

START

9613402.2863

9309L110-WES-1322

0043064



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

GC VOLATILE

The set of samples consisted of two (2) water samples collected on 09-27-93.

The samples were analyzed according to criteria set forth in Method 8010/8020 for Volatile Organic target compounds on 10-08,09-93.

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

1. The samples were not preserved with HCl as specified in the SW-846 protocol.
2. All samples were analyzed within fourteen (14) days of collection, which met holding time criteria.
3. All surrogate recoveries were within laboratory control limits.
4. All blank spike recoveries were within laboratory control limits.
5. All matrix spike recoveries were within laboratory control limits.
6. The Trichloroethene found in sample 93261-09.I27 MSD was converted from 1,1,2,2-Tetrachloroethane; there was no impact on the data.

J. Peter Hershey

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

11.05.93
Date



Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4865

page: 1 of 2

Collector: Steffler RZ

Project Designation: 1325N Waste Stream-4

Sampling Location: 1325N CELL SUMP

SAF #: 93-261

Sample Date: 9/27/93

Company Contact: MS HENDRIX

Phone #: 372-3916

Bill of Lading #:

Laboratory: Weston

Protocol: RCRA

Log book #: W.H.C. - 205-28 pages:

Offsite Prop #:

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	ES/R#	IC#
() 93261-07.127	AMERICIUM-241 (Lab Specific) Pu-238, -239, -240, -241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	GAMMA SCAN (Lab Specific) Sr89/90, Ra-226, TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	ICP METALS (6010) TIN, TITANIUM, ARSENIC(7060), SELENIUM(7740), THALLIUM(7841), MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	PCB/PEST (8080)	WATER	4 deg. C	01000mL aG	9/27/93 / 12/17		N/A	
() 93261-07.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 12/17		N/A	
() 93261-07.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 12/17		N/A	
() 93261-07.127	TRITIUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/17		N/A	

613402-2865

TLMD=510

(sign and print names)				Special Instructions/Conditions
Relinquished By: RZ Steffler R.Z. Steffler	Date/Time: 9-28-93 1100	Received By:	Date/Time:	
Relinquished By: BURLINGTON	Date/Time: 9-29-93 310	Received By: M. Conville	Date/Time: 9/30/93 810	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4865

page: 2 of 2

1100

001

Collector: Steffler RZ

Project Designation: 1325N Waste Stream-4

Sampling Location: 1325N CELL SUMP

SAF #: 93-261

Sample Date: 9/27/93

Company Contact: MS HENDRIX

Phone #: 372-3916

Bill of Lading #:

Laboratory: Weston

Protocol: RCRA

Log book #: WMC-N-705-28 pages:

Offsite Prop #:

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E# / R#	IC#
() 93261-07.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/7			N/A
() 93261-08.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/7			N/A
() 93261-08.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/7			N/A

2613402.2866

TEMP 35.0

(sign and print names)				Special Instructions/Conditions
Relinquished By: RZ Steffler	Date/Time: 9-28-93 1100	Received By:	Date/Time:	
Relinquished By: BURLINGTON	Date/Time: 9-29-93 3110	Received By: M. Donnie	Date/Time: 9/29/93 0310	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

9613402.2867

OVERNIGHT AIR

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Use SAMPLING & MOBILE LABS
The following items are to be shipped from		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Routing BURLINGTON AIR EXPRESS		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING Full Title	

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-389</u>	
	<i>Weight 65 Coder # SML-144</i>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s	93258	93258-01.I27	CoC#	4859
	93261	93258-02.I27	"	4862
	93262	93258-03.I27	"	4861
		93262-01.I27	"	4871
		93261-09.I27	"	4868
		93261-07.I27	"	4865
		93261-05.I27		4867

RECEIVED

SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 5167057	Date 9-28-93
Location of Property (Area & Bldg.) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to White - Property Management Green - Property Control Custodian (Issuing Office) Yellow - Retain Pink - Originator
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Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4868

page: 1 of 2

5100

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N ~~E-EVAPORATOR PIT~~ ^{RES 9-26-93}
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 ^{Slump #6} Bill of Lading #:
Laboratory: Weston Protocol: RCRA Log book #: WMC N-205.28 pages: Offsite Prop #:

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	ES/R#	IC#
() 93261-09.127	AMERICIUM-241 (Lab Specific) Pu-238,-239,-240,-241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1300		N/A	
() 93261-09.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 1300		N/A	
() 93261-09.127	GAMMA SCAN (Lab Specific) Sr89/90,Ra-226,TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1300		N/A	
() 93261-09.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 1300		N/A	
() 93261-09.127	ICP METALS (6010) TIN,TITANIUM, ARSENIC(7060), SELENIUM(7740),THALLIUM(7841),MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 1300		N/A	
() 93261-09.127	PCB/PEST (8080)	WATER	4 deg. C	01000mL aG	9/27/93 / 1300		N/A	
() 93261-09.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 1300		N/A	
() 93261-09.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 1300		N/A	
() 93261-09.127	TRITUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 1300		N/A	
() 93261-09.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
() 93261-09.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
() 93261-09.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
() 93261-09.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
() 93261-09.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	

9613402-2068

Temp = 4.3

(sign and print names) Special Instructions/Conditions

Relinquished By: *RZ Steffler* Date/Time: 9-28-93 1100 Received By: Date/Time: _____

Relinquished By: *BURLINGTON* Date/Time: 9-29-93 5:10 Received By: *[Signature]* Date/Time: 9/29/93 3:10

Relinquished By: Date/Time: Received By: Date/Time: _____

Laboratory Section Received By: Title: Date/Time: _____

(Sample Disposition) Disposal Method: Disposed of By: Date/Time: _____

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4868

page: 2 of 16

0016
0016
0016

Collector: Steffler RZ

Project Designation: 1325N Waste Stream-4

Sampling Location: 1325N G-EVAPORATOR PIT ^{RIS} 4-26 43

SAF #: 93-261

Sample Date: 9/27/93

Company Contact: MS HENDRIX

Phone #: 372-3916

SUMP #6

Bill of Lading #:

Laboratory: Weston

Protocol: RCRA

Log book #: ~~WHL-N 105-28~~ pages:

Offsite Prop #:

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	EM/R#	IC#
() 93261-09.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
() 93261-10.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
() 93261-10.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	

613402-2869

Time = 4.3

(sign and print names)				Special Instructions/Conditions
Relinquished By: RZ Steffler <i>R.Z. Steffler</i>	Date/Time: 9-28-93 1100	Received By:	Date/Time:	
Relinquished By: BURLINGTON	Date/Time: 9-29-93 3110	Received By: <i>[Signature]</i>	Date/Time: 9/29/93 0810	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

9613402.2870

OVERNIGHT AIR

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Unit SAMPLING & MOBILE LABS
The following items are to be shipped from <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Routing BURLINGTON AIR EXPRESS <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING	
	Full Title	

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Code # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-384</u>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859
93261	93258-02.I27	" 4862
93262	93258-03.I27	" 4861
	93262-01.I27	" 4871
	93261-09.I27	" 4868
	93261-07.I27	" 4865
	<u>93261-05.I27</u>	<u>4867</u>

RECEIVED
SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 5167057	Date 9-28-93
Location of Property (Area & Bldg.) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control	Custodian Date	Property Management Approval <i>[Signature]</i> Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date issued
Date	BEST AVAILABLE COPY			

DISTRIBUTION

By Originator	Shipping Operation - Sign all Copies and Forward to: 19
White, Green, Yellow, Pink - Property Management	White - Property Management Green - Property Control Custodian (Issuing Office)
Goldenrod - Retain	Yellow - Retain Pink - Originator

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4867

page: 1 of 2

0020

Collector: Steffler RZ

Project Designation: 1325N Waste Stream-4

Sampling Location: 1325N EMERGENCY DUMP BASIN

SAF #: 93-261

Sample Date: 9/27/93

Company Contact: MS HENDRIX

Phone #: 372-3916

Bill of Lading #:

Laboratory: Weston

Protocol: RCRA

Log book #: WNC-N-205-28 pages:

Offsite Prop #:

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	EB/R#	IC#
() 93261-05.127	AMERICIUM-241 (Lab Specific) Pu-238,-239,-240,-241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1420		N/A	
() 93261-05.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 1420		N/A	
() 93261-05.127	GAMMA SCAN (Lab Specific) Sr89/90,Ra-226,TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1420		N/A	
() 93261-05.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 1420		N/A	
() 93261-05.127	ICP METALS (6010) TIN,TITANIUM, ARSENIC(7060), SELENIUM(7740),THALLIUM(7841),MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 1420		N/A	
() 93261-05.127	PCB/PEST (8080)	WATER	4 deg. C	0,000mL aG	9/27/93 / 1420		N/A	
() 93261-05.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 1420		N/A	
() 93261-05.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 1420		N/A	
() 93261-05.127	TRITUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 1420		N/A	
() 93261-05.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1420		N/A	
() 93261-05.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1420		N/A	
() 93261-05.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1420		N/A	
() 93261-05.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1420		N/A	
() 93261-05.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1420		N/A	

Temp = 3.3

(sign and print names)

Special Instructions/Conditions

Relinquished By: RZ Steffler Date/Time: 9-28-93 1100 Received By: _____ Date/Time: _____

Relinquished By: R.Z. Steffler Date/Time: _____ Received By: _____ Date/Time: _____

Relinquished By: BURLINGTON Date/Time: 9-29-93 3110 Received By: [Signature] Date/Time: [Signature]

Laboratory Section _____ Received By: _____ Title: _____ Date/Time: _____

(Sample Disposition) Disposal Method: _____ Disposed of By: _____ Date/Time: _____

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4867

page: 2 of 2

0021

Collector: Steffler RZ

Project Designation: 1325N Waste Stream-4

Sampling Location: 1325N EMERGENCY DUMP BASIN

SAF #: 93-261 Sample Date: 9/27/93

Company Contact: MS HENDRIX

Phone #: 372-3916

Bill of Lading #: _____

Laboratory: Weston

Protocol: RCRA

Log book #: WHL-N-205-28 pages:

Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E# / R#	IC#
() 93261-05.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 1 1420			N/A
() 93261-06.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 1 1420			N/A
() 93261-06.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 1 1420			N/A

9613402.2872

Temp = 3.5

(sign and print names)

Special Instructions/Conditions

Relinquished By: <i>RZ Steffler</i>	Date/Time: <i>9-28-93 1100</i>	Received By:	Date/Time:	Special Instructions/Conditions
Relinquished By: <i>RZ Steffler</i>	Date/Time:	Received By:	Date/Time:	
Relinquished By: <i>BURLINGTON</i>	Date/Time: <i>9-29-93 310</i>	Received By: <i>[Signature]</i>	Date/Time: <i>9/29/93 6:20</i>	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

OVERNIGHT AIR

9613402.2873

Contractor
WESTINGHOUSE HANFORD

OFF-SITE
PROPERTY CONTROL

CONTROL NUMBER
(To be obtained from PROPERTY MANAGEMENT)
W93-0-0764-30

PART I - TO BE COMPLETED BY ORIGINATOR

Department: PROCESSING & ANALYTICAL LABS Section: ANALYTICAL CHEMISTRY Use: SAMPLING & MOBILE LABS

The following items are to be shipped from Contractor Vendor

Routing: BURLINGTON AIR EXPRESS Contractor Vendor

Shipped to
WESTON LAB
256 WELSH POOL ROAD
LIONVILLE, PA.19341-1313

Off-site Custodian
JOSIE KING
Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Coder # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-384</u>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859
93261	93258-02.I27	" 4862
93262	93258-03.I27	" 4861
	93262-01.I27	" 4871
	93261-09.I27	" 4868
	93261-07.I27	" 4865
	<u>93261-05.I27</u>	<u>4867</u>

RECEIVED
SEP 28 1993
PROPERTY RECORDS
BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No <u>5167057</u>	Date <u>9-28-93</u>
Location of Property (Area & Bldg) <u>200 WEST AREA 202-S ANNEX</u>	Contact <u>RZ STEFFLER</u>	Phone <u>373-9146</u>
Date Ready for Shipment <u>9-28-93</u>	Cost Code to be Charged Org Code <u>12911 E17205</u>	Approximate Date This Property will be Returned <u>N/A</u>
Originated By <u>RZ STEFFLER</u>	Date <u>9-28-93</u>	Authorized By <u>JE HYATT</u>
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date <u>9/28/93</u>

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Yellow - Retain	Green - Property Control Custodian (Issuing Office) Pink - Originator
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0024

001001



CORPORATE SUPPORT GROUP
18200 VON KARMAN AVE
IRVINE, CA 92715

9309L109
9309L110

997 332 674

9309L111

DATE 09-28-93	ORIGIN PSC	DEST SORT CODE
SHIPPER'S REFERENCE NO. 12911 E17205 W93-0764#30		SHIPPER'S ACCOUNT NO. 1414419
COMPANY RZ STEFFLER U S DEPT OF ENERGY C/O WESTINGHOUSE	DEPT./FLOOR	
FROM (YOUR NAME) HANFORD COMPANY	PHONE NO.	
STREET ADDRESS WESTINGHOUSE SHIPPING DEPT. (509) 376-6665 2355 STEVENS DR		
CITY RICHLAND	STATE WA	ZIP (REQUIRED) 99352

CONSIGNEE'S REFERENCE NO.		CONSIGNEE'S ACCOUNT NO.	
COMPANY RF WESTON INC		DEPT./FLOOR	
TO (CONSIGNEE NAME) RF WESTON INC JOSIE KING		PHONE NO.	
ACCURATE STREET ADDRESS (BURLINGTON CANNOT DELIVER TO A P.O. BOX) 256 WELSH POOL ROAD			
CITY LIONVILLE	STATE PA	ZIP (REQUIRED) 17048	

