0048324

OSM ORGANIC DATA ASSESSMENT

DATE 8.6.91 (LKT)

REVIEWED BY LK THOMPSON

LABORATORY WESTON

CASE # —

RFW ~~SDG~~ # 91021746

SAMPLES/MATRIX WATER

B00DL2 B00F59 B00F06 } VOA

B00DL2 B00F06 } BNA + PEST

~~B00F06 B00F07~~

(LKT)

DATA ASSESSMENT SUMMARY

	VOA	ABN	PEST
1. Holding Times (Form I)	O	O	O
2. Surrogate Recovery (II)	O	O	O
3. Matrix Spike/ MSD (III)	O	X	X
4. Blanks (IV)	X	X	O
5. GC/MS Tune (V)	O	O	
6. Calibration (VI-VII; VIII pest)	O	O	X
7. Internal Standards (VIII)	O	O	
8. Instr. Perform. (IX pest)			O
9. Other ( )	O	O	O

4 NOV 1997 RECEIVED EDMS

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems, some data may be unusable

OVERALL ASSESSMENT: few minor problems, PESTICIDE initial and continuing quantitation and confirmation for a number of pest were outside QC limits for 8D

NOTES : none

Refer to the corresponding attachments for explanation of any problems.

ok to transmit

10/4/91

ORGANIC QC - Holding Times

Name LK THOMPSON LKT Date 8.6.91

COMMENTS: VOA - ALL HT REQUIREMENTS MET

BNA - ALL HT REQUIREMENTS MET

PEST - WITHIN ALL HT REQUIREMENTS

ACTION: NONE

sample #	constituent	value/qual	sample #	constituent	value/qual

ORGANIC QC - Surrogate Recovery

Name LK THOMPSON Date 8-6-91

COMMENTS: VOA ALL SURR RECOVERIES WITHIN QC LIMITS

BNA ALL SURR RECOVERIES WITHIN QC LIMITS

PEST ALL SURR RECOVERIES WITHIN QC LIMITS

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

ORGANIC QC - MS/MSD

Name L/K THOMPSON Date 8-6-91

COMMENTS: VOA: ALL SPIKE RECOVERIES + RPDs WITHIN QC LIMITS

BNA: 2 SPIKE RECOVERIES WERE OUTSIDE QC LIMITS BOTH ASSOCIATED W 4-NITROPHENOL AND BOTH RECOVERIES SLIGHTLY ELEVATED ∴ NO EFFECT ON RESULTS. THE RPD FOR MS/MSD WERE ALL WITHIN QC LIMITS.

→ ALSO BLANK WAS SPIKED IN WHICH 4 OF 22 SPIKE RECOVERIES WERE OUTSIDE QC OUTLIERS. THE RPDs FOR THE 2,4 DINITROTOLUENE WERE ALL WITHIN THE QC LIMITS. BS/BSD WERE

ACTION: none

PESTICIDE MS/MSD: ALL RECOVERIES WITHIN QC LIMIT EXCEPT ENDRIN WAS SLIGHTLY ELEVATED (MS only)

→ ALL RPD WERE WITHIN QC LIMITS.

RESULT NO MAJOR PROBLEM DATA QUALITY

→ LAB ALSO SPIKED BLANK

sample #	constituent	value/qual	sample #	constituent	value/qual

ORGANIC QC - Blanks

Name LK THOMPSON LKT Date 8.6.91

COMMENTS: VOA : FORM IV BLANK SUMMARYS OK

FORM I → VBLK 3.6.91 $MeCl_2$ @ 20 Acetone @ 21 CS_2 @ 2 NO TIC

VBLK 3.8.91 $MeCl_2$ @ 10 Acetone @ 15 CS_2 @ 2 NO TICS

BNA FORM IV BLANK SUMMARY CORRECT

FORM I : Di-n-BUTYL PHTHALATE @ 2, N-NITROSODIPHENYLAMINE @ 2

AND Bis (2-ETHYLHEXYL) PHTHALATE 15PPB TCA FOUND 18 TICS FOUND

ACTION: ~~qualify associated data via OSM guidelines~~

FORM IV PEST CORRECTLY PRESENTED.

