Y) N
NOTES:
5 Received Within Holding Times (Y) N
NOTES:

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

COC Record Was:
1 Present Upon Receipt of Samples (Y) N

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

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RFW 21-21-001/A 12/88

7-115

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

RFW Batch Number: 9103L985 Client: WESTINGHOUSE HANFORD Work Order: 6168-02-01-0000 Report Date: 06/17/91 08:34 Page: 1a

	Cust ID:	BOOHY3		BOOHY4		BOOHY5		BOOHY6		BOOHY8		BOOHY9	
Sample Information	RFW#:	001		002		003		004		005		006	
	Matrix:	SOIL		SOIL		SOIL		SOLID		SOLID		SOLID	
	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	76	%	82	%	63	%	82	%	80	%	72	%
	2-Fluorobiphenyl	102	%	81	%	70	%	75	%	76	%	84	%
	p-Terphenyl-d14	68	%	79	%	80	%	96	%	84	%	85	%
	Phenol-d5	60	%	86	%	68	%	89	%	86	%	89	%
	2-Fluorophenol	53	%	78	%	63	%	84	%	87	%	84	%
	2,4,6-Tribromophenol	38	%	64	%	74	%	80	%	75	%	92	%
			fl		fl		fl		fl		fl		fl
Phenol		350	U	360	U	450	U	400	U	440	U	500	U
bis(2-Chloroethyl)ether		350	U	360	U	450	U	400	U	440	U	500	U
2-Chlorophenol		350	U	360	U	450	U	400	U	440	U	500	U
1,3-Dichlorobenzene		350	U	360	U	450	U	400	U	440	U	500	U
1,4-Dichlorobenzene		350	U	360	U	450	U	400	U	440	U	500	U
Benzyl alcohol		350	U	360	U	450	U	400	U	440	U	500	U
1,2-Dichlorobenzene		350	U	360	U	450	U	400	U	440	U	500	U
2-Methylphenol		350	U	360	U	450	U	400	U	440	U	500	U
bis(2-Chloroisopropyl)ether		350	U	360	U	450	U	400	U	440	U	500	U
4-Methylphenol		350	U	360	U	450	U	400	U	440	U	500	U
N-Nitroso-Di-n-propylamine		350	U	360	U	450	U	400	U	440	U	500	U
Hexachloroethane		350	U	360	U	450	U	400	U	440	U	500	U
Nitrobenzene		350	U	360	U	450	U	400	U	440	U	500	U
Isophorone		350	U	360	U	450	U	400	U	440	U	500	U
2-Nitrophenol		350	U	360	U	450	U	400	U	440	U	500	U
2,4-Dimethylphenol		350	U	360	U	450	U	400	U	440	U	500	U
Benzoic acid		1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
bis(2-Chloroethoxy)methane		350	U	360	U	450	U	400	U	440	U	500	U
2,4-Dichlorophenol		350	U	360	U	450	U	400	U	440	U	500	U
1,2,4-Trichlorobenzene		350	U	360	U	450	U	400	U	440	U	500	U
Naphthalene		350	U	360	U	450	U	81	J	150	J	510	
4-Chloroaniline		350	U	360	U	450	U	400	U	440	U	500	U
Hexachlorobutadiene		350	U	360	U	450	U	400	U	440	U	500	U
4-Chloro-3-methylphenol		350	U	360	U	450	U	400	U	440	U	500	U
2-Methylnaphthalene		350	U	360	U	46	J	140	J	260	J	1200	
Hexachlorocyclopentadiene		350	U	360	U	450	U	400	U	440	U	500	U

*= Outside of EPA CLP QC limits.

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Cust ID:	BOOHY3		BOOHY4		BOOHY5		BOOHY6		BOOHY8		BOOHY9	
RFW#:	001		002		003		004		005		006	
2,4,6-Trichlorophenol	350	U	360	U	450	U	400	U	440	U	500	U
2,4,5-Trichlorophenol	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
2-Chloronaphthalene	350	U	360	U	450	U	400	U	440	U	500	U
2-Nitroaniline	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
Dimethylphthalate	350	U	360	U	450	U	400	U	440	U	500	U
Acenaphthylene	350	U	360	U	450	U	400	U	440	U	500	U
2,6-Dinitrotoluene	350	U	360	U	450	U	400	U	440	U	500	U
3-Nitroaniline	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
Acenaphthene	350	U	360	U	450	U	400	U	440	U	500	U
2,4-Dinitrophenol	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
4-Nitrophenol	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
Dibenzofuran	350	U	360	U	450	U	400	U	440	U	120	J
2,4-Dinitrotoluene	350	U	360	U	450	U	400	U	440	U	500	U
Diethylphthalate	350	U	360	U	450	U	400	U	440	U	500	U
4-Chlorophenyl-phenylether	350	U	360	U	450	U	400	U	440	U	500	U
Fluorene	350	U	360	U	46	J	400	U	440	U	500	U
4-Nitroaniline	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
4,6-Dinitro-2-methylphenol	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
N-Nitrosodiphenylamine (1)	350	U	360	U	450	U	400	U	440	U	500	U
4-Bromophenyl-phenylether	350	U	360	U	450	U	400	U	440	U	500	U
Hexachlorobenzene	350	U	360	U	450	U	400	U	440	U	500	U
Pentachlorophenol	1800	U	1800	U	2300	U	2000	U	2200	U	2500	U
Phenanthrene	350	U	360	U	560		400	U	48	J	500	U
Anthracene	350	U	360	U	57	J	400	U	440	U	500	U
Di-n-Butylphthalate	350	U	360	U	450	U	400	U	440	U	60	J
Fluoranthene	350	U	360	U	320	J	400	U	440	U	500	U
Pyrene	350	U	360	U	450		400	U	440	U	110	J
Butylbenzylphthalate	350	U	360	U	450	U	400	U	440	U	500	U
3,3'-Dichlorobenzidine	700	U	710	U	900	U	790	U	880	U	1000	U
Benzo(a)anthracene	350	U	360	U	170	J	400	U	440	U	61	J
Chrysene	350	U	360	U	240	J	400	U	440	U	170	J
bis(2-Ethylhexyl)phthalate	110	J	100	J	440	J	68	J	230	J	360	J
Di-n-Octyl phthalate	350	U	360	U	450	U	400	U	440	U	500	U
Benzo(b)fluoranthene	350	U	360	U	74	J	400	U	440	U	500	U
Benzo(k)fluoranthene	350	U	360	U	90	J	400	U	440	U	500	U
Benzo(a)pyrene	350	U	360	U	120	J	400	U	440	U	500	U
Indeno(1,2,3-cd)pyrene	350	U	360	U	50	J	400	U	440	U	500	U
Dibenzo(a,h)anthracene	350	U	360	U	450	U	400	U	440	U	500	U
Benzo(g,h,i)perylene	350	U	360	U	56	J	400	U	440	U	500	U

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

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1B

SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000019

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
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

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SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000020

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G Lab File ID: L042407

Level: (low/med) LOW Date Received: 03/20/91

% Moisture: not dec. 6 dec. Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/24/91

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

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

CAS NO.	COMPOUND		
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)	350	U
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	110	J
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

1R

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000021

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

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.	ADIPATE	22.28	10000	J
2.	HYDROCARBON	22.90	100	J

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SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000032

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G Lab File ID: L042311

Level: (low/med) LOW Date Received: 03/20/91

% Moisture: not dec. 7 dec. Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
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

SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000033

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
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)	360	U
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	360	U
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	100	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

(1) - Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ADIPATE	22.23	20000	J

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SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000045

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G Lab File ID: L042314

Level: (low/med) LOW Date Received: 03/20/91

% Moisture: not dec. 27 dec. Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	450	U
111-44-4	bis(2-Chloroethyl)ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
100-51-6	Benzyl alcohol	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	bis(2-Chloroisopropyl)ether	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
65-85-0	Benzoic acid	2300	U
111-91-1	bis(2-Chloroethoxy)methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	2300	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	2300	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U

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SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000046

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2300	U
83-32-9	Acenaphthene	450	U
51-28-5	2,4-Dinitrophenol	2300	U
100-02-7	4-Nitrophenol	2300	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	46	J
100-01-6	4-Nitroaniline	2300	U
534-52-1	4,6-Dinitro-2-methylphenol	2300	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	2300	U
85-01-8	Phenanthrene	560	
120-12-7	Anthracene	57	J
84-74-2	Di-n-Butylphthalate	450	U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	450	
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)anthracene	170	J
218-01-9	Chrysene	240	J
117-81-7	bis(2-Ethylhexyl)phthalate	440	J
117-84-0	Di-n-Octyl phthalate	450	U
205-99-2	Benzo(b)fluoranthene	74	J
207-08-9	Benzo(k)fluoranthene	90	J
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	50	J
53-70-3	Dibenzo(a,h)anthracene	450	U
191-24-2	Benzo(g,h,i)perylene	56	J