3	C.O.D.
\$	CONSIGNEE'S CHECK O.K. MARK IF APPLICABLE <input type="checkbox"/>
\$	DECLARED VALUE
\$	LIMIT OF LIABILITY LIABILITY IS AGREED AND UNDERSTOOD TO BE \$50.00 OR \$50 PER POUND, WHICHEVER IS GREATER, UNLESS A HIGHER VALUE IS DECLARED AND APPLICABLE CHARGES PAID. SEE REVERSE SIDE OF AIRBILL PARAGRAPH 8, FOR DECLARED VALUE LIMITATIONS.
1-800-CALL-BAX FOR INFORMATION OR THE BAX OFFICE NEAREST YOU	

4	BILLING INFORMATION
<input checked="" type="checkbox"/>	PREPAID (SHIPPER) \$ _____ CASH RECEIVED (PAID IN ADVANCE)
<input type="checkbox"/>	COLLECT (CONSIGNEE)
<input type="checkbox"/>	3RD PARTY (ACCT. NO OR BILLING ADDRESS REQ'D.)
ACCOUNT NO.	
COMPANY/NAME	
STREET ADDRESS	
CITY	STATE ZIP

5	SERVICE REQUESTED
<input checked="" type="checkbox"/>	OVERNIGHT (NEXT BUSINESS DAY)
<input type="checkbox"/>	SECOND DAY
<input type="checkbox"/>	NEXT FLIGHT OUT
CHECK BELOW IF PACKAGE IS	
<input type="checkbox"/>	LETTER
<input type="checkbox"/>	G.O.H. (GARMENT ON HANGER)

6	HANDLING INFORMATION (* SPECIAL RATE MAY APPLY)										
<input type="checkbox"/>	HOLD AT BAX	<input type="checkbox"/>	*DANGEROUS GOODS	<input type="checkbox"/>	*SATURDAY DELIVERY	<input type="checkbox"/>	*SPECIAL DELIVERY	<input type="checkbox"/>	*CONVENTION	<input type="checkbox"/>	*GOVERNMENT SHIPMENT
SPECIAL INSTRUCTIONS / ADDITIONAL REFERENCE INFORMATION: WATER SAMPLES											
NO. OF PCS	WEIGHT	LENGTH	WIDTH	HEIGHT	DESCRIPTION						
5	384				COOLERS ID: SML413 97#; GT-5 63#; SML87 75#; SML389 84#; SML144 65#						
TOTAL PCS	TOTAL WT.	RATE QUOTE NUMBER			SKID(S) SAID TO CONTAIN				NO. OF PIECES		
5	384										
SIGNATURE OF SHIPPER <i>[Signature]</i>						RECEIVED BY BAX AT <input checked="" type="checkbox"/> SHIPPER'S DOOR <input type="checkbox"/> BAX TERMINAL		OUTSIDE CARRIER: CHARGES ADVANCED			
RELEASE SIGNATURE <i>[Signature]</i>						TIME/DATE OF PICK-UP 10/1/93		DRIVER NO.		\$ PRO NUMBER	
SIGNED FOR BAX <i>[Signature]</i>						BARRIER NAME					

997 332 674

AIRBILL NUMBER

DP 100 (11-92)

NON NEGOTIABLE AIRBILL SUBJECT TO TERMS AND CONDITIONS OF CONTRACT ON REVERSE SIDE

CONSIGNEE COPY

0025

Roy F. Weston, Inc. - Lionville Laboratory

Purgeable Halocarbons/ Aromatics by GC, 8010/8020

Report Date: 11/01/93 15:28

RFW Batch Number: 9309L110

Client: WESTINGHOUSE HANFORD

Work Order: 06168002001 Page: 1

Cust ID: 93261-07.I27 93261-09.I27 93261-09.I27 93261-09.I27 BLK BLK BS

Sample Information	RFW#:	001	003	003 MS	003 MSD	93LV51T6-MB1	93LV51T6-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L

Surrogate	Bromochloromethane	101 %	95 %	84 %	103 %	100 %	106 %
aaa-Trifluorotoluene	99 %	88 %	76 %	93 %	102 %	95 %	
		fl	fl	fl	fl	fl	fl
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene Chloride	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Trichlorofluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (total)	1.0 U	1.0 U	88 %	97 %	1.0 U	98 %	
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	92 %	103 %	1.0 U	103 %	
1,1,1-Trichloroethane	1.0 U	1.0 U	91 %	96 %	1.0 U	100 %	
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	93 %	100 %	1.0 U	99 %	
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	1.0 U	1.0 U	98 %	101 %	1.0 U	98 %	
Trichloroethene	1.0 U	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trans-1,3-Dichloropropene	1.0 U	1.0 U	94 %	105 %	1.0 U	100 %	
2-chloroethylvinylether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	91 %	97 %	1.0 U	98 %	
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	91 %	97 %	1.0 U	104 %	
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	1.0 U	1.0 U	89 %	97 %	1.0 U	97 %	
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	1.0 U	1.0 U	90 %	99 %	1.0 U	99 %	

*= Outside of EPA CLP QC limits.

0027

9613402.2875

	RFW#:	001	003	003 MS	003 MSD	93LV51T6-MB1	93LV51T6-MB1
Ethylbenzene		1.0 U	1.0 U	87 %	97 %	1.0 U	93 %
Toluene		1.0 U	1.0 U	88 %	98 %	1.0 U	94 %
Xylene (total)		1.0 U	1.0 U	88 %	96 %	1.0 U	94 %

0028

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

9613402-2876

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: J8340893

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. Date Analyzed: 10/08/93

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	
74-87-3	-----Chloromethane	2.0	U
74-83-9	-----Bromomethane	2.0	U
75-71-8	-----Dichlorodifluoromethane	2.0	U
75-01-4	-----Vinyl Chloride	2.0	U
75-00-3	-----Chloroethane	2.0	U
75-09-2	-----Methylene Chloride	4.0	U
75-69-4	-----Trichlorofluoromethane	2.0	U
75-35-4	-----1,1-Dichloroethene	1.0	U
75-34-3	-----1,1-Dichloroethane	1.0	U
540-59-0	-----1,2-Dichloroethene (total)	1.0	U
67-66-3	-----Chloroform	1.0	U
107-06-2	-----1,2-Dichloroethane	1.0	U
71-55-6	-----1,1,1-Trichloroethane	1.0	U
56-23-5	-----Carbon Tetrachloride	1.0	U
75-27-4	-----Bromodichloromethane	1.0	U
78-87-5	-----1,2-Dichloropropane	1.0	U
10061-01-5	-----cis-1,3-Dichloropropene	1.0	U
79-01-6	-----Trichloroethene	1.0	U
124-48-1	-----Dibromochloromethane	1.0	U
79-00-5	-----1,1,2-Trichloroethane	1.0	U
10061-02-6	-----Trans-1,3-Dichloropropene	1.0	U
110-75-8	-----2-chloroethylvinylether	1.0	U
75-25-2	-----Bromoform	1.0	U
79-34-5	-----1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	-----Tetrachloroethene	1.0	U
108-90-7	-----Chlorobenzene	1.0	U
541-73-1	-----1,3-Dichlorobenzene	1.0	U
95-50-1	-----1,2-Dichlorobenzene	1.0	U
106-46-7	-----1,4-Dichlorobenzene	1.0	U
71-43-2	-----Benzene	1.0	U
100-41-4	-----Ethylbenzene	1.0	U
108-88-3	-----Toluene	1.0	U
1330-20-7	-----Xylene (total)	1.0	U

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-003

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

Lab File ID: J8340910

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/08/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

74-87-3-----	Chloromethane	2.0	U
74-83-9-----	Bromomethane	2.0	U
75-71-8-----	Dichlorodifluoromethane	2.0	U
75-01-4-----	Vinyl Chloride	2.0	U
75-00-3-----	Chloroethane	2.0	U
75-09-2-----	Methylene Chloride	4.0	U
75-69-4-----	Trichlorofluoromethane	2.0	U
75-35-4-----	1,1-Dichloroethene	1.0	U
75-34-3-----	1,1-Dichloroethane	1.0	U
540-59-0-----	1,2-Dichloroethene (total)	1.0	U
67-66-3-----	Chloroform	1.0	U
107-06-2-----	1,2-Dichloroethane	1.0	U
71-55-6-----	1,1,1-Trichloroethane	1.0	U
56-23-5-----	Carbon Tetrachloride	1.0	U
75-27-4-----	Bromodichloromethane	1.0	U
78-87-5-----	1,2-Dichloropropane	1.0	U
10061-01-5-----	cis-1,3-Dichloropropene	1.0	U
79-01-6-----	Trichloroethene	1.0	U
124-48-1-----	Dibromochloromethane	1.0	U
79-00-5-----	1,1,2-Trichloroethane	1.0	U
10061-02-6-----	Trans-1,3-Dichloropropene	1.0	U
110-75-8-----	2-chloroethylvinylether	1.0	U
75-25-2-----	Bromoform	1.0	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4-----	Tetrachloroethene	1.0	U
108-90-7-----	Chlorobenzene	1.0	U
541-73-1-----	1,3-Dichlorobenzene	1.0	U
95-50-1-----	1,2-Dichlorobenzene	1.0	U
106-46-7-----	1,4-Dichlorobenzene	1.0	U
71-43-2-----	Benzene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
108-88-3-----	Toluene	1.0	U
1330-20-7-----	Xylene (total)	1.0	U



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

GC/MS VOLATILE

The set of samples consisted of six (6) water samples collected on 09-27-93.

The samples were analyzed according to criteria set forth in SW 846 Method 8240 for TCL Volatile target compounds on 10-05-93.

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

1. Non-target compounds were not detected in these samples.
2. One (1) of thirty (30) surrogate recoveries was outside EPA QC limits. The analysis of samples 93261-10.I27 and 93261-10.I27 MS fulfilled the reanalysis requirement for sample 93261-10.I27 MSD.
3. All matrix spike recoveries were within EPA QC limits.
4. All blank spike recoveries were within EPA QC limits.
5. The laboratory blank contained the common contaminant Acetone at a level less than the CRQL.
6. All internal standard area and retention time criteria were met.

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

10.26.93

Date

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

CDC # 4865

page: 1 of 2

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N CELL SUMP
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
Laboratory: Weston Protocol: RCRA Log book #: W/M-N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	EN/R#	IC#
() 93261-07.127	AMERICIUM-241 (Lab Specific) Pu-238, -239, -240, -241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 12/7		N/A	9613402.2881
() 93261-07.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 12/7		N/A	
() 93261-07.127	GAMMA SCAN (Lab Specific) Sr89/90, Ra-226, TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 12/7		N/A	
() 93261-07.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 12/7		N/A	
() 93261-07.127	ICP METALS (6010) TIN, TITANIUM, ARSENIC(7060), SELENIUM(7740), THALLIUM(7841), MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 12/7		N/A	
() 93261-07.127	PCB/PEST (8080)	WATER	4 deg. C	01000mL aG	9/27/93 / 12/7		N/A	
() 93261-07.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 12/7		N/A	
() 93261-07.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 12/7		N/A	
() 93261-07.127	TRITUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 12/7		N/A	
() 93261-07.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/7		N/A	
() 93261-07.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/7		N/A	
() 93261-07.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/7		N/A	
() 93261-07.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/7		N/A	
() 93261-07.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/7		N/A	

TLMD-510

Relinquished By:	(sign and print names)	Date/Time:	Received By:	Date/Time:	Special Instructions/Conditions
RZ Steffler	RZ Steffler	9-28-93 1100			
BURLINGTON	BURLINGTON	9-29-93 3110	M. Derril	9/29/93 310	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

210

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4865

page: 2 of 2

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N CELL SUMP
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
Laboratory: Weston Protocol: RCRA Log book #: WMC-N-705-23 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E#/R#	IC#
() 93261-07.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/17			N/A
() 93261-08.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/17			N/A
() 93261-08.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/17			N/A

9613402.2882

Time 35.0

(sign and print names)

Relinquished By: *RZ Steffler* Date/Time: 9-28-93 1100 Received By: _____ Date/Time: _____ Special Instructions/Conditions _____

Relinquished By: *BURLINGTON* Date/Time: 9-29-93 3110 Received By: *M. Donnie* Date/Time: 9/29/93 0310

Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____

Laboratory Section Received By: _____ Title: _____ Date/Time: _____

(Sample Disposition) Disposal Method: _____ Disposed of By: _____ Date/Time: _____

9613402.2883

OVERNIGHT AIR

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Unit SAMPLING & MOBILE LABS
The following items are to be shipped from		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Routing BURLINGTON AIR EXPRESS		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING	
	Full Title	

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Code # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-384</u>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859
93261	93258-02.I27	" 4862
93262	93258-03.I27	" 4861
	93262-01.I27	" 4871
	93261-09.I27	" 4868
	93261-07.I27	" 4865
	<u>93261-05.I27</u>	<u>4867</u>

RECEIVED

SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 5167057	Date 9-28-93
Location of Property (Area & Bldg.) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Yellow - Retain	Green - Property Control Custodian (Issuing Office) Pink - Originator
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015

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4868

page: 1 of 6

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N ^{RES} G-EVAPORATOR-PIT-9-26-93
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 ^{Sample #6} Bill of Lading #: _____
Laboratory: Weston Protocol: RCRA Log book #: WMC N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E#R#	IC#
()93261-09.127	AMERICIUM-241 (Lab Specific) Pu-238,-239,-240,-241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1300		N/A	
()93261-09.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 1300		N/A	
()93261-09.127	GAMMA SCAN (Lab Specific) Sr89/90,Ra-226,TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1300		N/A	
()93261-09.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 1300		N/A	
()93261-09.127	ICP METALS (6010) TIN,TITANIUM, ARSENIC(7060), SELENIUM(7740),THALLIUM(7841),MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 1300		N/A	
()93261-09.127	PCB/PEST (8080)	WATER	4 deg. C	01000mL aG	9/27/93 / 1300		N/A	
()93261-09.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 1300		N/A	
()93261-09.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 1300		N/A	
()93261-09.127	TRITIUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 1300		N/A	
()93261-09.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
()93261-09.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
()93261-09.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
()93261-09.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
()93261-09.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	