VOA

sample #	constituent	value/qual
B00DL2	Methylene Chloride	30 U
↓	ACETONE	10 U
B00F59	METHYLENE CHLORIDE	67 U
↓	ACETONE	10 U
B00F06	METHYLENE CHLORIDE	18 U
	CARBON DISULFIDE	5 U

BNA

sample #	constituent	value/qual
B00DL2	Di-n-BUTYL PHTHALATE	10 U
	Bis-(2-ETHYL HEXYL) PHTHALATE	10 U
B00F06	Di-n-BUTYL PHTHALATE	10 U

BNA

sample #	constituent	value/qual
B00BL2	1/1-10 TIC	REMOVED VIA BLANK RULE
B00F06	TIC # 2	REMOVED VIA BLANK RULE

ORGANIC QC - GC/MS Tune

Name LK THOMPSON LK Date 8.6.91

COMMENTS: VOA: ALL GCMS TUNE PARAMETERS WITHIN QC LIMITS
FREQUENCY OF TUNE EVERY 12 HR
BNA: ALL GCMS m/z TUNE PARAMETERS WITHIN QC LIMITS
FREQUENCY OF TUNE APPROPRIATE TO 12 HR
Pest: N/A

ACTION: None

sample #	constituent	value/qual	sample #	constituent	value/qual

ORGANIC QC - Calibrations

Name LK THOMPSON (LKT) Date 8.6.91

COMMENTS: VOA: ALL INITIAL + CONTINUAL CALIBRATION OK

BNA: ALL INITIAL + CONTINUAL CALIBRATION OK

PEST: 72 HOUR ANALYTICAL SEQUENCE OK

LINEARITY CHECK: OK

CONTINUING CALIBRATION % D >20% IN QUAL COLUMN AND IN QUANT COLUMN ENDRIN + LINDANE >15%

ACTION: QUALIFY DATA VIA OSM GUIDELINES

sample #	constituent	value/qual	sample #	constituent	value/qual
B00F06	ALL PESTICIDE ANALYTES	VALUE/UJ			
B00DL2	↓	↓ /UJ			

Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 11/9/91

REVIEWED BY JA Lerch

LABORATORY Weston

~~CASE #~~ RFW # 91026706 (also contains 91026722, 746)

SDG # N/A

SAMPLES/MATRIX

B00DZ6	B00DY7	B00F06
B00DZ7	B00DY9	B00F07
B00FZ2	B00DZ0	all water
B00FZ3	B00DL2	
B00DY6	B00DL3	

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS ICP (Bi, Sr, Sn)		
1. Holding time	O		
2. Blanks			
3. Spike Recovery			
4. Duplicates			
5. LCS			
6.			
7.			
8.			
9.			
10.			

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: all results acceptable

NOTES: See CLP report for CASE NARRATIVE + TAL results etc. Disregard all other results reported in this package

o Refer to the corresponding attachments for explanation of any problems.

RCRA LEVEL C QC

Name JA Lerch Date 11/9/91

QC Check: Holding time

COMMENTS: — 6 mo Holding time met for all samples

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Jf Date 11/9/91

QC Check: Blanks

COMMENTS: -all method blanks free of contamination

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 11/9/91

QC Check: Spike Recovery

COMMENTS: B00DZ6 - Bi, Sr, Sn MS %R within limits;
Bi MSD %R also ok
- all WS spike + spike dup %R ok for Sr, Sn

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 11/9/91

QC Check: Duplicates

COMMENTS: B00DZ6 - all Bi, Sn, Sr replicate results within applicable limits; Bi MSD % Diff ok
- all LCS spike + spike dup % Diff ok for Sr, Sn

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Larch Date 11/9/91

QC Check: LCS

COMMENTS: - all Bi, Sn, Sr LCS recoveries ok

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L706

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	BOODZ6	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	288		UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Bismuth, Total	200	u	UG/L	200
		Calcium, Total	38900		UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	155		UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	1040		UG/L	100
		Mercury, Total	0.20	u	UG/L	0.20
		Potassium, Total	8100		UG/L	5000
		Magnesium, Total	10900		UG/L	5000
		Manganese, Total	138		UG/L	15.0
		Sodium, Total	12000		UG/L	5000
		Nickel, Total	84.8		UG/L	40.0
		Lead, Total	4.4		UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	5.0	u	UG/L	5.0
		Tin, Total	100	u	UG/L	100
		Strontium, Total	258		UG/L	100
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	330		UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L706