(1) - Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SULFUR	14.95	500	J
2.	PAH	19.20	300	J
3.	PAH	19.27	300	J
4.	PAH	19.45	400	J
5.	PAH	20.20	200	J
6.	PAH	20.32	500	J
7.	PAH	21.68	200	J
8.	PAH	22.08	100	J
9.	ADIPATE	22.30	10000	J
10.	ALKANE	22.85	500	J
11.	PAH	23.03	90	J
12.	UNKNOWN	24.12	90	J
13.	ALKANE	24.25	100	J
14.	PAH	24.45	100	J
15.	PAH	24.57	200	J

1B

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000098

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
100-51-6	Benzyl alcohol	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	bis(2-Chloroisopropyl)ether	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
65-85-0	Benzoic acid	2000	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	81	J
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	140	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

9715504.1659

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000099

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID Lab Sample ID: 9103L985-004

Sample wt/vol: 30.8 (g/mL) G Lab File ID: L042312

Level: (low/med) LOW Date Received: 03/20/91

% Moisture: not dec. 18 dec. Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-Butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	790	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	68	J
117-84-0	Di-n-Octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

9715504.1660

0000100

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.50	200	J
2.	UNKNOWN	13.80	100	J
3.	SULFUR	14.93	300	J
4.	TRIMETHYLNAPHTHALENE	15.40	500	J
5.	TRIMETHYLNAPHTHALENE	15.77	200	J
6.	ALKANE	16.67	600	J
7.	PAH	16.77	300	J
8.	PAH	17.58	100	J
9.	ALKANE	18.65	200	J
10.	ALKANE	19.45	200	J
11.	ALKANE	20.17	100	J
12.	ALKANE	20.85	100	J
13.	ALKANE	21.50	200	J
14.	ALKANE	22.13	200	J
15.	ALKANE	22.75	400	J
16.	ALKANE	24.20	400	J
17.	ALKANE	25.10	200	J
18.	ALKANE	26.17	300	J
19.	ALKANE	27.43	100	J
20.	ALKANE	28.97	200	J

9213504.1661

1B

SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000135

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
100-51-6	Benzyl alcohol	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	bis(2-Chloroisopropyl)ether	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-Di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
65-85-0	Benzoic acid	2200	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	260	J
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethylphthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000136

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	440	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	48	J
120-12-7	Anthracene	440	U
84-74-2	Di-n-Butylphthalate	440	U
206-44-0	Fluoranthene	440	U
129-00-0	Pyrene	440	U
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	880	U
56-55-3	Benzo(a)anthracene	440	U
218-01-9	Chrysene	440	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	J
117-84-0	Di-n-Octyl phthalate	440	U
205-99-2	Benzo(b)fluoranthene	440	U
207-08-9	Benzo(k)fluoranthene	440	U
50-32-8	Benzo(a)pyrene	440	U
193-39-5	Indeno(1,2,3-cd)pyrene	440	U
53-70-3	Dibenzo(a,h)anthracene	440	U
191-24-2	Benzo(g,h,i)perylene	440	U

(1) - Cannot be separated from Diphenylamine

97 0504 1663

0000137

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.50	400	J
2.	TRIMETHYLNAPHTHALENE	15.40	800	J
3.	ALKANE	16.67	900	J
4.	PAH	16.77	400	J
5.	ALKANE	18.65	400	J
6.	ALKANE	19.45	300	J
7.	ALKANE	20.18	200	J
8.	ALKANE	20.87	200	J
9.	ALKANE	21.52	300	J
10.	ALKANE	22.17	300	J
11.	ADIPATE	22.27	10000	J
12.	ALKANE	22.78	700	J
13.	UNKNOWN	23.00	90	J
14.	ALKANE	24.23	500	J
15.	ALKANE	25.13	200	J
16.	UNKNOWN	25.47	100	J
17.	ALKANE	26.20	500	J
18.	UNKNOWN	26.45	100	J
19.	ALKANE	26.98	100	J
20.	ALKANE	27.48	200	J
21.	ALKANE	29.00	300	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000175

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
100-51-6	Benzyl alcohol	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	bis(2-Chloroisopropyl)ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
65-85-0	Benzoic acid	2500	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	510	
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	1200	
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U

SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	500	U
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	2500	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	2500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	2500	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
84-74-2	Di-n-Butylphthalate	60	J
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)anthracene	61	J
218-01-9	Chrysene	170	J
117-81-7	bis(2-Ethylhexyl)phthalate	360	J
117-84-0	Di-n-Octyl phthalate	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) - Cannot be separated from Diphenylamine

97 1504 1666

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000177

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

Number TICs found: 22

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.52	2000	J
2.	TRIMETHYLNAPHTHALENE	15.40	3000	J
3.	TRIMETHYLNAPHTHALENE	15.78	1000	J
4.	ALKANE	16.68	3000	J
5.	PAH	16.78	2000	J
6.	ALKANE	18.67	1000	J
7.	ALKANE	19.47	1000	J
8.	ALKANE	20.87	400	J
9.	ALKANE	21.52	500	J
10.	ALKANE	22.15	600	J
11.	ADIPATE	22.27	10000	J
12.	ALKANE	22.78	2000	J
13.	ALKANE	24.22	1000	J
14.	ALKANE	25.13	600	J
15.	ALKANE	26.20	2000	J
16.	ALKANE	27.47	1000	J
17.	UNKNOWN	27.85	800	J
18.	ALKANE	29.00	2000	J
19.	UNKNOWN	31.22	2000	J
20.	UNKNOWN	31.93	900	J
21.	UNKNOWN	32.55	900	J
22.	UNKNOWN	33.08	2000	J

9713504.1667

VALIDATION SUMMARY

9713504.1668

300-FF-1 OPERABLE UNIT DATA VALIDATION
WESTINGHOUSE HANFORD COMPANY
DISTRIBUTION & FILE RECORD FORM

Task E-92-15/2978
2/3/92
Rev. 0

Document Title: Semi-Volatiles 9103L985
Document Number:

Date: 10/20/92
Originator: CMR

HCS - WHC/E - 92 15/T ~~I-108~~

DISTRIBUTION					
M. Gerboth (HC-RL)		S. Kis-Young (HC-Sea)		Other:	
C. Russell (HC-Sea)		S. Kis-Young (Filing)	X		
D. Mantooth (Ebasco)		R. Moses (HC-RL)			

PROJECT FILES		
MANAGEMENT		Comments
M-1 Correspondence		
M-2 Meeting Minutes		
M-3 Telecons		
M-4 Statements of Work, Task Orders		
M-5 Purchase Requisitions and Receipt documentation		
M-6 Other Management Documents Generated		
M-7 Financial Data		
SOURCE DATA		
S-1 Original Data Packages		
S-2 Memos Transmitting Original Source Packages to WHC		
S-3 Other Original Data Documentation		
TASK TECHNICAL		
T-1 Validation Calculations and Notated Packages	X	
T-2 Progress Memos		
T-3 Completeness Checklists		
T-4 Draft Summary Report(s)		
T-5 Final Summary Report(s)		
T-6 Draft Summary Report Review Comments		
T-7 Other Technical Documentation		

FORM

9713504.1669

APPENDIX G
DATA VALIDATION DOCUMENTATION

Roy F. Weston Laboratories

Data Package 9103L985

Semivolatile Organic Analyses

9713504.1670

THIS APPENDIX CONSISTS OF FIVE ATTACHMENTS

Attachment 1 - Glossary of Data Qualifiers

This attachment provides a glossary explaining all data qualifiers applied as a result of the validation.

Attachment 2 - As Received Laboratory Sample Concentration Reports

This attachment provides a copy of the as-received sample concentration reports. This may be a tabular summary similar to that provided in Attachment 4, or may be a copy of the laboratory reports (e.g., Form I).

Attachment 3 - Summary of Data Qualifications (Form B-7)

This attachment provides a complete summary of all qualifications applied as a result of the validation.

Attachment 4 - As Qualified Data Summary

This attachment provides a tabular data summary of all data qualified from the validation.

Attachment 5 - Data Review Supporting Documentation

This attachment provides copies of the data validation checklists, data summary forms, telephone contact memoranda and other documentation completed as a result of the data validation.

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ATTACHMENT 1

Glossary of Data Qualifiers

U - Indicates the compound or analyte was analyzed for and not detected. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected. Due to quality control deficiencies identified during data validation the value reported may not accurately reflect the sample quantitation limit.