TEMP = 4.7

(sign and print names)

Relinquished By: RZ Steffler R.Z. Steffler	Date/Time: 9-28-93 1100	Received By:	Date/Time:	Special Instructions/Conditions
Relinquished By: BURLINGTON	Date/Time: 9-29-93 3:10	Received By: [Signature]	Date/Time: 9/29/93 0310	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

010
9-10-93
9613402-2884

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4868

page: 2 of 2

210
247
017

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N ~~6-EVAPORATOR PIT~~ ^{R25} 4-26 43
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 ^{SUMP #6} Bill of Lading #: _____
Laboratory: Weston Protocol: RCRA Log book #: ~~6/11-N 785-78~~ pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E#/R#	IC#
()93261-09.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040ml aGs	9/27/93 / 1300			N/A
()93261-10.127	VOA (8240)	WATER	4 deg. C	00040ml aGs	9/27/93 / 1300			N/A
()93261-10.127	VOA (8240)	WATER	4 deg. C	00040ml aGs	9/27/93 / 1300			N/A

9613402-2885

TI=700 = 4.3

(sign and print names)

Relinquished By:	Date/Time:	Received By:	Date/Time:	Special Instructions/Conditions
RZ Steffler <i>R.Z. Steffler</i>	9-28-93 1100			
BERLINGTON	9-29-93 3110	<i>[Signature]</i>	9/29/93 0810	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

9613402.2886

OVERNIGHT AIR

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Unit SAMPLING & MOBILE LABS
The following items are to be shipped from <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Routing BURLINGTON AIR EXPRESS <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING	
Full Title		

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Coder # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-389</u>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s	93258	93258-01.I27	CoC#	4859
	93261	93258-02.I27	"	4862
	93262	93258-03.I27	"	4861
		93262-01.I27	"	4871
		93261-09.I27	"	4868
		93261-07.I27	"	4865
		<u>93261-05.I27</u>		<u>4867</u>

RECEIVED

SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 5167057	Date 9-28-93
Location of Property (Area & Bldg.) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Yellow - Retain	Green - Property Control Custodian (Issuing Office) Pink - Originator
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0121

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N EMERGENCY DUMP BASIN
 SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
 Laboratory: Weston Protocol: RCRA Log book #: WNC-N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E# / R#	IC#
(93261-05.127	AMERICIUM-241 (Lab Specific) Pu-238, -239, -240, -241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1420			N/A
(93261-05.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 1420			N/A
(93261-05.127	GAMMA SCAN (Lab Specific) Sr89/90, Ra-226, TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1420			N/A
(93261-05.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 1420			N/A
(93261-05.127	ICP METALS (6010) TIN, TITANIUM, ARSENIC(7060), SELENIUM(7740), THALLIUM(7841), MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 1420			N/A
(93261-05.127	PCB/PEST (8080)	WATER	4 deg. C	0.000mL aG	9/27/93 / 1420			N/A
(93261-05.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 1420			N/A
(93261-05.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 1420			N/A
(93261-05.127	TRITUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 1420			N/A
(93261-05.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1420			N/A
(93261-05.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1420			N/A
(93261-05.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1420			N/A
(93261-05.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1420			N/A
(93261-05.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1420			N/A

Tbmp = 3.3

(sign and print names)				Special Instructions/Conditions
Relinquished By:	Date/Time:	Received By:	Date/Time:	
RZ Steffler R.Z. Steffler	9-28-93 1100			
BURLINGTON	9-29-93 3110			

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

9613402-208

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4867

page: 2 of 2

0022

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N EMERGENCY DUMP BASIN
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
Laboratory: Weston Protocol: RCRA Log book #: WHC-N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	E#/R#	IC#
()93261-05.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 1 1420		N/A	
()93261-06.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 1 1420		N/A	
()93261-06.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 1 1420		N/A	

96 3402.2888

TEMP = 3.3

(sign and print names)

Relinquished By: RZ Steffler	Date/Time: 9-28-93 1100	Received By:	Date/Time:	Special Instructions/Conditions
Relinquished By: RZ Steffler	Date/Time:	Received By:	Date/Time:	
Relinquished By: BURLINGTON	Date/Time: 9-29-93 3110	Received By: [Signature]	Date/Time: 9/29/93 3110	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

OVERNIGHT AIR

9613402.2889

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Unit SAMPLING & MOBILE LABS
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The following items are to be shipped from Contractor Vendor

Routing **BURLINGTON AIR EXPRESS** Contractor Vendor

Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING
	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT 97	COOLER # SML-413	
WEIGHT 63	COOLER # OT-5	
WEIGHT 75	COOLER # SML-87	
WEIGHT 84	COOLER # SML-384	

Weight 65 Code # SML-144

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859
93261	93258-02.I27	" 4862
93262	93258-03.I27	" 4861
	93262-01.I27	" 4871
	93261-09.I27	" 4868
	93261-07.I27	" 4865
	93261-05.I27	4867

RECEIVED

SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 3167057	Date 9-28-93
Location of Property (Area & Bldg) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Yellow - Retain	Green - Property Control Custodian (Issuing Office) Pink - Originator
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0025
54-3000-479 (09/89)

025

001001



CORPORATE SUPPORT GROUP
18200 VON KARMAN AVE
IRVINE, CA 92715

9309L109
9309L110

997 332 674

9304111

DATE 09-28-93	ORIGIN PSC	DEST SORT CODE
SHIPPER'S REFERENCE NO. 12911 E17205 W93-0764#30		SHIPPER'S ACCOUNT NO. 1414419
COMPANY U S DEPT OF ENERGY	DEPT./FLOOR C/O WESTINGHOUSE	
FROM (YOUR NAME) HANFORD COMPANY	PHONE NO.	
STREET ADDRESS WESTINGHOUSE SHIPPING DEPT. (509) 376-6665 2355 STEVENS DR		
CITY RICHLAND	STATE WA	ZIP (REQUIRED) 99352

CONSIGNEE'S REFERENCE NO.		CONSIGNEE'S ACCOUNT NO.	
COMPANY RF WESTON INC	DEPT./FLOOR		
TO (CONSIGNEE NAME) RF WESTON INC	PHONE NO.		
ACCURATE STREET ADDRESS (BURLINGTON CANNOT DELIVER TO A P.O. BOX) 256 WELSH POOL ROAD			
CITY LIONVILLE PA	STATE	ZIP (REQUIRED) 19341	

3	C.O.D.
\$	CONSIGNEE'S CHECK O.K. MARK IF APPLICABLE <input type="checkbox"/>
DECLARED VALUE	
\$	LIMIT OF LIABILITY LIABILITY IS AGREED AND UNDERSTOOD TO BE \$50.00 OR \$50 PER POUND WHICHEVER IS GREATER, UNLESS A HIGHER VALUE IS DECLARED AND APPLICABLE CHARGES PAID. SEE REVERSE SIDE OF AIRBILL, PARAGRAPH 8, FOR DECLARED VALUE LIMITATIONS.
1-800-CALL-BAX FOR INFORMATION OR THE BAX OFFICE NEAREST YOU	

4 BILLING INFORMATION	
<input checked="" type="checkbox"/> PREPAID (SHIPPER)	\$ _____ CASH RECEIVED (PAID IN ADVANCE)
<input type="checkbox"/> COLLECT (CONSIGNEE)	
<input type="checkbox"/> 3RD PARTY (ACCT. NO OR BILLING ADDRESS REQ'D.)	
ACCOUNT NO.	
COMPANY/NAME	
STREET ADDRESS	
CITY	STATE ZIP

5 SERVICE REQUESTED
<input checked="" type="checkbox"/> OVERNIGHT (NEXT BUSINESS DAY)
<input type="checkbox"/> SECOND DAY
<input type="checkbox"/> NEXT FLIGHT OUT
CHECK BELOW IF PACKAGE IS
<input type="checkbox"/> LETTER
<input type="checkbox"/> G.O.H. (GARMENT ON HANGER)
SIGNATURE OF SHIPPER <i>[Signature]</i>

6 HANDLING INFORMATION (* SPECIAL RATE MAY APPLY)					
<input type="checkbox"/> HOLD AT BAX	<input type="checkbox"/> *DANGEROUS GOODS	<input type="checkbox"/> *SATURDAY DELIVERY	<input type="checkbox"/> *SPECIAL DELIVERY	<input type="checkbox"/> *CONVENTION	<input type="checkbox"/> *GOVERNMENT SHIPMENT
SPECIAL INSTRUCTIONS / ADDITIONAL REFERENCE INFORMATION: WATER SAMPLES					
NO. OF PCS 5	WEIGHT 384	LENGTH	WIDTH	HEIGHT	DESCRIPTION COOLERS 1D: SML413 97#; GT-5 63#; SML87 75#; SML389 84#; SML144 65#
TOTAL PCS 5	TOTAL WT 384	RATE QUOTE NUMBER		SKID(S) SAID TO CONTAIN _____ NO. OF PIECES	
RECEIVED BY BAX AT <input checked="" type="checkbox"/> SHIPPER'S DOOR <input type="checkbox"/> BAX TERMINAL			OUTSIDE CARRIER:		
TIME/DATE OF PICK-UP			CHARGES ADVANCED		
DRIVER NO.			\$		
SIGNED FOR BAX <i>[Signature]</i>			PRO NUMBER		
SIGNATURE OF CONSIGNEE			CARRIER NAME		

997 332 674

AIRBILL NUMBER

NON-NEGOTIABLE AIRBILL SUBJECT TO TERMS AND CONDITIONS OF CONTRACT ON REVERSE SIDE

CONSIGNEE COPY

0026

961344-289

Roy F. Weston, Inc. - Lionville Laboratory

Volatiles by GC/MS, HSL List

Report Date: 10/14/93 13:14

RFW Batch Number: 9309L110

Client: WESTINGHOUSE HANFORD

Work Order: 06168002001 Page: 1a

Cust ID: 93261-07.I27 93261-08.I27 93261-09.I27 93261-10.I27 93261-10.I27 93261-10.I27

Sample Information	RFW#: Matrix: D.F.: Units:	001 WATER 1.00 ug/L	002 WATER 1.00 ug/L	003 WATER 1.00 ug/L	004 WATER 1.00 ug/L	004 MS WATER 1.00 ug/L	004 MSD WATER 1.00 ug/L
Surrogate	Toluene-d8	88 %	90 %	92 %	90 %	93 %	90 %
Recovery	Bromofluorobenzene	87 %	86 %	87 %	94 %	99 %	83 * %
	1,2-Dichloroethane-d4	88 %	86 %	89 %	89 %	85 %	83 %
-----f -----f -----f -----f -----f -----f -----f -----f							
Chloromethane		10 U	10 U				
Bromomethane		10 U	10 U				
Vinyl Chloride		10 U	10 U				
Chloroethane		10 U	10 U				
Methylene Chloride		5 U	1 J	5 U	2 J	2 J	1 J
Acetone		6 JB	5 JB	6 JB	6 JB	5 JB	3 JB
Carbon Disulfide		5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene		5 U	5 U	5 U	5 U	101 %	100 %
1,1-Dichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)		5 U	5 U	5 U	5 U	5 U	5 U
Chloroform		5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone		10 U	10 U				
1,1,1-Trichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride		5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate		10 U	10 U				
Bromodichloromethane		5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane		5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene		5 U	5 U	5 U	5 U	104 %	96 %
Dibromochloromethane		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane		5 U	5 U	5 U	5 U	5 U	5 U
Benzene		5 U	5 U	5 U	5 U	108 %	100 %
Trans-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone		10 U	10 U				
2-Hexanone		10 U	10 U				
Tetrachloroethene		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane		5 U	5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC Limits.

9613402.2891

00208

RFW#:	001	002	003	004	004 MS	004 MSD
Toluene	5 U	5 U	5 U	5 U	101 %	96 %
Chlorobenzene	5 U	5 U	5 U	5 U	101 %	94 %
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC Limits.

0029

9613402.2892

RFW#:	005	006	93LVQ171-MB1	93LVQ171-MB1	
Toluene	5 U	5 U	5 U	96	%
Chlorobenzene	5 U	5 U	5 U	97	%
Ethylbenzene	5 U	5 U	5 U	5	U
Styrene	5 U	5 U	5 U	5	U
Xylene (total)	5 U	5 U	5 U	5	U

*= Outside of EPA CLP QC Limits.

0031

9613402.2894

961402 2895
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-07.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-001

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

Lab File ID: Q100519

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

FORM 1 V-1

12/88 Rev.

0040

9613802.2896
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-07.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-001

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

Lab File ID: Q100519

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

96/1402-2897
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-08.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-002

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

Lab File ID: Q100514

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

FORM 1 V-1

12/88 Rev.

0046

961102 2898
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-08.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-002

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

Lab File ID: 0100514

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

9613402-2899

VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-09.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-003

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

Lab File ID: Q100515

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

9613402.2900
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-09.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-003

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

Lab File ID: Q100515

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

9617A02 2901
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-10.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-004

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

Lab File ID: Q100516

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

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

FORM 1 V-1

12/88 Rev.

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96102 2902
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-10.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-004

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

Lab File ID: Q100516

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

9613A02 2903
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-005

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

Lab File ID: 0100511

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

961302 2904
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-05.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-005

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

Lab File ID: Q100511

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

9613402.2905
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-06.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-006

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

Lab File ID: Q100512

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

FORM 1 V-1

12/88 Rev.

0073

9617102 2906
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-06.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-006

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

Lab File ID: Q100512

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

SEMIVOLATILE

The set of samples consisted of three (3) water samples collected on 09-27-93.

The samples were extracted on 10-01,04-93 and analyzed according to criteria set forth in SW 846 Method 8270 for TCL Semivolatile target compounds on 10-12,13,19,28-93.