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-002	BOODZ7	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	200	u	UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Bismuth, Soluble	200	u	UG/L	200
		Calcium, Soluble	41000		UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	11.0		UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	100	u	UG/L	100
		Mercury, Soluble	0.20	u	UG/L	0.20
		Potassium, Soluble	8510		UG/L	5000
		Magnesium, Soluble	11300		UG/L	5000
		Manganese, Soluble	122		UG/L	15.0
		Sodium, Soluble	12700		UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	5.0	u	UG/L	5.0
		Tin, Soluble	100	u	UG/L	100
		Strontium, Soluble	274		UG/L	100
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	183		UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L706

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-003	BOOFZ2	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	200	u	UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Bismuth, Total	200	u	UG/L	200
		Calcium, Total	5000	u	UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	10.0	u	UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	100	u	UG/L	100
		Mercury, Total	0.20	u	UG/L	0.20
		Potassium, Total	5000	u	UG/L	5000
		Magnesium, Total	5000	u	UG/L	5000
		Manganese, Total	15.0	u	UG/L	15.0
		Sodium, Total	5000	u	UG/L	5000
		Nickel, Total	40.0	u	UG/L	40.0
		Lead, Total	3.0	u	UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	5.0	u	UG/L	5.0
		Tin, Total	100	u	UG/L	100
		Strontium, Total	100	u	UG/L	100
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L706

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-004	BOOFZ3	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	200	u	UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Bismuth, Soluble	200	u	UG/L	200
		Calcium, Soluble	5000	u	UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	10.0	u	UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	100	u	UG/L	100
		Mercury, Soluble	0.20	u	UG/L	0.2(
		Potassium, Soluble	5000	u	UG/L	5000
		Magnesium, Soluble	5000	u	UG/L	5000
		Manganese, Soluble	15.0	u	UG/L	15.0
		Sodium, Soluble	5000	u	UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	5.0	u	UG/L	5.0
		Tin, Soluble	100	u	UG/L	100
		Strontium, Soluble	100	u	UG/L	100
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L722

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	BOODY6	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	200	u	UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Bismuth, Total	200	u	UG/L	200
		Calcium, Total	38400		UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	11.1		UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	164		UG/L	100
		Mercury, Total	0.20	u	UG/L	0.20
		Potassium, Total	8940		UG/L	5000
		Magnesium, Total	9960		UG/L	5000
		Manganese, Total	313		UG/L	15.0
		Sodium, Total	43100		UG/L	5000
		Nickel, Total	40.0	u	UG/L	40.0
		Lead, Total	3.0	u	UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	5.0	u	UG/L	5.0
		Tin, Total	100	u	UG/L	100
		Strontium, Total	197		UG/L	100
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L722

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-002	BOODY7	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	200	u	UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Bismuth, Soluble	200	u	UG/L	200
		Calcium, Soluble	38800		UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	10.0	u	UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	100	u	UG/L	100
		Mercury, Soluble	0.20	u	UG/L	0.20
		Potassium, Soluble	8530		UG/L	5000
		Magnesium, Soluble	10100		UG/L	5000
		Manganese, Soluble	295		UG/L	15.0
		Sodium, Soluble	42600		UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	7.0		UG/L	5.0
		Tin, Soluble	100	u	UG/L	100
		Strontium, Soluble	200		UG/L	100
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L722

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-003	BOODY9	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	200	u	UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Bismuth, Total	200	u	UG/L	200
		Calcium, Total	63200		UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	17.0		UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	653		UG/L	100
		Mercury, Total	0.20	u	UG/L	0.20
		Potassium, Total	9480		UG/L	5000
		Magnesium, Total	20200		UG/L	5000
		Manganese, Total	16.9		UG/L	15.0
		Sodium, Total	37400		UG/L	5000
		Nickel, Total	40.0	u	UG/L	40.0
		Lead, Total	3.0	u	UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	10.8		UG/L	10.0
		Tin, Total	100	u	UG/L	100
		Strontium, Total	329		UG/L	100
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L722

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-004	BOODZO	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	200	u	UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Bismuth, Soluble	200	u	UG/L	200
		Calcium, Soluble	62500		UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	10.0	u	UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	100	u	UG/L	100
		Mercury, Soluble	0.20	u	UG/L	0.20
		Potassium, Soluble	8990		UG/L	5000
		Magnesium, Soluble	19800		UG/L	5000
		Manganese, Soluble	15.0	u	UG/L	15.0
		Sodium, Soluble	36500		UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	12.6		UG/L	10.0
		Tin, Soluble	100	u	UG/L	100
		Strontium, Soluble	324		UG/L	100
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L746