J - Indicates the compound or analyte was analyzed for and detected. The associated value is estimated but the data are useable for decision making processes.

R - Indicates the compound or analyte was analyzed for and due to an identified quality control deficiency the data are unusable.

NJ - Indicates the presumptive evidence of a compound at an estimated value.

N - Indicates presumptive evidence of a compound.

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ATTACHMENT 2

As Received Laboratory Sample Concentration Reports

9713504.1673

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000019

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

Dilution Factor: 1.00

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

9713504.1674

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 000020

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
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)	350	U
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	110	J
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

9713504.1675

1F
SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000021

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

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.	ADIPATE	22.28	10000	J
2.	HYDROCARBON	22.90	100	J

9713504.1676

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000032

CLIENT SAMPLE NO.
BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
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

9713504.1677

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 000033

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
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)	360	U
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	360	U
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	100	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

(1) - Cannot be separated from Diphenylamine

9713504.1678

1F
SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0 0 0 0 3 4

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ADIPATE	22.23	20000	J

Sr-89 + Gamma Scan
missing
JMP 2/27/92

FORM 1 SV-TIC

12/88 Rev.

9713504.1679

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000045

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	450	U
111-44-4	bis(2-Chloroethyl)ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
100-51-6	Benzyl alcohol	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	bis(2-Chloroisopropyl)ether	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
65-85-0	Benzoic acid	2300	U
111-91-1	bis(2-Chloroethoxy)methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	2300	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	2300	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U

9713504.1680

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000046

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2300	U
83-32-9	Acenaphthene	450	U
51-28-5	2,4-Dinitrophenol	2300	U
100-02-7	4-Nitrophenol	2300	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	46	J
100-01-6	4-Nitroaniline	2300	U
534-52-1	4,6-Dinitro-2-methylphenol	2300	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	2300	U
85-01-8	Phenanthrene	560	
120-12-7	Anthracene	57	J
84-74-2	Di-n-Butylphthalate	450	U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	450	
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)anthracene	170	J
218-01-9	Chrysene	240	J
117-81-7	bis(2-Ethylhexyl)phthalate	440	J
117-84-0	Di-n-Octyl phthalate	450	U
205-99-2	Benzo(b)fluoranthene	74	J
207-08-9	Benzo(k)fluoranthene	90	J
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	50	J
53-70-3	Dibenzo(a,h)anthracene	450	U
191-24-2	Benzo(g,h,i)perylene	56	J

(1) - Cannot be separated from Diphenylamine

9713504.1681

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000047

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SULFUR	14.95	500	J
2.	PAH	19.20	300	J
3.	PAH	19.27	300	J
4.	PAH	19.45	400	J
5.	PAH	20.20	200	J
6.	PAH	20.32	500	J
7.	PAH	21.68	200	J
8.	PAH	22.08	100	J
9.	ADIPATE	22.30	10000	J
10.	ALKANE	22.85	500	J
11.	PAH	23.03	90	J
12.	UNKNOWN	24.12	90	J
13.	ALKANE	24.25	100	J
14.	PAH	24.45	100	J
15.	PAH	24.57	200	J

9713504.1682

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000098

CLIENT SAMPLE NO.
BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID Lab Sample ID: 9103L985-004

Sample wt/vol: 30.8 (g/mL) G Lab File ID: L042312

Level: (low/med) LOW Date Received: 03/20/91

% Moisture: not dec. 18 dec. Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
100-51-6	Benzyl alcohol	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	bis(2-Chloroisopropyl)ether	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
65-85-0	Benzoic acid	2000	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	81	J
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	140	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

9713504.1683

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000099

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-Butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	790	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	68	J
117-84-0	Di-n-Octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

9713504.1684

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000100

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.50	200	J
2.	UNKNOWN	13.80	100	J
3.	SULFUR	14.93	300	J
4.	TRIMETHYLNAPHTHALENE	15.40	500	J
5.	TRIMETHYLNAPHTHALENE	15.77	200	J
6.	ALKANE	16.67	600	J
7.	PAH	16.77	300	J
8.	PAH	17.58	100	J
9.	ALKANE	18.65	200	J
10.	ALKANE	19.45	200	J
11.	ALKANE	20.17	100	J
12.	ALKANE	20.85	100	J
13.	ALKANE	21.50	200	J
14.	ALKANE	22.13	200	J
15.	ALKANE	22.75	400	J
16.	ALKANE	24.20	400	J
17.	ALKANE	25.10	200	J
18.	ALKANE	26.17	300	J
19.	ALKANE	27.43	100	J
20.	ALKANE	28.97	200	J

9713504.1685

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000135

CLIENT SAMPLE NO.
B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
100-51-6	Benzyl alcohol	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	bis(2-Chloroisopropyl)ether	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-Di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
65-85-0	Benzoic acid	2200	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	260	J
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethylphthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U

9713504.1686

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 000136

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	440	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	48	J
120-12-7	Anthracene	440	U
84-74-2	Di-n-Butylphthalate	440	U
206-44-0	Fluoranthene	440	U
129-00-0	Pyrene	440	U
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	880	U
56-55-3	Benzo(a)anthracene	440	U
218-01-9	Chrysene	440	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	J
117-84-0	Di-n-Octyl phthalate	440	U
205-99-2	Benzo(b)fluoranthene	440	U
207-08-9	Benzo(k)fluoranthene	440	U
50-32-8	Benzo(a)pyrene	440	U
193-39-5	Indeno(1,2,3-cd)pyrene	440	U
53-70-3	Dibenzo(a,h)anthracene	440	U
191-24-2	Benzo(g,h,i)perylene	440	U

(1) - Cannot be separated from Diphenylamine

9713504.1687

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000137

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.50	400	J
2.	TRIMETHYLNAPHTHALENE	15.40	800	J
3.	ALKANE	16.67	900	J
4.	PAH	16.77	400	J
5.	ALKANE	18.65	400	J
6.	ALKANE	19.45	300	J
7.	ALKANE	20.18	200	J
8.	ALKANE	20.87	200	J
9.	ALKANE	21.52	300	J
10.	ALKANE	22.17	300	J
11.	ADIPATE	22.27	10000	J
12.	ALKANE	22.78	700	J
13.	UNKNOWN	23.00	90	J
14.	ALKANE	24.23	500	J
15.	ALKANE	25.13	200	J
16.	UNKNOWN	25.47	100	J
17.	ALKANE	26.20	500	J
18.	UNKNOWN	26.45	100	J
19.	ALKANE	26.98	100	J
20.	ALKANE	27.48	200	J
21.	ALKANE	29.00	300	J

9713504.1688

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000175

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
100-51-6	Benzyl alcohol	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	bis(2-Chloroisopropyl)ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
65-85-0	Benzoic acid	2500	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	510	
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	1200	
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U

9713504.1689

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000176

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	500	U
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	2500	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	2500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	2500	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
84-74-2	Di-n-Butylphthalate	60	J
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)anthracene	61	J
218-01-9	Chrysene	170	J
117-81-7	bis(2-Ethylhexyl)phthalate	360	J
117-84-0	Di-n-Octyl phthalate	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenzo(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) - Cannot be separated from Diphenylamine

9713504.1690

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000177

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

Number TICs found: 22

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.52	2000	J
2.	TRIMETHYLNAPHTHALENE	15.40	3000	J
3.	TRIMETHYLNAPHTHALENE	15.78	1000	J
4.	ALKANE	16.68	3000	J
5.	PAH	16.78	2000	J
6.	ALKANE	18.67	1000	J
7.	ALKANE	19.47	1000	J
8.	ALKANE	20.87	400	J
9.	ALKANE	21.52	500	J
10.	ALKANE	22.15	600	J
11.	ADIPATE	22.27	10000	J
12.	ALKANE	22.78	2000	J
13.	ALKANE	24.22	1000	J
14.	ALKANE	25.13	600	J
15.	ALKANE	26.20	2000	J
16.	ALKANE	27.47	1000	J
17.	UNKNOWN	27.85	800	J
18.	ALKANE	29.00	2000	J
19.	UNKNOWN	31.22	2000	J
20.	UNKNOWN	31.93	900	J
21.	UNKNOWN	32.55	900	J
22.	UNKNOWN	33.08	2000	J

9713504.1691

ATTACHMENT 3

Summary of Data Qualifications

9713504.1692

DRAFT

7/91

DATA QUALIFICATION SUMMARY - FORM B-7

SDG: 9103L985	REVIEWER: CMR	DATE:	PAGE 1 OF 1
COMMENTS: Semivolatiles			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
all compounds	R	all samples:	no data
		B00HY3	
		B00HY4	
		B00HY5	
		B00HY6	
		B00HY8	
		B00HY9	

9713504.1693

ATTACHMENT 4

As Qualified Data Summary

9713504.1694

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000019

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

Dilution Factor: 1.00

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

no data

CAS NO.	COMPOUND		
108-95-2	Phenol	350	U (R)
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

9713504.1695

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 000002.0

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

Dilution Factor: 1.00

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

no data

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	1800	U (R)
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)	350	U
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	110	J
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

9713504.1696

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000021

CLIENT SAMPLE NO.