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

1. Non-target compounds were detected in these samples.
2. All surrogate recoveries were within EPA QC limits.
3. Eight (8) of twenty-two (22) matrix spike recoveries were outside EPA QC limits.
4. Three (3) of thirty-three (33) blank spike recoveries were outside EPA QC limits.
5. All internal standard area and retention time criteria were met.

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

11.02.93
Date

Cust ID: 93261-07.I27 93261-07.I27 93261-07.I27 93261-09.I27 93261-05.I27 SBLK

Sample Information	RFW#:	001	001 MS	001 MSD	003	005	93LE1738-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate	Nitrobenzene-d5	77 %	94 %	93 %	80 %	85 %	80 %
Recovery	2-Fluorobiphenyl	76 %	83 %	85 %	76 %	84 %	63 %
	p-Terphenyl-d14	101 %	100 %	108 %	103 %	100 %	109 %
	Phenol-d5	49 %	77 %	84 %	11 %	81 %	53 %
	2-Fluorophenol	55 %	73 %	72 %	59 %	84 %	61 %
	2,4,6-Tribromophenol	94 %	94 %	99 %	86 %	71 %	80 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
	Phenol	10 U	89 %	90 * %	10 U	10 U	10 U
	bis(2-Chloroethyl)ether	10 U	19 U	19 U	10 U	10 U	10 U
	2-Chlorophenol	10 U	119 %	117 %	10 U	10 U	10 U
	1,3-Dichlorobenzene	10 U	19 U	19 U	10 U	10 U	10 U
	1,4-Dichlorobenzene	10 U	71 %	71 %	10 U	10 U	10 U
	Benzyl alcohol	10 U	19 U	19 U	10 U	10 U	10 U
	1,2-Dichlorobenzene	10 U	19 U	19 U	10 U	10 U	10 U
	2-Methylphenol	10 U	19 U	19 U	10 U	10 U	10 U
	bis(2-Chloroisopropyl)ether	10 U	19 U	19 U	10 U	10 U	10 U
	4-Methylphenol	10 U	19 U	19 U	10 U	10 U	10 U
	N-Nitroso-Di-n-propylamine	10 U	117 * %	118 * %	10 U	10 U	10 U
	Hexachloroethane	10 U	19 U	19 U	10 U	10 U	10 U
	Nitrobenzene	10 U	19 U	19 U	10 U	10 U	10 U
	Isophorone	10 U	19 U	19 U	10 U	10 U	10 U
	2-Nitrophenol	10 U	19 U	19 U	10 U	10 U	10 U
	2,4-Dimethylphenol	10 U	19 U	19 U	10 U	10 U	10 U
	Benzoic acid	50 U	95 U	95 U	50 U	50 U	50 U
	bis(2-Chloroethoxy)methane	10 U	19 U	19 U	10 U	10 U	10 U
	2,4-Dichlorophenol	10 U	19 U	19 U	10 U	10 U	10 U
	1,2,4-Trichlorobenzene	10 U	94 %	95 %	10 U	10 U	10 U
	Naphthalene	10 U	19 U	19 U	10 U	10 U	10 U
	4-Chloroaniline	10 U	19 U	19 U	10 U	10 U	10 U
	Hexachlorobutadiene	10 U	19 U	19 U	10 U	10 U	10 U
	4-Chloro-3-methylphenol	10 U	85 %	88 %	10 U	10 U	10 U
	2-Methylnaphthalene	10 U	19 U	19 U	10 U	10 U	10 U
	Hexachlorocyclopentadiene	10 U	19 U	19 U	10 U	10 U	10 U

*= Outside of EPA CLP QC limits.

9613402.2908

9027

820

RFW#:	001	001 MS	001 MSD	003	005	93LE1738-MB1
2,4,6-Trichlorophenol	10 U	19 U	19 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	50 U	95 U	95 U	50 U	50 U	50 U
2-Chloronaphthalene	10 U	19 U	19 U	10 U	10 U	10 U
2-Nitroaniline	50 U	95 U	95 U	50 U	50 U	50 U
Dimethylphthalate	10 U	19 U	19 U	10 U	10 U	10 U
Acenaphthylene	10 U	19 U	19 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	19 U	19 U	10 U	10 U	10 U
3-Nitroaniline	50 U	95 U	95 U	50 U	50 U	50 U
Acenaphthene	10 U	88 %	94 %	10 U	10 U	10 U
2,4-Dinitrophenol	50 U	95 U	95 U	50 U	50 U	50 U
4-Nitrophenol	50 U	83 * %	77 %	50 U	50 U	50 U
Dibenzofuran	10 U	19 U	19 U	10 U	10 U	10 U
2,4-Dinitrotoluene	10 U	106 * %	108 * %	10 U	10 U	10 U
Diethylphthalate	10 U	19 U	19 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	10 U	19 U	19 U	10 U	10 U	10 U
Fluorene	10 U	19 U	19 U	10 U	10 U	10 U
4-Nitroaniline	50 U	95 U	95 U	50 U	50 U	50 U
4,6-Dinitro-2-methylphenol	50 U	95 U	95 U	50 U	50 U	50 U
N-Nitrosodiphenylamine (1)	10 U	19 U	19 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	10 U	19 U	19 U	10 U	10 U	10 U
Hexachlorobenzene	10 U	19 U	19 U	10 U	10 U	10 U
Pentachlorophenol	50 U	114 * %	112 * %	50 U	50 U	50 U
Phenanthrene	10 U	19 U	19 U	10 U	10 U	10 U
Anthracene	10 U	19 U	19 U	10 U	10 U	10 U
Di-n-Butylphthalate	1 J	4 J	2 J	1 J	10 U	10 U
Fluoranthene	10 U	19 U	19 U	10 U	10 U	10 U
Pyrene	10 U	99 %	107 %	10 U	10 U	10 U
Butylbenzylphthalate	10 U	19 U	19 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	20 U	38 U	38 U	20 U	20 U	20 U
Benzo(a)anthracene	10 U	19 U	19 U	10 U	10 U	10 U
Chrysene	10 U	19 U	19 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10 U	3 J	19 U	1 J	4 J	10 U
Di-n-Octyl phthalate	10 U	19 U	19 U	10 U	10 U	10 U
Benzo(b)fluoranthene	10 U	19 U	19 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	19 U	19 U	10 U	10 U	10 U
Benzo(a)pyrene	10 U	19 U	19 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	19 U	19 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	10 U	19 U	19 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	19 U	19 U	10 U	10 U	10 U

820

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

9613402.2909

9613402.2910

SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101216

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/12/93

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/L</u>	
108-95-2	Phenol	10	U
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

9613402.2911
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101216

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/12/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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	1	J
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
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

(1) - Cannot be separated from Diphenylamine

9613402.2912

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-07.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001Client: WESTINGHOUSE HANFORDMatrix: WATERLab Sample ID: 9309L110-001Sample wt/vol: 990 (g/mL) MLLab File ID: J101216Level: (low/med) LOWDate Received: 09/29/93% Moisture: not dec. dec.Date Extracted: 10/04/93Extraction: (SepF/Cont/Sonc) CONTDate Analyzed: 10/12/93GPC Cleanup: (Y/N) N pH: 7.0Dilution Factor: 1.00Number TICs found: 2

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	METHYLCYCLOPENTANOL	5.48	10	JB
2.	UNKNOWN	18.49	50	J

9613402.2913

SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001Client: WESTINGHOUSE HANFORDMatrix: WATER Lab Sample ID: 9309L110-003Sample wt/vol: 990 (g/mL) ML Lab File ID: J101219Level: (low/med) LOW Date Received: 09/29/93% Moisture: not dec. dec. Date Extracted: 10/04/93Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/13/93GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	<u>ug/L</u>
108-95-2	Phenol	10	U
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

9613402.2914

CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS SHEET

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-003

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101219

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/13/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
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	1	J
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

9613402.2915
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-003

Sample wt/vol: 990 (g/mL) ML

Lab File ID: J101219

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. dec.

Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 10/13/93

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.	METHYLCYCLOPENTANOL	5.47	30	JB
2.	UNKNOWN	21.50	5	JB

9613402.2916

SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: J101208

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

108-95-2	Phenol	10	U
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

9613402.2917
LC

CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS SHEET

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: J101208

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
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	4	J
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

FORM 1 SV-2

12/88 Rev.

0084

9613402.2918

SEMIVOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-005

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

Lab File ID: J101208

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____ dec.

Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 10/12/93

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

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.				



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

PESTICIDE/PCB

1. The set of samples consisted of three (3) water samples collected on 09-27-93.
2. The samples were analyzed based on SW-846, 3rd Edition, procedures. The extraction procedure used was based on Method 3520 and the extracts were analyzed based on Method 8080.
3. All required holding times for extraction and analysis were met.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria with the exception of:

<u>Compound ID</u>	<u>% Recovery</u>	<u>Control Limit</u>
Gamma-BHC	50	56% - 127%
Dieldrin	56	57% - 131%

A Sample Discrepancy Report (SDR) has been enclosed.

6. All matrix spike recoveries were within acceptance criteria.
7. All surrogate recoveries were within acceptance criteria.
8. For continuing calibration standards analyzed prior to the sample extracts, the 15% criteria for calibration factors were exceeded for the following compound:

<u>Compound</u>	<u>Column</u>	<u>Date/Time of Analysis</u>
Methoxychlor	RTX5	10-06-93 at 1004
Methoxychlor	RTX35	10-06-93 at 1004
Methoxychlor	RTX5	10-07-93 at 0013
Methoxychlor	RTX35	10-07-93 at 0013



The data reflected an increase in instrument response for Methoxychlor so the ability to identify the target compound was not impaired. Since quantitation was not required, the data should not be impacted. A Sample Discrepancy Report (SDR) has been enclosed.

J. Peter Hershey

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

10.28.93

Date

Roy F. Weston, Inc. - Lionville Laboratory

Pesticide/PCBs by GC, CLP List

Report Date: 10/19/93 11:20

RFW Batch Number: 9309L110

Client: WESTINGHOUSE HANFORD

Work Order: 06168002001 Page: 1

Cust ID: 93261-07.I27 93261-09.I27 93261-09.I27 93261-09.I27 93261-05.I27 PBLK

Sample Information	RFW#:	001	003	003 MS	003 MSD	005	93LE1728-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate:	Decachlorobiphenyl	29 %	37 %	59 %	71 %	100 %	78 %
	Tetrachloro-m-xylene	58 %	58 %	52 %	50 %	80 %	48 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
Alpha-BHC		0.050 U	0.050 U	0.10 U	0.10 U	0.050 U	0.050 U
Beta-BHC		0.050 U	0.050 U	0.10 U	0.10 U	0.050 U	0.050 U
Delta-BHC		0.050 U	0.050 U	0.10 U	0.10 U	0.050 U	0.050 U
gamma-BHC (Lindane)		0.050 U	0.050 U	68 %	58 %	0.050 U	0.050 U
Heptachlor		0.050 U	0.050 U	65 %	55 %	0.050 U	0.050 U
Aldrin		0.050 U	0.050 U	60 %	50 %	0.050 U	0.050 U
Heptachlor epoxide		0.050 U	0.050 U	0.10 U	0.10 U	0.050 U	0.050 U
Endosulfan I		0.050 U	0.050 U	0.10 U	0.10 U	0.050 U	0.050 U
Dieldrin		0.10 U	0.10 U	72 %	60 %	0.099 U	0.10 U
4,4'-DDE		0.10 U	0.10 U	0.20 U	0.20 U	0.099 U	0.10 U
Endrin		0.10 U	0.10 U	84 %	72 %	0.099 U	0.10 U
Endosulfan II		0.10 U	0.10 U	0.20 U	0.20 U	0.099 U	0.10 U
4,4'-DDD		0.10 U	0.10 U	0.20 U	0.20 U	0.099 U	0.10 U
Endosulfan sulfate		0.10 U	0.10 U	0.20 U	0.20 U	0.099 U	0.10 U
4,4'-DDT		0.10 U	0.10 U	93 %	81 %	0.099 U	0.10 U
Methoxychlor		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Endrin ketone		0.10 U	0.10 U	0.20 U	0.20 U	0.099 U	0.10 U
alpha-Chlordane		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
gamma-Chlordane		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Toxaphene		1.0 U	1.0 U	2.0 U	2.0 U	0.99 U	1.0 U
Aroclor-1016		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Aroclor-1221		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Aroclor-1232		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Aroclor-1242		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Aroclor-1248		0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U
Aroclor-1254		1.0 U	1.0 U	2.0 U	2.0 U	0.99 U	1.0 U
Aroclor-1260		1.0 U	1.0 U	2.0 U	2.0 U	0.99 U	1.0 U

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

1267-2042196

9102 10/21/93

0031

9613402 2922

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

93261-07.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 10049310.65

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. _____ dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/07/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

319-84-6	-----Alpha-BHC	0.050	U
319-85-7	-----Beta-BHC	0.050	U
319-86-8	-----Delta-BHC	0.050	U
58-89-9	-----gamma-BHC (Lindane)	0.050	U
76-44-8	-----Heptachlor	0.050	U
309-00-2	-----Aldrin	0.050	U
1024-57-3	-----Heptachlor epoxide	0.050	U
959-98-8	-----Endosulfan I	0.050	U
60-57-1	-----Dieldrin	0.10	U
72-55-9	-----4,4'-DDE	0.10	U
72-20-8	-----Endrin	0.10	U
33213-65-9	-----Endosulfan II	0.10	U
72-54-8	-----4,4'-DDD	0.10	U
1031-07-8	-----Endosulfan sulfate	0.10	U
50-29-3	-----4,4'-DDT	0.10	U
72-43-5	-----Methoxychlor	0.50	U
53494-70-5	-----Endrin ketone	0.10	U
5103-71-9	-----alpha-Chlordane	0.50	U
5103-74-2	-----gamma-Chlordane	0.50	U
8001-35-2	-----Toxaphene	1.0	U
12674-11-2	-----Aroclor-1016	0.50	U
11104-28-2	-----Aroclor-1221	0.50	U
11141-16-5	-----Aroclor-1232	0.50	U
53469-21-9	-----Aroclor-1242	0.50	U
12672-29-6	-----Aroclor-1248	0.50	U
11097-69-1	-----Aroclor-1254	1.0	U
11096-82-5	-----Aroclor-1260	1.0	U