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	BOODL2	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	200	u	UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Bismuth, Total	200	u	UG/L	200
		Calcium, Total	23600		UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	44.2		UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	857		UG/L	100
		Mercury, Total	0.20	u	UG/L	0.2
		Potassium, Total	5580		UG/L	5000
		Magnesium, Total	8480		UG/L	5000
		Manganese, Total	15.0	u	UG/L	15.0
		Sodium, Total	17800		UG/L	5000
		Nickel, Total	40.0	u	UG/L	40.0
		Lead, Total	3.0	u	UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	5.0	u	UG/L	5.0
		Tin, Total	100	u	UG/L	100
		Strontium, Total	125		UG/L	100
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L746

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-002	BOODL3	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	200	u	UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Bismuth, Soluble	200	u	UG/L	200
		Calcium, Soluble	25100		UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	10.0	u	UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	100	u	UG/L	100
		Mercury, Soluble	0.20	u	UG/L	0.20
		Potassium, Soluble	5830		UG/L	5000
		Magnesium, Soluble	9030		UG/L	5000
		Manganese, Soluble	15.0	u	UG/L	15.0
		Sodium, Soluble	19000		UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	5.0	u	UG/L	5.0
		Tin, Soluble	100	u	UG/L	100
		Strontium, Soluble	133		UG/L	100
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L746

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-004	B00F06	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	775		UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Bismuth, Total	200	u	UG/L	200
		Calcium, Total	29500		UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	73.1		UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	1330		UG/L	100
		Mercury, Total	0.20	u	UG/L	0.20
		Potassium, Total	5000	u	UG/L	5000
		Magnesium, Total	6910		UG/L	5000
		Manganese, Total	177		UG/L	15.0
		Sodium, Total	20500		UG/L	5000
		Nickel, Total	40.0	u	UG/L	40.0
		Lead, Total	3.0	u	UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	5.0	u	UG/L	5.0
		Tin, Total	100	u	UG/L	100
		Strontium, Total	162		UG/L	100
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	147		UG/L	20.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 05/01/91

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

WESTON BATCH #: 9102L746

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-005	BOOF07	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	244		UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Bismuth, Soluble	200	u	UG/L	200
		Calcium, Soluble	31100		UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	26.4		UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	347		UG/L	100
		Mercury, Soluble	0.20	u	UG/L	0.20
		Potassium, Soluble	5000	u	UG/L	5000
		Magnesium, Soluble	7170		UG/L	5000
		Manganese, Soluble	169		UG/L	15.0
		Sodium, Soluble	21700		UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	5.0	u	UG/L	5.0
		Tin, Soluble	100	u	UG/L	100
		Strontium, Soluble	171		UG/L	100
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	86.2		UG/L	20.0

ORGANIC QC - Internal Standards

Name LK THOMPSON LH Date 8.6.91

COMMENTS: VOA: → ALL IS AREAS WITHIN QC LIMITS

→ ALL IS RT WITHIN QC LIMITS

BNA → ALL IS AREAS WITHIN QC LIMITS EXCEPT BOOFOGMS & MSD WITH IS 3 & IS 4 ELEVATED. SINCE BOOFOG HAD ALL IS AREA OK THEN DATA NOT EFFECTED AND OK.

→ ALL IS RT WITHIN QC LIMITS.

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

ORGANIC QC - Instrument Performance (pest)

Name LK THOMPSON LKT Date 8.6.91

COMMENTS: → DDT RT >12 MIN ie WITHIN QC GUIDELINES

→ ALL PEST STD RTs WITHIN RT WINDOWS

→ DDT/ENDRIN BREAKDOWN < 20%

→ DBC RTs WITHIN 1.5% FOR WIDE BORE CAPILLARY.

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

ORGANIC QC - Other

Name LK THOMPSON Date 8.6.91

COMMENTS: none

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

1A
VOLATILE ORGANICS ANALYSIS SHEET 0000040

CLIENT SAMPLE NO.

BOOF06

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-004

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

Lab File ID: W030810

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____

Date Analyzed: 03/08/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	18	~~B~~ u
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	~~2~~ 5	~~JB~~ u
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

UT
8-6-91

1E

VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS 0000041

CLIENT SAMPLE NO.