BOOHY3

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-001

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: L042407

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 6 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/24/91

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

Dilution Factor: 1.00

no data

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ADIPATE	22.28	~~10000~~	~~J~~ R
2.	HYDROCARBON	22.90	~~100~~	~~J~~

FORM 1 SV-TIC 12/88 Rev.

9713504.1697

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000032

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

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

no data

CAS NO.	COMPOUND		
108-95-2	Phenol	360	U (R)
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

9713504.1698

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 000033

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

no data

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
99-09-2	3-Nitroaniline	1800	U (R)
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)	360	U
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	360	U
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	100	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

9713504.1699

1F
SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000034

CLIENT SAMPLE NO.

BOOHY4

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-002

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: L042311

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 7 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.00

no data

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ADIPATE	22.23	~~20000~~	~~J~~ R

Sr-89 + Gamma Scan
missing
TMP 2/27/92

9713504.1700

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000045

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

no data

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

CAS NO.	COMPOUND		
108-95-2	Phenol	450	U (R)
111-44-4	bis(2-Chloroethyl)ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
100-51-6	Benzyl alcohol	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	bis(2-Chloroisopropyl)ether	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
65-85-0	Benzoic acid	2300	U
111-91-1	bis(2-Chloroethoxy)methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	2300	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	2300	U
131-11-3	Dimethylphthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U

am

9713504.1701

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000046

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

no data

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	~~2300~~	U (R)
83-32-9	Acenaphthene	450	U
51-28-5	2,4-Dinitrophenol	2300	U
100-02-7	4-Nitrophenol	2300	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	46	J
100-01-6	4-Nitroaniline	2300	U
534-52-1	4,6-Dinitro-2-methylphenol	2300	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	2300	U
85-01-8	Phenanthrene	560	
120-12-7	Anthracene	57	J
84-74-2	Di-n-Butylphthalate	450	U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	450	
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)anthracene	170	
218-01-9	Chrysene	240	
117-81-7	bis(2-Ethylhexyl)phthalate	440	J
117-84-0	Di-n-Octyl phthalate	450	U
205-99-2	Benzo(b)fluoranthene	74	J
207-08-9	Benzo(k)fluoranthene	90	J
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	50	J
53-70-3	Dibenzo(a,h)anthracene	450	U
191-24-2	Benzo(g,h,i)perylene	56	J

(1) - Cannot be separated from Diphenylamine

FORM 1 SV-2

12/88 Rev.

9713504.1702

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000047

CLIENT SAMPLE NO.

BOOHY5

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

Client: WESTINGHOUSE HANFORD

Matrix: SOIL

Lab Sample ID: 9103L985-003

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042314

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 27 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 6.6

Dilution Factor: 1.00

no data

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SULFUR	14.95	500	J R
2.	PAH	19.20	300	J
3.	PAH	19.27	300	J
4.	PAH	19.45	400	J
5.	PAH	20.20	200	J
6.	PAH	20.32	500	J
7.	PAH	21.68	200	J
8.	PAH	22.08	100	J
9.	ADIPATE	22.30	10000	J
10.	ALKANE	22.85	500	J
11.	PAH	23.03	90	J
12.	UNKNOWN	24.12	90	J
13.	ALKANE	24.25	100	J
14.	PAH	24.45	400	J
15.	PAH	24.57	200	J

am

9713504.1703

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000098

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

no data

CAS NO.	COMPOUND		
108-95-2	Phenol	400	U (R)
111-44-4	bis(2-Chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
100-51-6	Benzyl alcohol	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	bis(2-Chloroisopropyl)ether	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
65-85-0	Benzoic acid	2000	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	81	J
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	140	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

9713504.1704

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000099

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

no data

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2000	U (R)
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-Butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	790	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	68	U
117-84-0	Di-n-Octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

FORM 1 SV-2

12/88 Rev.

9713504.1705

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000100

CLIENT SAMPLE NO.

BOOHY6

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-004

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

Lab File ID: L042312

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 18 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

no data

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.50	200	J R
2.	UNKNOWN	13.80	100	J
3.	SULFUR	14.93	300	J
4.	TRIMETHYLNAPHTHALENE	15.40	500	J
5.	TRIMETHYLNAPHTHALENE	15.77	200	J
6.	ALKANE	16.67	600	J
7.	PAH	16.77	100	J
8.	PAH	17.58	100	J
9.	ALKANE	18.65	200	J
10.	ALKANE	19.45	200	J
11.	ALKANE	20.17	100	J
12.	ALKANE	20.85	100	J
13.	ALKANE	21.50	200	J
14.	ALKANE	22.13	200	J
15.	ALKANE	22.75	400	J
16.	ALKANE	24.20	400	J
17.	ALKANE	25.10	200	J
18.	ALKANE	26.17	300	J
19.	ALKANE	27.43	100	J
20.	ALKANE	28.97	200	J

9713504.1706

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 9000135

CLIENT SAMPLE NO.
B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

no data

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
108-95-2	Phenol	440	U (R)
111-44-4	bis(2-Chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
100-51-6	Benzyl alcohol	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	bis(2-Chloroisopropyl)ether	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-Di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
65-85-0	Benzoic acid	2200	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	260	J
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethylphthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U

9713504.1707

1C
SEMIVOLATILE ORGANICS ANALYSIS SHEET 000136

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

no data

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	2200	U R
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	440	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	48	J
120-12-7	Anthracene	440	U
84-74-2	Di-n-Butylphthalate	440	U
206-44-0	Fluoranthene	440	U
129-00-0	Pyrene	440	U
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	880	U
56-55-3	Benzo(a)anthracene	440	U
218-01-9	Chrysene	440	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	J
117-84-0	Di-n-Octyl phthalate	440	U
205-99-2	Benzo(b)fluoranthene	440	U
207-08-9	Benzo(k)fluoranthene	440	U
50-32-8	Benzo(a)pyrene	440	U
193-39-5	Indeno(1,2,3-cd)pyrene	440	U
53-70-3	Dibenzo(a,h)anthracene	440	U
191-24-2	Benzo(g,h,i)perylene	440	U

(1) - Cannot be separated from Diphenylamine

9713504.1708

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000137

CLIENT SAMPLE NO.

B00HY8

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-005

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

Lab File ID: L042313

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 24 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

GPC Cleanup: (Y/N) Y pH: 7.0

Dilution Factor: 1.00

Number TICs found: 21

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

no data

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.50	400	J R
2.	TRIMETHYLNAPHTHALENE	15.40	800	J
3.	ALKANE	16.67	900	J
4.	PAH	16.77	400	J
5.	ALKANE	18.65	400	J
6.	ALKANE	19.45	300	J
7.	ALKANE	20.18	200	J
8.	ALKANE	20.87	200	J
9.	ALKANE	21.52	300	J
10.	ALKANE	22.17	300	J
11.	ADIPATE	22.27	10000	J
12.	ALKANE	22.78	700	J
13.	UNKNOWN	23.00	90	J
14.	ALKANE	24.23	500	J
15.	ALKANE	25.13	200	J
16.	UNKNOWN	25.47	100	J
17.	ALKANE	26.20	500	J
18.	UNKNOWN	26.45	100	J
19.	ALKANE	26.98	100	J
20.	ALKANE	27.48	200	J
21.	ALKANE	29.00	300	J

9713504.1709

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000175

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

no data

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
108-95-2	Phenol	500	U (R)
111-44-4	bis(2-Chloroethyl)ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
100-51-6	Benzyl alcohol	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	bis(2-Chloroisopropyl)ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-Di-n-propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
65-85-0	Benzoic acid	2500	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	510	
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	1200	
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U

9713504.1710

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000176

CLIENT SAMPLE NO.