9/10/93

9613402.2923
ID

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-003

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 10049310.66

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/07/93

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

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

319-84-6	Alpha-BHC	0.050	U
319-85-7	Beta-BHC	0.050	U
319-86-8	Delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

*9/02/93
12/18/93*

9613402.2924

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-005

Sample wt/vol: 1010 (g/mL) ML Lab File ID: 10119310.68

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/14/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

319-84-6	Alpha-BHC	0.050	U
319-85-7	Beta-BHC	0.050	U
319-86-8	Delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.099	U
72-55-9	4,4'-DDE	0.099	U
72-20-8	Endrin	0.099	U
33213-65-9	Endosulfan II	0.099	U
72-54-8	4,4'-DDD	0.099	U
1031-07-8	Endosulfan sulfate	0.099	U
50-29-3	4,4'-DDT	0.099	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.099	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.99	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.99	U
11096-82-5	Aroclor-1260	0.99	U

*9/29/93
10/14/93*

9615402.2925

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



Client : WESTINGHOUSE HANFORD
RFW# : 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

INORGANIC

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

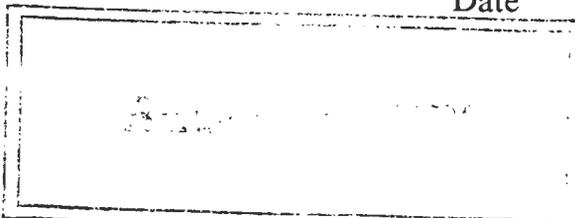
1. All sample holding times as required by 40CFR136 were met.
2. All preparation blank results were below the required detection limits.
3. All laboratory control standards (blank spikes) were within the control limits of 80-120%. All %RPD were within the 20% guidance limit.
4. All calibration verification checks were within the required control limits of 90-110%. Calibration verification is performed using independent standards.
5. Matrix spike recoveries are summarized on the Inorganic Accuracy Report contained within this document. All recoveries were within the 75-125% guidance limits. All %RPD were within the 20% guidance limit.
6. Replicate results are summarized on the Inorganic Precision Report contained within this document. All results were within the 20% RPD guidance limit.
7. The analytical methods applied by the laboratory, unless otherwise requested, for all inorganic analyses are derived from the USEPA Method for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), Standard Methods for the Examination of Water and Wastewater 16 ed. and Test Methods for Evaluating Solid Waste (USEPA SW846).



J. Peter Hershey

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

10-29-93
Date



9613402.2926

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 10/26/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	93261-07.I27	Chloride	35.6	MG/L	6.2	25.0
		Oil & Grease Gravimetri	5.0	u MG/L	5.0	1.0
-003	93261-09.I27	Chloride	8.7	MG/L	0.25	1.0
		Oil & Grease Gravimetri	5.0	u MG/L	5.0	1.0
-005	93261-05.I27	Chloride	13.8	MG/L	1.2	5.0
		Oil & Grease Gravimetri	5.0	u MG/L	5.0	1.0

0004



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

CLP METALS

1. This narrative covers the analyses of three (3) water samples.
2. The samples were prepared and analyzed in accordance with the following protocols: SW-846.
3. ICVs, CCVs, and LCSs stock standards were purchased from Inorganic Ventures Laboratory and High Purity.
4. All analyses were performed within the required holding times.
5. All Initial and Continuing Calibration Verifications (ICV/CCV's) were within control limits.
6. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.
7. All Preparation/Method Blanks were below Reporting Limits.
8. All ICP Interference Check Samples (ICSA and ICSAB) were within control limits.
9. All Laboratory Control Samples (LCS) were within the 80-120% control limits.
10. All Serial Dilution percent differences were within SW-846 control limits.
11. All Matrix Spike recoveries were within the 75-125% control limits (exception allowed when sample concentration exceeds the spike added concentration by a factor of 4 or more).

Matrix spike analyses are not required for Ca, Mg, Na, and K in waters.

12. All Matrix Spike Duplicates were within the 20% Relative Percent Difference (RPD) control limits.



13. All Duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits for samples values greater than 5X Reporting Limit, or +/- the Reporting Limits for sample values less than 5X Reporting Limit.
14. The code CV is currently in use by the laboratory for both mercury instruments in operation (HG1 and HG2). HG1 is complete with autosampler and software, but still requires manual digestion; HG2 is operated by the analyst, produces a strip chart and also requires manual digestion.
15. HG1 requires less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionally scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 ml. For soils, 0.1 gram of sample is taken to a final volume of 50 ml (including all reagents).
16. ICP Interelement Correction Factors for IC1 and IC3 are included in this package, but do not appear on EDD.
17. The graphite furnace time that appears on form XIV is the time of the first injection. The time that appears on the data is the print time.
18. All sample ID's were changed to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP Forms. Refer to the Cover Page of the CLP Forms to correlate the modified sample ID's to the RFW#'s. Refer to the Chain of Custody to correlate RFW#'s to the original client ID.

A handwritten signature in black ink, appearing to read "Ray Siery", written over a horizontal line.

Raymond A. Siery
Inorganic Section Manager
Lionville Analytical Laboratory

11.4.93

Date

9613402.2929

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

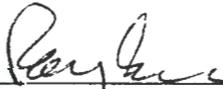


Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

CLP METALS ADDENDUM

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



Raymond A. Siery
Inorganic Section Manager
Lionville Analytical Laboratory

11.4.93
Date

9613402.2930

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 11/03/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	93261-07.I27	Silver, Total	10.0	u UG/L	10.0	1.0
		Aluminum, Total	200	u UG/L	200	1.0
		Arsenic, Total	10.0	u UG/L	10.0	1.0
		Barium, Total	200	u UG/L	200	1.0
		Beryllium, Total	5.0	u UG/L	5.0	1.0
		Calcium, Total	18500	UG/L	5000	1.0
		Cadmium, Total	5.0	u UG/L	5.0	1.0
		Cobalt, Total	50.0	u UG/L	50.0	1.0
		Chromium, Total	10.0	u UG/L	10.0	1.0
		Copper, Total	25.0	u UG/L	25.0	1.0
		Iron, Total	497	UG/L	100	1.0
		Mercury, Total	0.20	u UG/L	0.20	1.0
		Potassium, Total	6710	UG/L	5000	1.0
		Magnesium, Total	5000	u UG/L	5000	1.0
		Manganese, Total	15.0	u UG/L	15.0	1.0
		Sodium, Total	54500	UG/L	5000	1.0
		Nickel, Total	40.0	u UG/L	40.0	1.0
		Lead, Total	3.0	u UG/L	3.0	1.0
		Antimony, Total	60.0	u UG/L	60.0	1.0
		Selenium, Total	5.0	u UG/L	5.0	1.0
		Tin, Total	100	u UG/L	100	1.0
		Titanium, Total	100	u UG/L	100	1.0
		Thallium, Total	10.0	u UG/L	10.0	1.0
		Vanadium, Total	50.0	u UG/L	50.0	1.0
		Zinc, Total	20.7	UG/L	20.0	1.0

0025

9615402.2951

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 11/03/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	93261-09.I27	Silver, Total	10.0	u UG/L	10.0	1.0
		Aluminum, Total	200	u UG/L	200	1.0
		Arsenic, Total	10.0	u UG/L	10.0	1.0
		Barium, Total	200	u UG/L	200	1.0
		Beryllium, Total	5.0	u UG/L	5.0	1.0
		Calcium, Total	30700	UG/L	5000	1.0
		Cadmium, Total	5.0	u UG/L	5.0	1.0
		Cobalt, Total	50.0	u UG/L	50.0	1.0
		Chromium, Total	10.0	u UG/L	10.0	1.0
		Copper, Total	25.0	u UG/L	25.0	1.0
		Iron, Total	100	u UG/L	100	1.0
		Mercury, Total	0.20	u UG/L	0.20	1.0
		Potassium, Total	5000	u UG/L	5000	1.0
		Magnesium, Total	5000	u UG/L	5000	1.0
		Manganese, Total	15.0	u UG/L	15.0	1.0
		Sodium, Total	12200	UG/L	5000	1.0
		Nickel, Total	40.0	u UG/L	40.0	1.0
		Lead, Total	3.0	u UG/L	3.0	1.0
		Antimony, Total	60.0	u UG/L	60.0	1.0
		Selenium, Total	5.0	u UG/L	5.0	1.0
		Tin, Total	100	u UG/L	100	1.0
		Titanium, Total	100	u UG/L	100	1.0
		Thallium, Total	10.0	u UG/L	10.0	1.0
		Vanadium, Total	50.0	u UG/L	50.0	1.0
		Zinc, Total	20.0	UG/L	20.0	1.0

0026

9613402.2932

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 11/03/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-005	93261-05.I27	Silver, Total	10.0	u UG/L	10.0	1.0
		Aluminum, Total	200	u UG/L	200	1.0
		Arsenic, Total	10.0	u UG/L	10.0	1.0
		Barium, Total	200	u UG/L	200	1.0
		Beryllium, Total	5.0	u UG/L	5.0	1.0
		Calcium, Total	21000	UG/L	5000	1.0
		Cadmium, Total	5.0	u UG/L	5.0	1.0
		Cobalt, Total	50.0	u UG/L	50.0	1.0
		Chromium, Total	10.0	u UG/L	10.0	1.0
		Copper, Total	25.0	u UG/L	25.0	1.0
		Iron, Total	100	u UG/L	100	1.0
		Mercury, Total	0.20	u UG/L	0.20	1.0
		Potassium, Total	5000	u UG/L	5000	1.0
		Magnesium, Total	7330	UG/L	5000	1.0
		Manganese, Total	15.0	u UG/L	15.0	1.0
		Sodium, Total	11800	UG/L	5000	1.0
		Nickel, Total	40.0	u UG/L	40.0	1.0
		Lead, Total	3.0	u UG/L	3.0	1.0
		Antimony, Total	60.0	u UG/L	60.0	1.0
		Selenium, Total	5.0	u UG/L	5.0	1.0
		Tin, Total	100	u UG/L	100	1.0
		Titanium, Total	100	u UG/L	100	1.0
		Thallium, Total	10.0	u UG/L	10.0	1.0
		Vanadium, Total	50.0	u UG/L	50.0	1.0
		Zinc, Total	20.0	u UG/L	20.0	1.0

0027

9613402.2933

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

07.I27

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP110

Matrix (soil/water): WATER Lab Sample ID: 930911001

Level (low/med): LOW Date Received: 9/29/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	48.00	U		P
7440-36-0	Antimony	46.00	U		P
7440-38-2	Arsenic	2.00	U		F
7440-39-3	Barium	14.40	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	18500.00			P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	7.00	U		P
7439-89-6	Iron	497.00			P
7439-92-1	Lead	2.00	U		F
7439-95-4	Magnesium	1690.00	B		P
7439-96-5	Manganese	4.80	B		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	12.00	U		P
7440-09-7	Potassium	6710.00			P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	7.00	U		P
7440-23-5	Sodium	54500.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	3.00	U		P
7440-66-6	Zinc	20.70			P
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

FORM I - IN

0040

9613402.2934

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

09.I27

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP110

Matrix (soil/water): WATER Lab Sample ID: 930911003

Level (low/med): LOW Date Received: 9/29/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	48.00	U		P
7440-36-0	Antimony	46.00	U		P
7440-38-2	Arsenic	2.00	U		F
7440-39-3	Barium	27.40	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	30700.00			P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	7.00	U		P
7439-89-6	Iron	57.20	B		P
7439-92-1	Lead	2.00	U		F
7439-95-4	Magnesium	3670.00	B		P
7439-96-5	Manganese	10.50	B		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	12.00	U		P
7440-09-7	Potassium	4110.00	B		P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	7.00	U		P
7440-23-5	Sodium	12200.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	3.00	U		P
7440-66-6	Zinc	20.00			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

FORM I - IN

0041

9613402-2935

U.S. EPA - CLP

EPA SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

05.I27

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

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP110

Matrix (soil/water): WATER Lab Sample ID: 930911005

Level (low/med): LOW Date Received: 9/29/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	48.00	U		P
7440-36-0	Antimony	46.00	U		P
7440-38-2	Arsenic	2.00	U		F
7440-39-3	Barium	23.60	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	21000.00			P
7440-47-3	Chromium	8.40	B		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	7.00	U		P
7439-89-6	Iron	99.60	B		P
7439-92-1	Lead	2.00	U		F
7439-95-4	Magnesium	7330.00			P
7439-96-5	Manganese	8.70	B		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	12.00	U		P
7440-09-7	Potassium	2400.00	B		P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	7.00	U		P
7440-23-5	Sodium	11800.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	3.00	U		P
7440-66-6	Zinc	13.90	B		P
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

FORM I - IN

0042

9613402.2936

VALIDATION SUMMARY

9613402.2937

9309L110-WES-1322

DON'T SAY IT --- Write It!

DATE: December 8, 1993

TO: 9309L109
 9309L110
 9310L146
 9310L147

FROM: Michelle Hendrix H4-23
 Telephone: 372-3916

cc: Joan Kessner
 Karl Pool
 Briana Colley
 Doris Ayres
 Jon Ball

SUBJECT: CANCELLATION OF METHOD 8010/8020 DUE TO INSTRUMENT PROBLEMS.

Due to instrument difficulties, WESTON could not provide analyses for Volatiles - Aromatic (8020) and Volatiles - Halogenated (8010) in a timely fashion. Since Volatiles (8240) was also requested, the customer opted to cancel the 8010 and 8020 analyses for the above listed sample delivery groups. WESTON assured the customer that essentially the same analyte list with comparable detection limits could be obtained using the Volatile 8240 method.