B00F06

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-004

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

Lab File ID: W030810

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____

Date Analyzed: 03/08/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

Number TICs found: 0

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

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

1A

VOLATILE ORGANICS ANALYSIS SHEET 0000022

CLIENT SAMPLE NO.

BOODL2

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-001

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

Lab File ID: W030616

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____

Date Analyzed: 03/06/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	30	~~B~~ U
67-64-1	Acetone	~~5~~ 10	~~JB~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

LKT 8.6.91

1E

VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS 0000023

CLIENT SAMPLE NO.

BOODL2

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-001

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

Lab File ID: W030616

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____

Date Analyzed: 03/06/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

Number TICs found: 0

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

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

1A
VOLATILE ORGANICS ANALYSIS SHEET

000003 1

CLIENT SAMPLE NO.

B00F59

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-003

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

Lab File ID: W030619

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____

Date Analyzed: 03/06/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	67	~~B~~ u
67-64-1	Acetone	~~9~~ 10	~~JB~~ u
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

LRT 8.6.91

1E

VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS 0000032

CLIENT SAMPLE NO.

BOOF59

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-003

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

Lab File ID: W030619

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____

Date Analyzed: 03/06/91

Column: (pack/cap) PACK

Dilution Factor: 1.00

Number TICs found: 0

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

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

SEMIVOLATILE ORGANICS ANALYSIS SHEET

0000022

CLIENT SAMPLE NO.

BOODL2

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-001

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S032110

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____ dec.

Date Extracted: 03/01/91

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 03/21/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	2	J
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	2	J
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000023

CLIENT SAMPLE NO.

BOODL2

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9102L746-001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S032110

Level: (low/med) LOW Date Received: 02/28/91

% Moisture: not dec. _____ dec. Date Extracted: 03/01/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/21/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	~~3~~ 10	~~JB~~ U
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	4	J
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	~~3~~ 10	~~JB~~ U
117-84-0	Di-n-Octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

LKT 8.6.91

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000024

CLIENT SAMPLE NO.

BOODL2

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-001

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S032110

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____ dec.

Date Extracted: 03/01/91

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 03/21/91

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

Dilution Factor: 1.00

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	HYDROCARBON	17.22	6	JB
2.	HYDROCARBON	18.02	7	JB
3.	HYDROCARBON	18.17	10	JB
4.	HYDROCARBON	19.15	10	JB
5.	HYDROCARBON	19.63	700	JB
6.	HYDROCARBON	19.97	20	JB
7.	HYDROCARBON	20.07	20	JB
8.	HYDROCARBON	20.22	20	JB
9.	HYDROCARBON	20.92	40	JB
~~10.~~	~~UNKNOWN~~	~~21.33~~	~~10~~	~~JB~~
11.	UNKNOWN	21.43	5	J

LKT 8.6.91

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000055

CLIENT SAMPLE NO.

BOOF06

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9102L746-004

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S032111

Level: (low/med) LOW Date Received: 02/28/91

% Moisture: not dec. _____ dec. Date Extracted: 03/01/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/21/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
108-95-2	Phenol	2	J
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS SHEET 0000056

CLIENT SAMPLE NO.

BOOFO6

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9102L746-004

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S032111

Level: (low/med) LOW Date Received: 02/28/91

% Moisture: not dec. _____ dec. Date Extracted: 03/01/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/21/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	~~2~~ 10	~~JB~~ U
206-44-0	Fluoranthene	1	J
129-00-0	Pyrene	3	J
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-Octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

LKT 8.6.91

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000057

CLIENT SAMPLE NO.

B00F06

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-004

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S032111

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____ dec.

Date Extracted: 03/01/91

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 03/21/91

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

Dilution Factor: 1.00

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	16.97	20	J
~~2.~~	~~HYDROCARBON~~	~~19.62~~	~~300~~	~~JB~~

4/6.91

1D
PESTICIDE ORGANICS ANALYSIS SHEET 0000152

CLIENT SAMPLE NO.