BOOHY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

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

nodata

CAS NO.	COMPOUND			
99-09-2	3-Nitroaniline	2500	U	(K)
83-32-9	Acenaphthene	500	U	
51-28-5	2,4-Dinitrophenol	2500	U	
100-02-7	4-Nitrophenol	2500	U	
132-64-9	Dibenzofuran	120	J	
121-14-2	2,4-Dinitrotoluene	500	U	
84-66-2	Diethylphthalate	500	U	
7005-72-3	4-Chlorophenyl-phenylether	500	U	
86-73-7	Fluorene	500	U	
100-01-6	4-Nitroaniline	2500	U	
534-52-1	4,6-Dinitro-2-methylphenol	2500	U	
86-30-6	N-Nitrosodiphenylamine (1)	500	U	
101-55-3	4-Bromophenyl-phenylether	500	U	
118-74-1	Hexachlorobenzene	500	U	
87-86-5	Pentachlorophenol	2500	U	
85-01-8	Phenanthrene	500	U	
120-12-7	Anthracene	500	U	
84-74-2	Di-n-Butylphthalate	80	J	
206-44-0	Fluoranthene	500	U	
129-00-0	Pyrene	110	J	
85-68-7	Butylbenzylphthalate	500	U	
91-94-1	3,3'-Dichlorobenzidine	1000	U	
56-55-3	Benzo(a)anthracene	61	J	
218-01-9	Chrysene	170	J	
117-81-7	bis(2-Ethylhexyl)phthalate	360	J	
117-84-0	Di-n-Octyl phthalate	500	U	
205-99-2	Benzo(b)fluoranthene	500	U	
207-08-9	Benzo(k)fluoranthene	500	U	
50-32-8	Benzo(a)pyrene	500	U	
193-39-5	Indeno(1,2,3-cd)pyrene	500	U	
53-70-3	Dibenzo(a,h)anthracene	500	U	
191-24-2	Benzo(g,h,i)perylene	500	U	

(1) - Cannot be separated from Diphenylamine

FORM 1 SV-2

12/88 Rev.

9713504.1711

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000177

CLIENT SAMPLE NO.

B00HY9

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

Client: WESTINGHOUSE HANFORD

Matrix: SOLID

Lab Sample ID: 9103L985-006

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: L042315

Level: (low/med) LOW

Date Received: 03/20/91

% Moisture: not dec. 35 dec.

Date Extracted: 03/21/91

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 04/23/91

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

Dilution Factor: 1.00

Number TICs found: 22

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

no dat

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	DIMETHYLNAPHTHALENE	13.52	2000	J
2.	TRIMETHYLNAPHTHALENE	15.40	3000	J
3.	TRIMETHYLNAPHTHALENE	15.78	1000	J
4.	ALKANE	16.68	3000	J
5.	PAH	16.78	2000	J
6.	ALKANE	18.67	1000	J
7.	ALKANE	19.47	1000	J
8.	ALKANE	20.87	400	J
9.	ALKANE	21.52	500	J
10.	ALKANE	22.15	600	J
11.	ADIPATE	22.27	10000	J
12.	ALKANE	22.78	2000	J
13.	ALKANE	24.22	1000	J
14.	ALKANE	25.13	600	J
15.	ALKANE	26.20	2000	J
16.	ALKANE	27.47	1000	J
17.	UNKNOWN	27.85	800	J
18.	ALKANE	29.00	2000	J
19.	UNKNOWN	31.22	2000	J
20.	UNKNOWN	31.93	900	J
21.	UNKNOWN	32.55	900	J
22.	UNKNOWN	33.08	2000	J

9713504.1712

ATTACHMENT 5

Data Review Supporting Documentation

9713504.1713

SEMI-VOLATILE ORGANIC DATA REVIEW CHECKLIST - FORM A-2

PROJECT: Westinghouse 300FFI ; 2978-40	REVIEWER: CMR	DATE:
LABORATORY: Weston	CASE: 9103L985	SDG:
SAMPLES/MATRIX:		
B00HY3 B00HY8	3 soil, 3 solid	
B00HY4 B00HY9		
B00HY5		
B00HY6		

1. DATA PACKAGE COMPLETENESS

Review the data package for completeness and check off the items below. If any data review elements are missing contact the laboratory for submittal.

Data Package Item	Present?: Yes	No	N/A
Case Narrative	✓	—	—
Data Summary	✓	—	—
Chain-of-Custody	—	✓	—
QC Summary			
Surrogate report	—	✓	—
MS/MSD report	—	✓	—
Blank summary report	—	✓	—
GC/MS tuning report	—	✓	—
Internal standard summary report	—	✓	—
Sample Data			
Sample reports	✓	—	—
TIC reports for each sample	✓	—	—
RIC reports for all samples	—	✓	—
Raw and corrected spectra for all detected results	—	✓	—
Raw and corrected library search data for all reported TIC	—	✓	—
Quantitation and calculation data for all TIC	—	✓	—
Standards Data			
Initial calibration report	—	✓	—
RIC and quantitation reports for initial calibration	—	✓	—
Continuing calibration reports	—	✓	—
RIC and quantitation reports for cont. calibrations	—	✓	—
Internal standard summary report	—	✓	—

nothing present but the sample reports + (Form I) narrative

Data Package Item	Present?: Yes	No	N/A
Raw QC Data			
Tuning report, spectra and mass lists	—	✓	—
Blank analysis reports	—	✓	—
TIC reports for all blanks	—	✓	—
RIC and quantitation reports for blanks	—	✓	—
Raw and corrected spectra for all detected results in blanks	—	✓	—
Raw and corrected library search data for all reported TIC	—	✓	—
Quantitation and calculation data for all TIC	—	✓	—
MS/MSD report forms	—	✓	—
RIC and quantitation reports for MS/MSD	—	✓	—
Additional Data			
Moisture/% solids data sheets	—	✓	—
Reduction formulae	—	✓	—
Instrument time logs	—	✓	—
Chemist notebook pages	—	✓	—
Sample preparation sheets	—	✓	—

2. HOLDING TIMES

Were all samples extracted within holding time?	Yes	No	N/A
Were all samples analyzed within holding time?	Yes	No	N/A

ACTION: If any holding times have been exceeded, qualify all results for the associated samples as estimated (J for detects and UJ for non-detects).

3. INSTRUMENT CALIBRATION AND TUNING

3.1 GC/MS TUNING

Is a DFTPP tune report present for each applicable 12h period?	Yes	No	N/A
Do all tunes on all instruments meet the tuning criteria?	Yes	No	N/A
Do all tunes on all instruments meet the expanded criteria?	Yes	No	N/A
Has the laboratory made any calculation or transciption errors?	Yes	No	N/A
Have the proper significant figures been reported?	Yes	No	N/A

ACTION: If the mass calibration is out of specification but within the expanded criteria, qualify associated data as estimated (J for detects and UJ for non-detects). If all tuning criteria are not met, qualify all associated data as unusable (R).

CMK

9213504.1715

300-FF-1 OPERABLE UNIT DATA VALIDATION
WESTINGHOUSE HANFORD COMPANY
DISTRIBUTION & FILE RECORD FORM

Task E-92-15/2978-40
2/93

Document Title: Prelim. QA Record - Weston Case # 9103L933 - Metals Date: 3/9/93

Document Number: E-92-15/T2-011 Originator:

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HARTCROWSER

Hart Crowser, Inc.
1001 Jadwin Avenue, Suite 204
Richland, WA 99352
FAX 509 946.4203
509 946 4344

Earth and Environmental Technologies

2978-40

March 9, 1993

Mr. Ron Belden
Westinghouse Hanford Company
P.O. Box 1970 / MSIN H6-03
Richland, Washington 99352

Subject: WHC Order No. MLW-SVV-037106
Task Order No. E-92-15, Rev. E
Preliminary Quality Assurance Record - 300-FF-1 RI/FS
Roy F. Weston Case Number 9103L933 - Metals

Dear Mr. Belden:

Ebasco and Hart Crowser are pleased to provide you with the attached results of our review and validation of the subject data from the 300-FF-1 Operable Unit Remedial Investigation/Feasibility Study (RI/FS). The attached results are provided to you in fulfillment of Subtask 08 as outlined in our letter to you dated February 4, 1993. The subject data package consisted of two low level soil samples submitted for analysis for metals. The samples were analyzed by Roy F. Weston using the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) statement of work. All analytical results, together with the data qualifiers which we have tentatively assigned as a result of our review, are provided in Attachment 4.

DATA QUALITY OBJECTIVES SUMMARY

Data quality objectives (e.g. holding times, blanks, matrix spikes, duplicates, initial and continuing calibrations, contract required detection limits, and instrument-specific quality control measures) were met for this case with the exception of the following: minor blank contamination (vanadium); analytical spike percent recoveries were outside the control limits (arsenic, cadmium, magnesium, thallium); ICP serial dilution values exceeded the control limit (calcium, iron, and magnesium); and holding time exceedences (mercury).

MAJOR DEFICIENCIES (REJECTED DATA)

Magnesium was rejected (R) in samples B00HY5 and B00HY9 due to spike recoveries below 30 percent.