Before the instrument problems, Weston was able to analyze some of the samples for 8010 and 8020 (see table below). These analyses were not canceled.

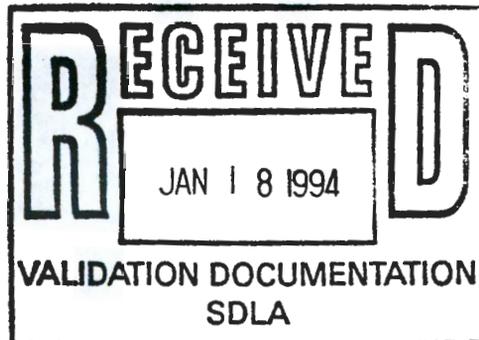
93260-01.I27	SAF 93-260	canceled 8010/8020
93261-01.I27	SAF 93-261	canceled 8010/8020
93261-07.I27	SAF 93-261	8010/8020 data provided
93261-09.I27	SAF 93-261	8010/8020 data provided
93261-05.I27	SAF 93-261	canceled 8010/8020
93262-01.I27	SAF 93-262	8010/8020 data provided

9613402.2938

DATA VALIDATION REPORT
for
1325N WASTE STREAM 4
SDG: 9309L110-WES-1322

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

January 12, 1994



1325N Waste Stream 4 Data Validation Summary

Validation of the analytical data package was performed to the requirements provided in Section 2.0, of WHC-CM-5-3. A Quality Assurance Plan was requested; however, it was not available. The sample analyses were performed by Weston Laboratories.

The primary objective of the data validation effort was to ensure the usability and defensibility of the data produced for the project. This was accomplished through a detailed examination of the data package to recreate the analytical process and verify that proper and acceptable analytical techniques had been applied. The data package was checked for correct submission of required deliverables, correct transcription of raw data to the summary forms, and for proper calculation of a number of parameters. Additionally, supplemental radiochemical documentation was reviewed for evidence of proper initial instrument calibrations. An overall assessment of the data is provided on the Data Assessment Summary Form as required by WHC-CM-5-3. Assessments of individual quality control checks performed by the laboratory are located with the Data Assessment Summary Forms.

Data qualifiers are assigned to any results that have been determined to be deficient. If required, the following data qualifiers are added by the data validator to the laboratory data summary to signify the nature and magnitude of a deficiency:

- 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 This qualifier indicates that the analyte was analyzed for and not detected. Since a quality control deficiency has been identified during the validation process, the value reported may not accurately reflect the sample detection limit.
- J Indicates the compound or analyte was analyzed for and detected. The associated value is estimated but the data is usable for decision making purposes.
- R Indicates the analyte was analyzed for and found to be unusable due to significant quality control deficiencies.

Data Validation NarrativeAnalyses Requested

Samples 93261-05.I27, -06.I27, -07.I27, -08.I27, -09.I27, and -10.I27 were collected on September 27, 1993 by WHC and transferred to Weston Laboratories for analysis. All of the sample containers were received unbroken.

The radiochemical portion of the data package will be validated separately. The chemical portion was received on December 15, 1993. In addition, the following determinations were conducted on samples 93621-05.I27, -06.I27, -07.I27, -08.I27, -09.I27, and -10.I27:

Volatiles (SW-846; by Method 8240)
Volatiles - Aromatic (SW-846; by Method 8020)
Volatiles - Halogenated (SW-846; by Method 8010)
SemiVOA
Pesticide/PCB
ICP Metals/AA--Tin, Titanium, Arsenic, Selenium, Tl
General Chemistry

MAJOR DEFICIENCIES (REJECTED DATA)

The following major deficiencies resulted in the qualification of the results as unusable.

- No major deficiencies were found.

MINOR DEFICIENCIES

The following minor deficiencies were discovered. These minor shortcomings are not expected to significantly affect the overall quality of the data.

- The matrix spike and matrix spike duplicate recoveries were outside the control limits for the following analytes: Phenol, N-Nitroso-Di-n-propylamine, 4-Nitrophenol, 2,4-Dinitrotoluene, Pentachlorophenol. These results were qualified as estimated, non-detect (UJ) in samples 93261-05, -07, and -09.
- The continuing calibration percent difference for methoxychlor exceeded control limits for both the quantitative and confirmation columns. In result, these data were qualified as estimated, non-detect (UJ) due to low bias in samples 93261-05, -07, and -09.
- The matrix spike of blank 1728 exceeded control limits for gamma-BHC and Dieldrin. Since the recovery of Gamma-BHC was low, all the BHC compounds in samples 93261-05, -07 and -09 were qualified as estimated, non-detect (UJ). The Dieldrin recovery missed the control limits by only 1% and the spike recovery for the sample was acceptable; therefore, the dieldrin results were not qualified.
- Acetone results were qualified as non-detected due to contamination in the blank.

1A
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-001

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

Lab File ID: 0100519

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

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	5	U
67-64-1	Acetone	10 8 <i>ogd</i>	U <i>JB</i>
75-15-0	Carbon Disulfide	5 <i>/11/19/93</i>	U <i>ogd /11/19/93</i>
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

FORM 1 V-1

12/88 Rev.

dw 12/30/93

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0040

06/15/93
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-001

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

Lab File ID: Q100519

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

dw 12/30/93

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0617002 2042
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-08.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-002

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

Lab File ID: 0100514

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

.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	1	J
67-64-1-----	Acetone	10	JB
75-15-0-----	Carbon Disulfide	5 <i>dw</i>	U
75-35-4-----	1,1-Dichloroethene	5 <i>1/18/94</i>	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

RU dw 1/18/94

FORM 1 V-1

12/88 Rev.

dw 12/30/93

000035

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15
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-08.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-002

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

Lab File ID: Q100514

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

du 12/30/93

9613802 2005
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-003

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

Lab File ID: Q100515

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/L</u>	
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	5	U
67-64-1	Acetone	5	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

*5 10 du JB
1/18/94* *2 U du
1/18/94*

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du 12/30/93

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1E
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-09.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-003

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

Lab File ID: 0100515

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

du 12/30/93

961A002 2017
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-10.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-004

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

Lab File ID: 0100516

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

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

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du
1/14/94

u du
1/14/94

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du 12/30/93

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0059

06/15/02 2010
 VOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-10.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-004

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: Q100516

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. Date Analyzed: 10/05/93

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.				

du 12/30/93

9611A02 2000
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-005

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

Lab File ID: Q100511

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/L</u>	
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	5	U
67-64-1	Acetone	5	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

*710 duw
1/18/94*

X U duw 1/18/94

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12/88 Rev.

duw 12/30/93

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06121512 2000
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-005

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

Lab File ID: 0100511

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

FORM 1 VOA-TIC

12/88 Rev.

duw 12/30/93

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9613103 2051
VOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-06.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-006

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

Lab File ID: 0100512

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec. _____

Date Analyzed: 10/05/93

Column: (pack/cap) PACK

Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/L</u>	
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	1	J
67-64-1	Acetone	2 10 du	JB
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

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FORM 1 V-1

12/88 Rev.

du 12/30/93

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06168002001
VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-06.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9309L110-006

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

Lab File ID: 0100512

Level: (low/med) LOW

Date Received: 09/29/93

% Moisture: not dec.

Date Analyzed: 10/05/93

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.				

FORM 1 VOA-TIC

12/88 Rev.

dw 12/30/93

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SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101216

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/12/93

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>ug/L</u>	
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	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
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

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

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12/88 Rev.

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1F
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101216

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/12/93

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.	METHYLCYCLOPENTANOL	5.48	10	JB
2.	UNKNOWN	18.49	50	J

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SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-09.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-003

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101219

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/13/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

108-95-2-----	Phenol	10	U
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

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93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-003

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101219

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/13/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
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	1	J
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

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(1) - Cannot be separated from Diphenylamine

1F
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-09.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-003

Sample wt/vol: 990 (g/mL) ML Lab File ID: J101219

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/04/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/13/93

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

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

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	METHYLCYCLOPENTANOL	5.47	30	JB
2.	UNKNOWN	21.50	5	JB

dw 1/2/94

1B
SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: J101208

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/93

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

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

108-95-2-----	Phenol	10	U
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

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SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: J101208

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
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	4	J
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

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(1) - Cannot be separated from Diphenylamine

1F
 SEMIVOLATILE ORGANICS ANALYSIS SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: J101208

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/12/93

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

CONCENTRATION UNITS:

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

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

9613402 ID 2962
 PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

93261-05.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab sample ID: 9309L110-005

Sample wt/vol: 1010 (g/mL) ML Lab File ID: 10119310.68

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 10/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/14/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.099	U
72-55-9	4,4'-DDE	0.099	U
72-20-8	Endrin	0.099	U
33213-65-9	Endosulfan II	0.099	U
72-54-8	4,4'-DDD	0.099	U
1031-07-8	Endosulfan sulfate	0.099	U
50-29-3	4,4'-DDT	0.099	U
72-43-5	Methoxychlor	0.50	U uJ
53494-70-5	Endrin ketone	0.099	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.99	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1243	0.50	U
11097-69-1	Aroclor-1254	0.99	U
11096-82-5	Aroclor-1260	0.99	U

*9/24
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FORM 1 PEST

12/88 Rev.

dw 1/7/94

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9613402-2963
ID

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

93261-07.I27

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 10049310.65

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/07/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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
309-00-2	-----Aldrin	0.050	U
1024-57-3	-----Heptachlor epoxide	0.050	U
959-98-8	-----Endosulfan I	0.050	U
60-57-1	-----Dieldrin	0.10	U
72-55-9	-----4,4'-DDE	0.10	U
72-20-8	-----Endrin	0.10	U
33213-65-9	-----Endosulfan II	0.10	U
72-54-8	-----4,4'-DDD	0.10	U
1031-07-8	-----Endosulfan sulfate	0.10	U
50-29-3	-----4,4'-DDT	0.10	U
72-43-5	-----Methoxychlor	0.50	U uJ
53494-70-5	-----Endrin ketone	0.10	U
5103-71-9	-----alpha-Chlordane	0.50	U
5103-74-2	-----gamma-Chlordane	0.50	U
8001-35-2	-----Toxaphene	1.0	U
12674-11-2	-----Aroclor-1016	0.50	U
11104-28-2	-----Aroclor-1221	0.50	U
11141-16-5	-----Aroclor-1232	0.50	U
53469-21-9	-----Aroclor-1242	0.50	U
12672-29-6	-----Aroclor-1248	0.50	U
11097-69-1	-----Aroclor-1254	1.0	U
11096-82-5	-----Aroclor-1260	1.0	U

*gicx
10/2/93*

FORM 1 PEST

12/88 Rev.

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9613402 2964
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CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

93261-09.127

Lab Name: Roy F. Weston, Inc. Work Order: 06168002001

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9309L110-003

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 10049310.66

Level: (low/med) LOW Date Received: 09/29/93

% Moisture: not dec. dec. Date Extracted: 10/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/07/93

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

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
309-00-2	-----Aldrin	0.050	U
1024-57-3	-----Heptachlor epoxide	0.050	U
959-98-8	-----Endosulfan I	0.050	U
60-57-1	-----Dieldrin	0.10	U
72-55-9	-----4,4'-DDE	0.10	U
72-20-8	-----Endrin	0.10	U
33213-65-9	-----Endosulfan II	0.10	U
72-54-8	-----4,4'-DDD	0.10	U
1031-07-8	-----Endosulfan sulfate	0.10	U
50-29-3	-----4,4'-DDT	0.10	U
72-43-5	-----Methoxychlor	0.50	U uJ
53494-70-5	-----Endrin ketone	0.10	U
5103-71-9	-----alpha-Chlordane	0.50	U
5103-74-2	-----gamma-Chlordane	0.50	U
8001-35-2	-----Toxaphene	1.0	U
12674-11-2	-----Aroclor-1016	0.50	U
11104-28-2	-----Aroclor-1221	0.50	U
11141-16-5	-----Aroclor-1232	0.50	U
53469-21-9	-----Aroclor-1242	0.50	U
12672-29-6	-----Aroclor-1248	0.50	U
11097-69-1	-----Aroclor-1254	1.0	U
11096-82-5	-----Aroclor-1260	1.0	U

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10/12/93*

FORM 1 PEST

12/88 Rev.

dw 1/7/94

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ROY P. WESTON INC.