BOODL2

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9102L746-001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 04089103.48

Level: (low/med) LOW Date Received: 02/28/91

% Moisture: not dec. _____ dec. Date Extracted: 03/02/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	0.050	U UJ
319-85-7	Beta-BHC	0.050	U UJ
319-86-8	Delta-BHC	0.050	U UJ
58-89-9	gamma-BHC (Lindane)	0.050	U UJ
76-44-8	Heptachlor	0.050	U UJ
309-00-2	Aldrin	0.050	U UJ
1024-57-3	Heptachlor epoxide	0.050	U UJ
959-98-8	Endosulfan I	0.050	U UJ
60-57-1	Dieldrin	0.10	U UJ
72-55-9	4,4'-DDE	0.10	U UJ
72-20-8	Endrin	0.10	U UJ
33213-65-9	Endosulfan II	0.10	U UJ
72-54-8	4,4'-DDD	0.10	U UJ
1031-07-8	Endosulfan sulfate	0.10	U UJ
50-29-3	4,4'-DDT	0.10	U UJ
72-43-5	Methoxychlor	0.50	U UJ
53494-70-5	Endrin ketone	0.10	U UJ
5103-71-9	alpha-Chlordane	0.50	U UJ
5103-74-2	gamma-Chlordane	0.50	U UJ
8001-35-2	Toxaphene	1.0	U UJ
12674-11-2	Aroclor-1016	0.50	U UJ
11104-28-2	Aroclor-1221	0.50	U UJ
11141-16-5	Aroclor-1232	0.50	U UJ
53469-21-9	Aroclor-1242	0.50	U UJ
12672-29-6	Aroclor-1248	0.50	U UJ
11097-69-1	Aroclor-1254	1.0	U UJ
11096-82-5	Aroclor-1260	1.0	U UJ

LKT 8.6.91

TKL 9/10/91

1D
PESTICIDE ORGANICS ANALYSIS SHEET 0000157

CLIENT SAMPLE NO.

B00F06

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

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9102L746-004

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 04089103.49

Level: (low/med) LOW

Date Received: 02/28/91

% Moisture: not dec. _____ dec.

Date Extracted: 03/02/91

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 04/10/91

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

Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	0.050	U UJ
319-85-7	Beta-BHC	0.050	U UJ
319-86-8	Delta-BHC	0.050	U UJ
58-89-9	gamma-BHC (Lindane)	0.050	U UJ
76-44-8	Heptachlor	0.050	U UJ
309-00-2	Aldrin	0.050	U UJ
1024-57-3	Heptachlor epoxide	0.050	U UJ
959-98-8	Endosulfan I	0.050	U UJ
60-57-1	Dieldrin	0.10	U UJ
72-55-9	4,4'-DDE	0.10	U UJ
72-20-8	Endrin	0.10	U UJ
33213-65-9	Endosulfan II	0.10	U UJ
72-54-8	4,4'-DDD	0.10	U UJ
1031-07-8	Endosulfan sulfate	0.10	U UJ
50-29-3	4,4'-DDT	0.10	U UJ
72-43-5	Methoxychlor	0.50	U UJ
53494-70-5	Endrin ketone	0.10	U UJ
5103-71-9	alpha-Chlordane	0.50	U UJ
5103-74-2	gamma-Chlordane	0.50	U UJ
8001-35-2	Toxaphene	1.0	U UJ
12674-11-2	Aroclor-1016	0.50	U UJ
11104-28-2	Aroclor-1221	0.50	U UJ
11141-16-5	Aroclor-1232	0.50	U UJ
53469-21-9	Aroclor-1242	0.50	U UJ
12672-29-6	Aroclor-1248	0.50	U UJ
11097-69-1	Aroclor-1254	1.0	U UJ
11096-82-5	Aroclor-1260	1.0	U UJ

LKJ 8.6.91

FORM 1 PEST 12/88 Rev.

Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 11/16/91

REVIEWED BY JA Lerch

LABORATORY Weston

CASE # —

SDG # —

RPW# 91021746

SAMPLES/MATRIX B00PL2 ____ ____

B00FD6 ____ ____

both water ____ ____

____ ____ ____

____ ____ ____

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	Alkalinity	Anions IC[1]	Hardness
1. Holding Time		O	X	O
2. Blanks		X	O	O
3. Spike Recovery		O	O	O
4. Duplicates		NE	NE	O
5.				
6.				
7.				
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable
NE - not evaluated

OVERALL ASSESSSMENT: no major problems - all results acceptable w/attached qualifiers

NOTES: discregard CN results - reported + validated by CLP proc.

o Refer to the corresponding attachments for explanation of any problems.