MINOR DEFICIENCIES (OTHER QUALIFIED DATA)

The following general trends resulted in the qualification of data for multiple samples. All qualified data are discussed in Attachments 3 and 5.

Minor blank contamination resulted in the qualification of some data (vanadium) as undetected (U). The following resulted in some data being qualified as estimates (J or UJ): analytical spike percent recoveries outside the control limits (arsenic, cadmium, and thallium), ICP serial dilution values exceeded the control limit (calcium, iron, and magnesium), and holding time exceedences (mercury).

No other qualifications were made.

The analysis run log (CLP Form XIV) was not provided by the laboratory. Thus, the analysis sequence could not be confirmed. Westinghouse Hanford was notified and will make contact with the laboratory. Upon receipt of the Form XIV we will incorporate the necessary information into the Draft Summary Report.

We trust that these preliminary results meet your needs. Our qualifier assignments will be finalized at the time the summary report for this sampling round is published. The final qualifiers may vary from those presented here, reflecting any trends in data quality or laboratory performance observed over the course of the 300-FF-1 RI/FS. Please contact me if you have any questions with regard to our activities.

Sincerely,

HART CROWSER, INC.

D. MARK GERBOTH, P.E.
Project Manager
HC#133:RL1677.DOC

Attachments

cc: Mark Gerboth (w/o attachments)
Jeff Grover (w/o attachments)
Westinghouse EDMC
Project File (E-92-15/T2-011)

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THIS APPENDIX CONSISTS OF FIVE ATTACHMENTS

Attachment 1 - Glossary of Data Qualifiers

This attachment provides a glossary explaining all data qualifiers applied as a result of the validation.

Attachment 2 - As Received Laboratory Sample Concentration Reports

This attachment provides copies of the as-received sample concentration reports.

Attachment 3 - Summary of Data Qualifications

This attachment provides a complete summary of all qualifications applied as a result of the validation.

Attachment 4 - As Qualified Data Summary

This attachment provides a tabular data summary or copies of the annotated sample concentration reports as qualified from the validation.

Attachment 5 - Data Review Supporting Documentation

This attachment provides copies of the data validation checklists, data summary forms, telephone contact memoranda and other documentation completed as a result of the data validation.

ATTACHMENT 1

Glossary of Data Qualifiers

U - Indicates the compound or analyte was analyzed for and not detected. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected. Due to quality control deficiencies identified during data validation the value reported may not accurately reflect the sample quantitation limit.

J - Indicates the compound or analyte was analyzed for and detected. The associated value is estimated but the data are useable for decision making processes.

R - Indicates the compound or analyte was analyzed for and due to an identified quality control deficiency the data are unusable.

NJ - Indicates presumptive evidence of a compound at an estimated value.

N - Indicates presumptive evidence of a compound.

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ATTACHMENT 2

As Received Laboratory Sample Concentration Reports

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOHY5

Lab Name:Roy F. Weston, Inc. Contract:6168-02-01

Lab Code:WESTON Case No:WEST SAS No.: SDG No.:CLP933

Matrix (soil/water):SOIL Lab Sample ID:9103985003

Level (low/med): LOW Date Received:03/20/91

% Solids: 70.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5990			P
7440-36-0	Antimony	4.11	U		P
7440-38-2	Arsenic	6.25		S	F
7440-39-3	Barium	66.7			P
7440-41-7	Beryllium	0.410	B		P
7440-43-9	Cadmium	0.866	U	N	P
7440-70-2	Calcium	3180		E	P
7440-47-3	Chromium	28.9			P
7440-48-4	Cobalt	5.30	B		P
7440-50-8	Copper	95.3			P
7439-89-6	Iron	10300		E	P
7439-92-1	Lead	45.1			F
7439-95-4	Magnesium	1490		*E	P
7439-96-5	Manganese	148		N	P
7439-97-6	Mercury	0.142	U		CV
7440-02-0	Nickel	12.0			P
7440-09-7	Potassium	322	B		P
7782-49-2	Selenium	0.730	B		F
7440-22-4	Silver	0.866	U		P
7440-23-5	Sodium	213	B		P
7440-28-0	Thallium	12.1	U	N	F
7440-62-2	Vanadium	20.3			P
7440-66-6	Zinc	105			P
	Cyanide				

Color Before:BROWN Clarity Before: Texture:FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

FORM I - IN

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U.S. EPA - CLP 000028

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOGY9

Lab Name:Roy F. Weston, Inc. Contract:5168-02-01

Lab Code:WESTON Case No:WEST SAS No.: SDG No.:CLP933

Matrix (soil/water):SOIL Lab Sample ID:9103933001

Level (low/med): LOW Date Received:03/14/91

% Solids: 94.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2930			P
7440-36-0	Antimony	3.96	U		P
7440-38-2	Arsenic	1.00	B		F
7440-39-3	Barium	43.7			P
7440-41-7	Beryllium	0.380	B		P
7440-43-9	Cadmium	0.834	U	N	P
7440-70-2	Calcium	5160		E	P
7440-47-3	Chromium	2.10			P
7440-48-4	Cobalt	4.30	B		P
7440-50-8	Copper	10.9			P
7439-89-6	Iron	9600		E	P
7439-92-1	Lead	7.10		S	F
7439-95-4	Magnesium	2530		*E	P
7439-96-5	Manganese	183		N	P
7439-97-6	Mercury	0.100	U		CV
7440-02-0	Nickel	6.00	B		P
7440-09-7	Potassium	857	B		P
7782-49-2	Selenium				
7440-22-4	Silver	0.834	U		P
7440-23-5	Sodium	288	B		P
7440-28-0	Thallium				
7440-62-2	Vanadium	15.0			P
7440-66-6	Zinc	17.3			P
	Cyanide				

Color Before:BROWN Clarity Before: Texture:FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

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ATTACHMENT 3

Summary of Data Qualifications

DATA QUALIFICATION SUMMARY - FORM B-7

SDG: CLP933	REVIEWER: KR	DATE: 3/3/93	PAGE 1 OF 1
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Mercury	J	B00HY5	Holding Time
		B00HY9	Exceeded
Vanadium	U	B00HY5	Blank
			Contamination
Cadmium	UJ	B00HY5, B00HY9	Matrix Spike Y.R
Manganese	R	↓	↓
Thallium	UJ	↓	↓
Calcium	J	B00HY5, B00HY9	ICP Serial dilution Y.D
IRON	J	↓	↓
Magnesium	J	↓	↓
Arsenic	J	B00HY5	Analytical Spike Y.R

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ATTACHMENT 4

As Qualified Data Summary

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

300HY5

Lab Name:Roy F. Weston, Inc. Contract:6168-02-01

Lab Code:WESTON Case No:WEST SAS No.: SDG No.:CLP933

Matrix (soil/water):SOIL Lab Sample ID:9103985003

Level (low/med): LOW Date Received:03/20/91

% Solids: 70.7

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5990			P	
7440-36-0	Antimony	4.11	U		P	
7440-38-2	Arsenic	6.25		~~S~~ J	F	AS
7440-39-3	Barium	66.7			P	
7440-41-7	Beryllium	0.410	~~B~~		P	
7440-43-9	Cadmium	0.366	~~U~~	~~N~~ UJ	P	MS
7440-70-2	Calcium	3180		~~E~~ J	P	ICP
7440-47-3	Chromium	28.9			P	
7440-48-4	Cobalt	5.30	~~B~~		P	
7440-50-8	Copper	95.3			P	
7439-89-6	Iron	10300		~~E~~ J	P	ICP
7439-92-1	Lead	45.1			F	
7439-95-4	Magnesium	1490		~~E~~ J	P	ICP
7439-96-5	Manganese	148		~~N~~ B	P	MS
7439-97-6	Mercury	0.142	U	J	CV	Hg
7440-02-0	Nickel	12.0			P	
7440-09-7	Potassium	322	~~B~~		P	
7782-49-2	Selenium	0.730	~~B~~		F	
7440-22-4	Silver	0.366	U		P	
7440-23-5	Sodium	213	~~B~~		P	
7440-28-0	Thallium	12.1	~~B~~	~~N~~ UJ	F	MS
7440-62-2	Vanadium	20.3		U	P	B
7440-66-6	Zinc	105			P	
	Cyanide					

Color Before:BROWN Clarity Before: Texture:FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