INORGANIC DATA SUMMARY REPORT 11/03/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	93261-07.I27	Silver, Total	10.0	u UG/L	10.0	1.0
		Aluminum, Total	200	u UG/L	200	1.0
		Arsenic, Total	10.0	u UG/L	10.0	1.0
		Barium, Total	200	u UG/L	200	1.0
		Beryllium, Total	5.0	u UG/L	5.0	1.0
		Calcium, Total	18500	UG/L	5000	1.0
		Cadmium, Total	5.0	u UG/L	5.0	1.0
		Cobalt, Total	50.0	u UG/L	50.0	1.0
		Chromium, Total	10.0	u UG/L	10.0	1.0
		Copper, Total	25.0	u UG/L	25.0	1.0
		Iron, Total	497	UG/L	100	1.0
		Mercury, Total	0.20	u UG/L	0.20	1.0
		Potassium, Total	6710	UG/L	5000	1.0
		Magnesium, Total	5000	u UG/L	5000	1.0
		Manganese, Total	15.0	u UG/L	15.0	1.0
		Sodium, Total	54500	UG/L	5000	1.0
		Nickel, Total	40.0	u UG/L	40.0	1.0
		Lead, Total	3.0	u UG/L	3.0	1.0
		Antimony, Total	60.0	u UG/L	60.0	1.0
		Selenium, Total	5.0	u UG/L	5.0	1.0
		Tin, Total	100	u UG/L	100	1.0
		Titanium, Total	100	u UG/L	100	1.0
		Thallium, Total	10.0	u UG/L	10.0	1.0
		Vanadium, Total	50.0	u UG/L	50.0	1.0
		Zinc, Total	20.7	UG/L	20.0	1.0

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ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 11/03/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	93261-09.I27	Silver, Total	10.0	u UG/L	10.0	1.0
		Aluminum, Total	200	u UG/L	200	1.0
		Arsenic, Total	10.0	u UG/L	10.0	1.0
		Barium, Total	200	u UG/L	200	1.0
		Beryllium, Total	5.0	u UG/L	5.0	1.0
		Calcium, Total	30700	UG/L	5000	1.0
		Cadmium, Total	5.0	u UG/L	5.0	1.0
		Cobalt, Total	50.0	u UG/L	50.0	1.0
		Chromium, Total	10.0	u UG/L	10.0	1.0
		Copper, Total	25.0	u UG/L	25.0	1.0
		Iron, Total	100	u UG/L	100	1.0
		Mercury, Total	0.20	u UG/L	0.20	1.0
		Potassium, Total	5000	u UG/L	5000	1.0
		Magnesium, Total	5000	u UG/L	5000	1.0
		Manganese, Total	15.0	u UG/L	15.0	1.0
		Sodium, Total	12200	UG/L	5000	1.0
		Nickel, Total	40.0	u UG/L	40.0	1.0
		Lead, Total	3.0	u UG/L	3.0	1.0
		Antimony, Total	60.0	u UG/L	60.0	1.0
		Selenium, Total	5.0	u UG/L	5.0	1.0
		Tin, Total	100	u UG/L	100	1.0
		Titanium, Total	100	u UG/L	100	1.0
		Thallium, Total	10.0	u UG/L	10.0	1.0
		Vanadium, Total	50.0	u UG/L	50.0	1.0
		Zinc, Total	20.0	UG/L	20.0	1.0

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ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 11/03/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-005	93261-05.I27	Silver, Total	10.0	u UG/L	10.0	1.0
		Aluminum, Total	200	u UG/L	200	1.0
		Arsenic, Total	10.0	u UG/L	10.0	1.0
		Barium, Total	200	u UG/L	200	1.0
		Beryllium, Total	5.0	u UG/L	5.0	1.0
		Calcium, Total	21000	UG/L	5000	1.0
		Cadmium, Total	5.0	u UG/L	5.0	1.0
		Cobalt, Total	50.0	u UG/L	50.0	1.0
		Chromium, Total	10.0	u UG/L	10.0	1.0
		Copper, Total	25.0	u UG/L	25.0	1.0
		Iron, Total	100	u UG/L	100	1.0
		Mercury, Total	0.20	u UG/L	0.20	1.0
		Potassium, Total	5000	u UG/L	5000	1.0
		Magnesium, Total	7330	UG/L	5000	1.0
		Manganese, Total	15.0	u UG/L	15.0	1.0
		Sodium, Total	11800	UG/L	5000	1.0
		Nickel, Total	40.0	u UG/L	40.0	1.0
		Lead, Total	3.0	u UG/L	3.0	1.0
		Antimony, Total	60.0	u UG/L	60.0	1.0
		Selenium, Total	5.0	u UG/L	5.0	1.0
		Tin, Total	100	u UG/L	100	1.0
		Titanium, Total	100	u UG/L	100	1.0
		Thallium, Total	10.0	u UG/L	10.0	1.0
		Vanadium, Total	50.0	u UG/L	50.0	1.0
		Zinc, Total	20.0	u UG/L	20.0	1.0

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ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 10/26/93

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

WESTON BATCH #: 9309L110

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	93261-07.I27	Chloride	35.6	MG/L	6.2	25.0
		Oil & Grease Gravimetri	5.0	u MG/L	5.0	1.0
-003	93261-09.I27	Chloride	8.7	MG/L	0.25	1.0
		Oil & Grease Gravimetri	5.0	u MG/L	5.0	1.0
-005	93261-05.I27	Chloride	13.8	MG/L	1.2	5.0
		Oil & Grease Gravimetri	5.0	u MG/L	5.0	1.0

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12-29-93

VOA DATA ASSESSMENT

DATE	<u>12-30-93</u>	SAMPLES/MATRIX	<u>93261-05.I27/WATER</u>
REVIEWED BY	<u>M.I. Weyns-Rollosson</u>	<i>dw 1/18/94</i>	<u>93261-06.I27/WATER</u>
LABORATORY	<u>WESTON</u>		<u>93261-07.I27/WATER</u>
CASE #	<u>1325 N WST STREAM 4</u>		<u>93261-08.I27/WATER</u>
SDG #	<u>9309L110-WES-1322</u>		<u>93261-09.I27/WATER</u>
			<u>93261-10.I27/WATER</u>

DATA ASSESSMENT SUMMARY

	<u>VOA</u>
1. <u>Chain of Custody/Holding Times</u>	<u>0</u>
2. <u>Instrument Calibration</u>	<u>0</u>
3. <u>Blanks</u>	<u>X</u>
4. <u>Accuracy</u>	<u>0</u>
5. <u>Precision</u>	<u>0</u>
6. <u>Instrument Performance</u>	<u>0</u>
7. <u>Other</u>	<u>N/A</u>

O = data had no problems

X = minor problems, data may be qualified

M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: The VOA analyses were conducted in accordance with the recommended quality control requirements, with one exception. The acetone results were qualified as undetected since acetone was detected in the blank and the sample results were not 5x greater than the concentration in the blank.

NOTES: The VOA analyses were performed using SW-846 Method 8240.

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

9613402_2970

VOA QC

Name M.I. WEYNS-ROLLOSSON

Date 12-30-93

QC Check: CHAIN OF CUSTODY/HOLDING TIMES

COMMENTS: Volatile organic analyses are to be conducted within fourteen days of sample collection. The samples were collected by WHC on 09-27-93 and transferred to Weston for qualitative and quantitative evaluation. The volatile organic analyses were completed on 10-05-93.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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000002

VOA QCName M.I. Weyns-RollosonDate 12-30-93QC Check: INSTRUMENT CALIBRATION

COMMENTS: A GC/MS tune shall be performed at twelve hour intervals, and the wet (BFB) percent relative ion abundance results must satisfy the ion abundance criteria.

With respect to initial calibration data, all average RRF values for system performance check compounds (SPCC) must be greater than the specified minimum of 0.300; the RRF value corresponding to bromoform must exceed 0.250. The percent relative standard deviation (%RSD) results of all calibration check compounds (CCC) are to be $\leq 30\%$. Initial calibration was conducted on 09-13-93.

All applicable SPCC RRF50 values associated with the continuing calibration data must be greater than 0.300 and the bromoform result shall exceed 0.250. The percent differences (%D) associated with the calibration check compounds are to be within $\pm 25\%$. Continuing calibration checks were run on 10-05-93.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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VOA QCName M.I. Weyns-RollosonDate 12-30-93QC Check: BLANKS

COMMENTS: The laboratory must conduct a blank analysis within every twelve hour period in which samples are analyzed. All analytes exhibiting a concentration ≤ 5 times the corresponding blank result shall be qualified as non-detects.

ACTION: Acetone was detected in the blank analysis. The acetone results were qualified as undetected since acetone was detected in the blank and the sample results were not 5x greater than the concentration in the blank.

<u>sample #</u>	<u>constituent</u>	<u>value(ug/L)/qualifier</u>	
93261-05.I27	Acetone	10	U
93261-06.I27	Acetone	10	U
93261-07.I27	Acetone	10	U
93261-08.I27	Acetone	10	U
93261-09.I27	Acetone	10	U
93261-10.I27	Acetone	10	U

000034

VOA QCName M.I. Weyns-RollosonDate 12-30-93QC Check: ACCURACY (Surrogate and Matrix Spike Recoveries)

COMMENTS: The recoveries of the following surrogate compounds are to fall within the control limits as specified by the RCRA guidelines: Toluene-d₈, wet, and 1,2-dichloroethane-d₄.

Sample 93261-10 was spiked with the following compounds: 1,1-dichloroethene, trichloroethene, benzene, toluene, and chlorobenzene.

The recoveries resulting from the matrix spike and matrix spike duplicate analyses must satisfy the laboratory defined quality control criteria.

ACTION: No action was required.

sample #constituentvalue/qualifier

9613402.2974

VOA QC

Name M.I. Weyns-Rolloson

Date 12-30-93

QC Check: PRECISION

COMMENTS: The relative percent difference (%RPD) values calculated from the matrix spike and matrix spike duplicate data must be within the laboratory specified quality control limits.

ACTION: No action was required.

sample # constituent

value/qualifier

00036

9613402.2975

VOA QC

Name M.I. Weyns-Rolloson

Date 12-30-93

QC Check: INSTRUMENT PERFORMANCE

COMMENTS: Bromochloromethane, 1,4-dichlorobenzene, and chlorobenzene-d₅ were utilized as internal standards and evaluated on 10-05-93.

The extracted ion current profile (EICP) area of each internal standard must be within its corresponding control limit and all internal standard retention times shall be within thirty seconds of the respective twelve hour standard.

ACTION: No action was required.

sample #

constituent

value/qualifier

000037

SemiVOA QCName M.I. Weyns-RollosonDate 01-02-94QC Check: CHAIN OF CUSTODY/HOLDING TIMES

COMMENTS: Samples submitted for semivolatile organic analysis are required to be extracted within seven days of collection and evaluated within forty days of extraction. The samples were collected by WHC on September 27, 1993 and transferred to WESTON for qualitative and quantitative evaluation. The extraction procedures were conducted on October 1 and 4, 1993 and the semivolatile organic analyses were completed on October 12 and 13, 1993.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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SemiVOA QCName M.I. Weyns-RollosonDate 01-02-94QC Check: INSTRUMENT CALIBRATION

COMMENTS: A GC/MS tune shall be performed at twelve hour intervals and the decafluorotriphenylphosphine (DFTPP) percent relative ion abundance results must satisfy the ion abundance criteria.

With respect to initial calibration data, all average RRF values for system performance check compounds (SPCC) must be greater than the specified minimum of 0.050. The percent relative standard deviation (%RSD) results of all calibration check compounds (CCC) are to be $\leq 30\%$. Initial calibration was conducted on 10-11-93.

All applicable SPCC RRF50 values associated with the continuing calibration data must be greater than 0.050 and the percent differences (%D) associated with the calibration check compounds (CCC) are to be within $\pm 25\%$. Continuing calibration checks were run on 10-12-93 and 10-19-93.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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SemiVOA QCName M.I. Weyns-RollosonDate 01-02-94QC Check: BLANKS

COMMENTS: The laboratory must conduct a blank analysis within every twelve hour period in which samples are analyzed. All analytes exhibiting a concentration ≤ 5 times the corresponding blank result shall be qualified as non-detects.

ACTION: No action was required.

sample # constituentvalue/qualifier

SemiVOA QCName M.I. Weyns-RollossonDate 01-02-94QC Check: ACCURACY (Surrogate and Matrix Spike Recoveries)

COMMENTS: The recoveries of the following surrogate compounds are to fall within the control limits as specified by the RCRA guidelines: nitrobenzene-d₅, 2-fluorobiphenyl, terphenyl, phenol-d₅, 2-fluorophenol, and 2,4,6-tribromophenol.

The recoveries resulting from the matrix spike and matrix spike duplicate analyses must satisfy the laboratory defined quality control criteria.

ACTION: The matrix spike and matrix spike duplicate recoveries were outside of control limits for the following analytes.

<u>sample #</u>	<u>constituent</u>	<u>value (ug/L)/qualifier</u>	
93261-05.I27	Phenol	10	UJ
	N-Nitroso-Di-n-propylamine	10	UJ
	4-Nitrophenol	50	UJ
	2,4-Dinitrotoluene	10	UJ
	Pentachlorophenol	50	UJ
93261-07.I27	Phenol	10	UJ
	N-Nitroso-Di-n-propylamine	10	UJ
	4-Nitrophenol	50	UJ
	2,4-Dinitrotoluene	10	UJ
	Pentachlorophenol	50	UJ
93261-09.I27	Phenol	10	UJ
	N-Nitroso-Di-n-propylamine	10	UJ
	4-Nitrophenol	50	UJ
	2,4-Dinitrotoluene	10	UJ
	Pentachlorophenol	50	UJ

SemiVOA QCName M.I. Weyns-RollosonDate 01-02-94QC Check: PRECISION

COMMENTS: The relative percent difference (%RPD) values calculated from the matrix spike and matrix spike duplicate data must be within the laboratory specified quality control limits.

ACTION: No action was required.

sample # constituentvalue/qualifier

SemiVOA QCName M.I. Weyns-RollosonDate 01-02-94QC Check: INSTRUMENT PERFORMANCE

COMMENTS: 1,4-dichlorobenzene-d₄, naphthalene-d₈, acenaphthene-d₁₀, phenanthrene-d₁₀, chrysene-d₁₂, and perylene-d₁₂ were utilized as internal standards and evaluated on 10-12-93.

The extracted ion current profile (EICP) area of each internal standard must be within its corresponding control limit and all internal standard retention times shall be within thirty seconds of the respective twelve hour standard.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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PESTICIDE/PCB DATA ASSESSMENT

DATE	<u>1-6-94</u>	SAMPLES/MATRIX	<u>93261-05.I27</u>
			<u>93261-07.I27</u>
REVIEWED BY	<u>M.I. WEYNS-ROLLOSSON</u>	<i>dw 1/6/94</i>	<u>93261-09.I27</u>
LABORATORY	<u>WESTON</u>		<u> </u>
CASE #	<u>1325 NWASTE STREAM 4</u>		<u> </u>
SDG #	<u>9309L110-WES-1332</u>		<u> </u>

DATA ASSESSMENT SUMMARY

	<u>Pest/PCB</u>
1. <u>Chain of Custody/Holding Times</u>	<u>0</u>
2. <u>Instrument Performance</u>	<u>0</u>
3. <u>Instrument Calibration</u>	<u>X</u>
4. <u>Blanks</u>	<u>0</u>
5. <u>Accuracy</u>	<u>X</u>
6. <u>Precision</u>	<u>0</u>
7. <u>Other</u>	<u>N/A</u>

O = data had no problems

X = minor problems, data may be qualified

M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: The pesticides/PCB analyses were completed in accordance with recommended quality control requirements, with a few minor qualifications for poor matrix spike and CCV recoveries.