[1] Anions include - chloride, nitrate, nitrite, phosphate, fluoride, sulfate

Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT (pg 2)

DATE 11/16/91

SAMPLES/MATRIX See Cover

REVIEWED BY JA Lerch

LABORATORY Weston

CASE # —

SDG # —

RFW# 91021746

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	NO_2/NO_3	Ammonia	TOC
1. Holding Time		O	O	O
2. Blanks		O	O	O
3. Spike Recovery		O	O	O
4. Duplicates		O	NE	O
5.				
6.				
7.				
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: See Cover

NOTES: See Cover

o Refer to the corresponding attachments for explanation of any problems.

Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT (pg 3)

DATE 11/16/91

REVIEWED BY JA Lerch

LABORATORY Weston

CASE # —

SDG # —

RFW# 91021746

SAMPLES/MATRIX See cover

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	Sulfate	Conductance	TDS
1. Holding Time		O	O	O
2. Blanks		O	O	O
3. Spike Recovery		O	O	N/A
4. Duplicates		O	NE	NE
5.				
6.				
7.				
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: See cover

NOTES: See Cover

o Refer to the corresponding attachments for explanation of any problems.

RCRA LEVEL C QC

Name JA Lerch Date 11/16/91

QC Check: Holding Time

COMMENTS: nitrate, nitrite, phosphate 48 hr hold time exceeded;
- all other holding time criteria met
- no holding time criteria specified for Hardness, TDS

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
all	nitrite	UJ			
	nitrate	J			
	phosphate	UJ			

RCRA LEVEL C QC

Name JA Lerch Date 11/16/91

QC Check: Blanks

COMMENTS: contaminants present in Alkalinity blanks at detection level; all other blanks free of contaminants

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
all	alkalinity	acceptable			

RCRA LEVEL C QC

Name JA Lerch Date 11/16/91

QC Check: Spike Recovery

COMMENTS: B00DL2 - TOC MS recovery within limits; B00F06 - NO_2/NO_3 MS recovery within limits; all blank spike recoveries acceptable for other analytes (TDS N/A)

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 11/16/91

QC Check: Duplicates

COMMENTS: B00DL2 - TOC MS/MSD % Diff ok; B00F06 - NO_2/NO_3 MS/MSD % Diff ok; hardness, sulfate BS/BSD % diff ok; B00DL2 - TOC replicate % Diff ok B00F06 - NO_2/NO_3 replicates % Diff ok; other dup results not reported; other BP-1 samples have not shown prob

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 03/29/91

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

WESTON BATCH #: 9102L746

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
-001	BOODL2	Alkalinity	100	MG/L	2.0
		Chloride by IC	5.2	mg/L	0.25
		Fluoride by IC	1.2	mg/L	0.50
		Nitrite by IC	0.25 uJ	mg/L	0.25
		Nitrate by IC	4.7 J	mg/L	0.25
		~~Cyanide, Total~~	~~10.0 u~~	UG/L	10.0
		Phosphate by IC	0.25 uJ	mg/L	0.25
		Sulfate by IC	17.5	mg/L	2.5
		Hardness	91.0	MG/L	2.0
		Nitrate Nitrite	1.1	MG/L	0.10
		Ammonia, as N	0.10 u	MG/L	0.10
		Total Organic Carbon	0.59	MG/L	0.50
		pH	7.6	PH UNITS	0.10
		Sulfate	18.6	MG/L	5.0
		Specific Conductance	265	UMHOS/CM	1.0
		Total Dissolved Solids	180	MG/L	5.0
-004	BOOFO6	Alkalinity	124	MG/L	2.0
		Chloride by IC	8.3	mg/L	0.25
		Fluoride by IC	1.1	mg/L	0.50
		Nitrite by IC	0.25 uJ	mg/L	0.25
		Nitrate by IC	1.0 J	mg/L	0.25
		~~Cyanide, Total~~	~~10.0 u~~	UG/L	10.0
		Phosphate by IC	0.25 uJ	mg/L	0.25
		Sulfate by IC	13.1	mg/L	2.5
		Hardness	111	MG/L	2.0
		Nitrate Nitrite	0.46	MG/L	0.10
		Ammonia, as N	0.10 u	MG/L	0.10
		Total Organic Carbon	0.59	MG/L	0.50
		pH	7.6	PH UNITS	0.10
		Sulfate	12.8	MG/L	5.0
		Specific Conductance	283	UMHOS/CM	1.0
		Total Dissolved Solids	185	MG/L	5.0

11/16/91