300HY9

Lab Name:Roy F. Weston, Inc. Contract:6168-02-01

Lab Code:WESTON Case No:WEST SAS No.: SDG No.:CLP933

Matrix (soil/water):SOIL Lab Sample ID:9103985006

Level (low/med): LOW Date Received:03/20/91

% Solids: 65.8

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	4810			P	
7440-36-0	Antimony	5.66	U		P	
7440-38-2	Arsenic	5.20			F	
7440-39-3	Barium	424			P	
7440-41-7	Beryllium	1.70			P	
7440-43-9	Cadmium	1.19	~~U~~	~~N~~ UJ	P	MS
7440-70-2	Calcium	3930		~~E~~ J	P	ICP
7440-47-3	Chromium	7.60			P	
7440-48-4	Cobalt	4.70	B		P	
7440-50-8	Copper	54.9			P	
7439-89-6	Iron	4980		~~E~~ J	P	ICP
7439-92-1	Lead	57.4			P	
7439-95-4	Magnesium	526	B	~~E~~ J	P	ICP
7439-96-5	Manganese	24.1		~~N~~ R	P	MS
7439-97-6	Mercury	0.191		J	CV	HT
7440-02-0	Nickel	66.9			P	
7440-09-7	Potassium	322	B		P	
7782-49-2	Selenium	0.271	U		F	
7440-22-4	Silver	1.19	U		P	
7440-23-5	Sodium	936	B		P	
7440-28-0	Thallium	13.5	~~U~~	~~N~~ UJ	F	MS
7440-62-2	Vanadium	161		~~UL~~ KL	P	
7440-66-6	Zinc	59.4			P	
	Cyanide					

Color Before:BROWN Clarity Before: Texture:FINE

Color After: BROWN Clarity After: Artifacts:

Comments:

FORM I - IN

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ATTACHMENT 5

Data Review Supporting Documentation

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST - FORM A-6

PROJECT: 300-FF-1	REVIEWER: KR	DATE:
LABORATORY: Weston	CASE: 91031933	SDG:
SAMPLES/MATRIX: B00HY5 - B00HY9		

1. COMPLETENESS AND CONTRACT COMPLIANCE

Review the data package for completeness and check off the items below. If any data review elements are missing contact the laboratory for submittal of the omitted data.

Data Package Item	Present?: Yes	No	N/A
Case Narrative	✓		
Cover Page	✓		
Traffic Reports	✓		
Sample Data			
Inorganic Analysis Data Sheets	✓		
Standards Data			
Initial and Continuing Calibration Verification	✓		
CRDL Standard for AA and ICP	✓		
QC Summary			
Blanks	✓		
ICP Interference Check Summary	✓		
Spike Sample Recovery	✓		
Post-Digestion Spike Sample Recovery	✓		
Duplicate	✓		
Laboratory Control Sample	✓		
Standard Addition Results	✓		
ICP Serial Dilutions	✓		
Instrument Detection Limits	✓		
ICP Interelement Correction Factors	✓		
ICP Linear Ranges	✓		
Preparation Log	✓		
Analysis Run Log		✓	
Raw Data			
ICP Raw Data	✓		
Furnace AA Raw Data	✓		
Mercury Raw Data	✓		
Cyanide Raw Data			✓
Additional Data			
Internal laboratory chain-of-custody		✓	
Laboratory Sample Preparation Records	✓		

Data Package Item	Present?: Yes	No	N/A
Percent Solids Analysis Records	✓		
Reduction Formulae			✓
Instrument Run Logs			✓
Chemist Notebook Pages			✓

2. HOLDING TIMES

Have all samples been analyzed within holding times? Yes **(No)** N/A

ACTION: If any holding times have been exceeded qualify all affected results as estimated (J for detects and UJ for nondetects).

3. INITIAL CALIBRATIONS

Were all instruments calibrated daily, each set-up time and were the proper number of standards used? **(Yes)** No N/A

Are the correlation coefficients ≥0.995? Yes No **(N/A)**

Was a midrange cyanide standard distilled? Yes No **(N/A)**

ACTION: Qualify all data as unusable if reported from an analysis in which an instrument was not calibrated or was calibrated with less than the minimum number of standards. Qualify associated sample results > IDL as estimated (J) and results < IDL as estimated (UJ), if the correlation coefficient is < 0.995 or the laboratory did not distill the midrange cyanide standard.

4. INITIAL AND CONTINUING CALIBRATION VERIFICATION

Are ICV and CCV percent recoveries within control? **(Yes)** No N/A

Are there calculation errors? Yes No **(N/A)**

ACTION: Qualify all affected data in accordance with Section 8.3 of the validation requirements. If calculation errors are noted, contact the laboratory for clarification.

5. ICP INTERFERENCE CHECK SAMPLE

Has an ICS sample been analyzed at the proper frequency? **(Yes)** No N/A

Are the AB solution %R values within control? **(Yes)** No N/A

Are there calculation errors? Yes No **(N/A)**

ACTION: Qualify all affected data in accordance with Section 8.3 of the validation requirements. If calculation errors are noted, contact the laboratory for clarification.

6. LABORATORY BLANKS

Are target analytes present in the laboratory blanks? Yes No N/A

ACTION: Qualify all associated sample results for any analyte <5 times the amount in any laboratory blank as nondetected (U). If analyte concentrations in the blank are >CRDL or below the negative CRDL, verify the laboratory has redigested and reanalyzed associated samples with analyte concentrations < 10 times the blank concentration. If the laboratory has not redigested and reanalyzed the samples, note in the validation narrative.

7. FIELD BLANKS

Are target analytes present in the field blanks? Yes No N/A

ACTION: Qualify all sample results for any analyte <5 times the amount in any valid field blank as nondetected (U).

8. MATRIX SPIKE SAMPLE ANALYSIS

Are spike recoveries within the control limits? Yes No N/A

ACTION: Qualify the affected sample data according to the following requirements:

If spike recovery is > 125% and sample results are <IDL no qualification is required. If spike recovery is > 125% or <75% qualify all positive results as estimated (J). If spike recovery is 30% to 74% qualify all nondetects as estimated (UJ). If spike recovery is <30%, reject all nondetects (R). If the field blank has been used for spike analysis, note in the validation narrative.

9. LABORATORY CONTROL SAMPLE

Are percent recoveries within the acceptance limits? Yes No N/A

Are there calculation errors? Yes No N/A

ACTION: Qualify the sample data according to the following requirements:

AQUEOUS LCS - Qualify as estimated (J), all sample results >IDL, for which the LCS %R falls within the range 50-79% or >120%. Qualify as estimated (UJ), all sample results <IDL, for which the LCS falls within the range of 50-79%. Qualify as unusable (R) all sample results, for which the LCS %R <50%.

SOLID LCS - Qualify as estimated (J), all sample results >IDL for which the LCS result is outside the established control limits. Qualify as estimated (UJ), all sample results <IDL for which the LCS %R are lower than the established control limits.

10. PERFORMANCE AUDIT ANALYSES

Are the performance audit sample results within the acceptance limits? Yes No N/A

ACTION: Note the results of the performance audit sample analyses in the data validation narrative.

11. DUPLICATE SAMPLE ANALYSIS

Are RPD values acceptable? Yes No N/A

ACTION: Qualify the results for all associated samples of the same matrix as estimated (J) if the RPD results fall outside the appropriate control limits. If field blanks were used for laboratory duplicates, note in the validation narrative.

12. ICP SERIAL DILUTION

Are the serial dilution results acceptable? Yes No N/A

Is there evidence of negative interference? Yes No N/A

ACTION: Qualify the associated data as estimated (J) for those analytes in which the %D is outside the control limits. If evidence of negative interference is found, use professional judgment to qualify the data.

13. FIELD DUPLICATE SAMPLES

Do the RPD values exceed the control limits? Yes No N/A

ACTION: Note the results of the field duplicate samples in the validation narrative.

14. FIELD SPLIT SAMPLES

Do the RPD values exceed the control limits? Yes No N/A

ACTION: Note the results of the field split samples in the validation narrative.

1516. FURNACE ATOMIC ABSORPTION QUALITY CONTROL

Do all applicable analyses have duplicate injections? Yes No N/A

Are applicable duplicate injection RSD values within control? Yes No N/A

If no, were samples rerun once as required? Yes No N/A

Does the RSD for the rerun fall within the control limits? Yes No N/A

Were analytical spike recoveries within the control limits? Yes No N/A

If no, were MSA analyses performed when required?	Yes	No	N/A
Are MSA correlation coefficients ≥ 0.995?	Yes	No	N/A
If no, was a second MSA analysis performed?	Yes	No	N/A

ACTION: If duplicate injections are outside the acceptance limits and the sample has not been reanalyzed or the reanalysis is outside the acceptance limits, qualify the associated data as estimated (J for detects and UJ for nondetects). If the analytical spike recovery is $<40\%$ qualify detects as estimated (J). If the analytical spike recovery is $\geq 10\%$ but $<40\%$, qualify all nondetects as estimated (UJ) and if the analytical spike recovery is $<10\%$, reject all nondetects (R). If the sample absorbance is $<50\%$ of the analytical spike absorbance and the analytical spike recovery is $<85\%$ or $>115\%$, qualify all results as estimated (J for detects and UJ for nondetects). If method of standard additions (MSA) was required but was not performed, the MSA samples were spiked incorrectly, or the MSA correllation coefficient was <0.995, qualify the associated detected results as estimated (J).

17. ANALYTE QUANTITATION AND DETECTION LIMITS

Have results been reported and calculated correctly?	Yes	No	N/A
Are results within the calibrated range of the instruments and within the linear range of the ICP?	Yes	No	N/A
Are all detection limits below the CRQL?	Yes	No	N/A

Action: If analyte quantitation is in error, contact the laboratory for explanation. If errors or deficiencies can not be resolved with the laboratory, qualify associated data as unusable (R).

18. OVERALL ASSESSMENT AND SUMMARY

Has the laboratory conducted the analysis in accordance with the analytical SOW?	Yes	No	N/A
Were project specific data quality objectives met for this analysis?	Yes	No	N/A

ACTION: Summarize all the data qualifications and complete the data validation narrative as specified in Section 10.0 of the data validation requirements.

COMMENTS (attach additional sheets as necessary):

HOLDING TIME SUMMARY - FORM B-1

SDG: CLP933	REVIEWER: KP	DATE: 2/28/93	PAGE 1 OF ___

COMMENTS: Mercury was prepared and analyzed past required holding time.

FIELD SAMPLE ID	ANALYSIS TYPE	DATE SAMPLED	DATE PREPARED	DATE ANALYZED	PREP. HOLDING TIME, DAYS	ANALYSIS HOLDING TIME, DAYS	QUALIFIER
B00GY9	WP INPA CN	3/12/91	4/18 KW	4/16 4/16 4/16	27	27	
B00HY3		3/14/91	4/13	4/15 4/15 4/14	30	31	Hg = 3 J
B00HY4				4/16 4/16			
B00HY5							
B00HY6							
B00HY8							
B00HY9							

CALIBRATION DATA SUMMARY - FORM B-2

SDG: CLP933	REVIEWER: KR	DATE: 2/28/93	PAGE 1 OF ___	
COMMENTS:				
CALIB. TYPE:	INITIAL CONTINUING	INSTRUMENT:		
CALIB. DATE	COMPOUND	RF	RSD/%D/%R	SAMPLES AFFECTED	QUALIFIER
	all initial and continuing calibrations are accepted				
CRDL Standard	Aluminum		290.2		none
			259.6		
	Arsenic		30		
	Calcium		140.2		
	T		135.4		
	Iron		141.9		
			137.4		
	Magnesium		142.3		
			150.0		
	Potassium		14.9		
			19.0		
	Selenium		4.0		
	Silver		68.5		
	Sodium		139.8		

no CRDL % Cs Tl

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BLANK AND SAMPLE DATA SUMMARY - FORM B-3

SDG: CLP933 | REVIEWER: KP | DATE: 2/28/93 | PAGE 1 OF ___

COMMENTS:

SAMPLE ID	COMPOUND	RESULT	Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	QUALIFIER
CCB1	Magnesium	158.8	B		ug/L				
CCB2	↓	193.9	B						
CCB3	↓	247.3	B			1231.5			
PB	↓	21.2	B		mg/kg	-			
ICB	Sodium	137.7	B		ug/L				
CCB1	↓	332.9	B						
CCB2	↓	492.0	B						
CCB3	↓	1013.7	B			3068.5			
PB	↓	63.200	B		mg/kg	-			
CCB1	Vanadium	15.6	B		ug/L			B00119	
		25.1	B		↓			B00143	
		50.2	B		↓	151		B00114	
		2100	B		mg/kg	-		B00145	
								B00116	
								B00146	

ACCURACY DATA SUMMARY - FORM B-4

SDG: CLP933	REVIEWER: KR	DATE: 2/28/93	PAGE 1 OF ___	
COMMENTS:				
SAMPLE ID	COMPOUND	% RECOVERY	SAMPLE(S) AFFECTED	QUALIFIER REQUIRED
ICP interference Check Sample is acceptable.				
				Cd. Mn. Tl
B00H43 Spike	Cadmium	73.2%	B00479	UJ R ~~UJ~~
	Magnesium Manganese	216.9%	B00H43	~~UJ~~ UJ R ~~R~~ UJ R
	Thallium	37.2%	B00H41	UJ R UJ
			B00H45	UJ R UJ
Post digest. Spike	Cadmium	110%	B00H46	UJ R UJ
	Manganese	101.2%	B00H48	UJ R UJ
			B00H49	UJ R UJ
LCS % R are acceptable.				

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PRECISION DATA SUMMARY - FORM B-5

SDG: CLP933	REVIEWER KR	DATE: 2/28/93	PAGE 1 OF

COMMENTS:

COMPOUND	SAMPLE ID:	SAMPLE ID:	RPD	SAMPLES AFFECTED	QUALIFIER
Duplicates RPDs are acceptable					
ICP Serial dilutions: ND					Ca Fe Mg
Calcium	11.9%			B00HY9	J J J
Iron	16.8%			B00HY3	↓ ↓ ↓
Magnesium	28.1%			B00HY4	
				B00HY5 →	
				B00HY6	↓
				B00HY7	UJ
				B00HY9 →	↓ ↓ ↓
GFAA QUALITY CONTROL.					
As	B00HY5	all analytical spike percent R			
	B00HY9	and RSD met criteria for			
Se.	B00HY5	these samples,		an MSA was	
	B00HY9	performed on		B00HY AS. @	124%
Pb	B00HY5				
	B00HY9				
Tl	B00HY5				
	B00HY9				

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CALCULATION SUMMARY - FORM B-6

SDG:	REVIEWER: KL	DATE: 7/28	PAGE 1 OF 1

COMMENTS:

SEE ATTACHED SHEETS

9713504.1741

Analyte	Result	%Solids	g Sample	VOL ML	RESULT
Al	27660	70.7	1.306	200	5991.279
Sb	8.7	70.7	1.306	200	1.884458
As	25.8	70.7	1.166	200	6.259386
Ba	307.9	70.7	1.306	200	66.69251
Be	1.949	70.7	1.306	200	0.422162
Cd	1.839	70.7	1.306	200	0.398335
Ca	14700	70.7	1.306	200	3184.085
Cr	133.7	70.7	1.306	200	28.96001
Co	24.51	70.7	1.306	200	5.308975
Cu	440	70.7	1.306	200	95.30596
Fe	47370	70.7	1.306	200	10260.55
Mg	6885	70.7	1.306	200	1491.321
Mn	684.6	70.7	1.306	200	148.2874
Hg	0	70.7	0.2	100	0
Ni	55.41	70.7	1.306	200	12.00205
Pb	186	70.7	1.166	200	45.12580
K	1488	70.7	1.306	200	322.3074
Se	3	70.7	1.166	200	0.727835
Ag	0	70.7	1.306	200	0
Na	984.4	70.7	1.306	200	213.2254
Tl	ND	70.7	1.166	200	0
V	93.94	70.7	1.306	200	20.34782
Zn	484.8	70.7	1.306	200	105.0098

BCOH45

slightly off from the laboratory reported result, possibly due to rounding difference

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Analyte	Result	%Solids	g Sample	VOL ML	RESULT
Al	16140	65.8	1.02	200	4809.583
Sb	0	65.8	1.02	200	0
As	19.1	65.8	1.122	200	5.174216
Ba	1422	65.8	1.02	200	423.7439
Be	5.733	65.8	1.02	200	1.708385
Cd	1.149	65.8	1.02	200	0.342392
Ca	13200	65.8	1.02	200	3933.488
Cr	25.36	65.8	1.02	200	7.557065
Co	15.88	65.8	1.02	200	4.732105
Cu	184.2	65.8	1.02	200	54.89004
Fe	16690	65.8	1.02	200	4973.478
Mg	1765	65.8	1.02	200	525.9550
Mn	80.85	65.8	1.02	200	24.09261
Hg	0.191	65.8	0.2	100	0.191
Ni	224.6	65.8	1.02	200	66.92889
Pb	212	65.8	1.122	200	57.43109
K	1079	65.8	1.02	200	321.5328
Se	0.5	65.8	1.122	200	0.135450
Ag	0	65.8	1.02	200	0
Na	3143	65.8	1.02	200	936.5874
Tl	ND	65.8	1.122	200	0
V	538.8	65.8	1.02	200	160.5578
Zn	199.2	65.8	1.02	200	59.35991

BCONM9