NOTES: The pesticide/PCB analyses were performed using SW-846 Method 8080.

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

PESTICIDE/PCB QCName M.I. WEYNS-ROLLOSSONDate 1-6-94QC Check: CHAIN OF CUSTODY/HOLDING TIMES

COMMENTS: Samples submitted for pesticide/PCB analysis are required to be extracted within seven days of collection and evaluated within forty days of extraction. The samples were collected by WHC on 9-27-93 and transferred to Weston Laboratory for qualitative and quantitative evaluation. The extraction procedures were conducted on 10-1-93 and 10-3-93, and the pesticide/PCB analyses were completed on 10-7-93 and 10-14-93.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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PESTICIDE/PCB QC

Name M.I WEYNS-ROLLOSSON

Date 1-6-94

QC Check: INSTRUMENT PERFORMANCE

COMMENTS: The retention times for DDT on the quantitative and confirmation columns must be greater than twelve minutes and all pesticide standards are to elute within their corresponding retention time windows on both columns.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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PESTICIDE/PCB QCName M.I. WEYNS-ROLLOSSONDate 1-6-94QC Check: INSTRUMENT CALIBRATION

COMMENTS: Initial calibration of the quantitative and confirmation columns shall be conducted by analyzing five standard solutions of each analyte of interest, three for polybrominated biphenyl. A calibration factor is then calculated for every analyte at each standard concentration. The percent relative standard deviation (%RSD) associated with the calibration factors for Aldrin, Endrin, DDT, and DBC must be less than or equal to 10% on quantitative columns and all standard analyte %RSD values must be less than 20% on both columns.

With respect to continuing calibration data, the percent difference (%D) values, which are determined by comparing the initial and subsequent standard analyte calibration factors, must be $\leq 15\%$ on quantitative columns and $\leq 20\%$ on confirmation columns.

ACTION: The continuing calibration percent difference for methoxychlor exceeded control limits for both the quantitative and confirmation columns, resulting in the qualification of these data as estimated due to low bias.

<u>sample #</u>	<u>constituent</u>	<u>value(μg/L)/qualifier</u>
93261-05.127	Methoxychlor	0.50 /UJ
93261-07.127	Methoxychlor	0.50 /UJ
93261-09.127	Methoxychlor	0.50 /UJ

9613402.2987

PESTICIDE/PCB QC

Name M.I. WEYNS-ROLLOSSON

Date 1-6-94

QC Check: BLANKS

COMMENTS: One blank analysis is to be conducted for every batch of samples. All analytes exhibiting a concentration ≤ 5 times the corresponding blank result shall be qualified as non-detects.

ACTION: No action was required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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PESTICIDE/PCB QCName M.I. WEYNS-ROLLOSSONDate 1-6-94QC Check: ACCURACY (Surrogate and Matrix Spike Recoveries)

COMMENTS: The surrogate compounds, decachlorobiphenyl (DCB) and tetrachloro-m-xylene (TCX), are required to yield recoveries within the laboratory specified quality control limits.

Samples 93261-07 and 93261-09 were spiked with the following compounds: gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, Endrin, and 4,4'-DDT.

The recoveries resulting from the matrix spike and matrix spike duplicate analyses must satisfy the laboratory defined quality control criteria.

ACTION: The matrix spike of blank 1728 exceeded control limits for gamma-BHC and Dieldrin. Since the recovery of Gamma-BHC was low, all the BHC compounds in samples -07 and -09 were qualified as estimated. The Dieldrin recovery missed the control limits by only 1 % and the spike recovery for the sample was acceptable; therefore, the Dieldrin results were not qualified.

<u>sample #</u>	<u>constituent</u>	<u>value($\mu\text{g/L}$)/qualifier</u>
93261-07.127	Alpha-BHC	0.050 / UJ
"	Beta-BHC	0.050 / UJ
"	Delta-BHC	0.050 / UJ
"	Gamma-BHC	0.050 / UJ
93261-09.127	Alpha-BHC	0.050 / UJ
"	Beta-BHC	0.050 / UJ
"	Delta-BHC	0.050 / UJ
"	Gamma-BHC	0.050 / UJ

9613402.2989

PESTICIDE/PCB QC

Name M.I. WEYNS-ROLLOSSON

Date 1-6-94

QC Check: PRECISION

COMMENTS: The relative percent difference (%RPD) values calculated from the matrix spike and matrix spike duplicate data must be within the laboratory defined quality control limits.

ACTION: No action was required.

sample # constituent

value/qualifier

000051

ICP DATA ASSESSMENT

DATE	<u>01-03-94</u>	SAMPLES/MATRIX	<u>93261-05. I27/WATER</u>
REVIEWED BY	<u>D.E.Berkowitz</u> <i>du for</i> <i>DeB 1/4/94</i>		<u>93261-07. I27/WATER</u>
LABORATORY	<u>Weston</u>		<u>93261-09. I27/WATER</u>
CASE #	<u>1325N WSTE STREAM 4</u>		
SDG #	<u>93-261</u>		

DATA ASSESSMENT SUMMARY

	<u>ICP/AA</u>			
1. <u>Chain of Custody/Holding Times</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
2. <u>Instrument Calibration</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
3. <u>ICV/CCV Standards</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
4. <u>Blanks</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
5. <u>Interference Check Sample</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
6. <u>Laboratory Control Sample</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
7. <u>Duplicate Analysis</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
8. <u>Matrix Spike/Matrix Spike Dup.</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
9. <u>CRDL Standard</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
10. <u>Serial Dilution</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
11. <u>Other Quality Control</u>	<u>NA</u>	<u> </u>	<u> </u>	<u> </u>

O = data had no problems

X = minor problems, data may be qualified

M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: The laboratory has referenced CRDL limits for the reporting of non-detect laboratory results. Therefore, the validation report follows the laboratory format.

NOTES: None

INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: HOLDING TIMES

COMMENTS: Analytical holding times were assessed to determine whether the requirements for metals analyses were met. The maximum holding times for mercury is 28 days and 180 days for all other metals. The samples were collected on 8-10-93. Metals analysis was performed on 9-9-93. Mercury analysis was completed on 9-3-93, and the analysis of the samples for cyanide was done on 8-23-93. All samples were received in good condition and preserved in accordance with SW-846.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: INSTRUMENT CALIBRATION

COMMENTS: The data was examined to determine whether the instruments used were calibrated at the correct frequency and that the calibration was performed correctly. All instruments must be calibrated on a daily basis or upon each set-up. Atomic Absorption calibration must be performed with a minimum of a blank and 3 standards with a minimum correlation coefficient of 0.995. Data is qualified as unusable if reported from an instrument that was not calibrated or was calibrated with less than the minimum number of standards. Associated sample results were qualified as estimated if the correlation coefficient is less than 0.995.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: INITIAL AND CONTINUING CALIBRATION VERIFICATION

COMMENTS: An Initial Calibration Verification (ICV) standard must be run at the beginning of each run. A Continuing Calibration Standard (CCV) must be run at a 10% frequency. The recoveries for all ICVs must be within $\pm 10\%$ of the true value and the recoveries for CCVs within $\pm 20\%$ for AA and $\pm 10\%$ for ICP. In addition, method 6010 requires the analysis of the highest concentration mixed standard before sample analysis. The recovery for this standard must be within $\pm 5\%$ of the true values. If the ICV/CCV results are outside the acceptable range, all associated sample results are qualified as estimated.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: BLANKS

COMMENTS: Calibration and preparation blanks were evaluated for the presence of contaminants. Calibration blanks should be run at a 10% frequency. At least one preparation blank is required for each sample batch. All analytes exhibiting a concentration ≤ 5 times the corresponding blank result shall be qualified as non-detects. If the absolute value of any negative blank values exceeded the Instrument Detection Limit (IDL), non-detects were qualified as estimated (UJ) and positive results within 2 times the absolute value of the blank value as estimated.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: INTERFERENCE CHECK SAMPLE

COMMENTS: The ICP Interference Check Sample (ICS) is run to verify the instrumental interelement and background correction factors. An ICS must be run at the beginning and end of each sample analysis run or twice per 8 hour shift. The results for the ICS solution AB analysis must fall within the control limits of $\pm 20\%$ of the true value. In addition, the ICS raw data is examined for results with an absolute value of $> IDL$ for those analytes which are not present in the ICS solution. Associated sample results are qualified as estimated when the ICS criteria are not met.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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9613402.2996

INORGANIC QC

Name D.E. Berkowitz

Date 01-03-94

QC Check: LABORATORY CONTROL STANDARD

COMMENTS: The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of all steps in the analysis, including sample preparation. All LCS results must fall within the control limits of $\pm 20\%$ of the true value. If the LCS recovery is $> 120\%$ or $50 - 79\%$, sample results are qualified as estimated. Results associated with an LCS recovery of $< 50\%$ are qualified as unusable.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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000078

INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: DUPLICATE ANALYSIS

COMMENTS: Duplicate analysis are indicators of laboratory precision based on each sample matrix. Duplicate analysis must be performed at a 5% frequency or 1 per batch, whichever is greater. The relative percent deviation (RPD) for duplicate analyses should be less than 20% for sample results greater than 10 times the IDL. If the RPD is greater than 20%, the associated sample results are qualified as estimated.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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INORGANIC QCName D.E. BerkowitzDate 01-03-94QC Check: MATRIX SPIKE/MATRIX SPIKE DUPLICATE

COMMENTS: Matrix spikes sample analysis provide information about the effect of each sample matrix on the digestion and measurement methodology. Matrix spikes must be performed at a 5% frequency and recoveries should be between 75-125%. If the spike result is between 30-74% or >125%, results are qualified as estimated. Sample results associated with a spike recovery of less than 30% are qualified as unusable.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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9613402.2999

INORGANIC QC

Name D.E. Berkowitz

Date 01-03-94

QC Check: CONTRACT REQUIRED DETECTION LIMIT STANDARD

COMMENTS: A Contract Required Detection Limit Standard (CRDL) is performed to evaluate instrument performance near the detection limit for AA and ICP metals. The control limit is only advisory.

ACTION: No action required.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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000061

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INORGANIC QC

Name D.E. Berkowitz

Date 01-03-94

QC Check: SERIAL DILUTION

COMMENTS: Serial dilutions are run to determine whether significant physical or chemical interferences exist due to sample matrix. In addition, the results of the serial dilution can be used to determine whether sample results greater than the instrument linear range can be reported as valid results. Analyte results for a five fold dilution that are greater than 50 times the IDL must agree within 10% difference (%D) of the original results. If the criteria are not met, the results are qualified as estimated. In the presence of negative interferences, professional judgement is used to qualify the data.

ACTION: All criteria were met.

<u>sample #</u>	<u>constituent</u>	<u>value/qualifier</u>
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000062

GENERAL CHEMISTRY DATA ASSESSMENT

DATE: 01-06-94

SAMPLE/MATRIX: 93261-07.I27/WATER

REVIEWED BY: D.E. STROUP *DES 1-6-94*

93261-09.I27/WATER

93261-05.I27/WATER

LABORATORY: WESTON

CASE #: 1325N WASTE STREAM 4

SDG #: 9309L110-WES-1322

ASSESSMENT SUMMARY

	<u>General Chemistry</u>
1. <u>Chain of Custody/Holding Times</u>	0
2. <u>ICV/CCV</u>	0
3. <u>Blank Analysis</u>	0
4. <u>Matrix Spike</u>	0
5. <u>LCS</u>	0
6. <u>Duplicate Analysis</u>	0

O = data has no problems

X = data qualified due to minor problems

M = data qualified due to major problems, some data may be unusable

OVERALL ASSESSMENT: The data is acceptable with no qualifications.**NOTES:** The following analyses are included in the General Chemistry category:

Chloride

Oil & Grease

■ Refer to the corresponding attachments for explanations of any problems.

GENERAL CHEMISTRY QC

Name: D.E. Stroup

Date: 12-29-93

QC Check: Chain of Custody/Holding Times

COMMENTS: The Chain of Custody and Sample Analysis Request (SAR) documentation is included in the data package and meets the quality control requirements. The methods requested in the SAR were used by the laboratory for the analyses included in the General Chemistry category.

The samples were collected 9-27-93. The Chloride analysis was done on 10-22-93 and the Oil & Grease analysis was done on 10-15-93 and 10-22-93. The required holding time for both analyses is 28 days.

ACTION: No action is required.

GENERAL CHEMISTRY QC

Name: D.E. Stroup

Date: 12-29-93

QC Check: ICV/CCV

COMMENTS: Five standards at different concentrations and a blank were used for the Chloride calibration with $r > 0.995$. Blank spikes were used as LCSs and carried through the Chloride and Oil & Grease analyses.

ACTION: No action is required as the LCSs were carried through the analyses and used as calibration verifications.

9615402, 5004

GENERAL CHEMISTRY QC

Name: D.E. Stroup

Date: 12-29-93

QC Check: Blank Analysis

COMMENTS: Blank analysis results are at the reporting limit for Chloride and Oil & Grease analyses.

ACTION: None required.

000036

9613402.3005

GENERAL CHEMISTRY QC

Name: D.E. Stroup

Date: 12-29-93

QC Check: Matrix Spike

COMMENTS: The matrix spike and matrix spike duplicate recoveries for the Chloride analysis are 107 and 108 respectively with a relative percent difference of zero. No matrix spike is required for the Oil & Grease analysis.

ACTION: None required.

000037

9613402.3006

GENERAL CHEMISTRY QC

Name: D.E. Stroup

Date: 12-29-93

QC Check: LCS

COMMENTS: Blank spikes were used as LCSs for the Chloride and Oil & Grease analyses. The spikes were carried through the analyses with recoveries of 106 for Chloride and 86.6 and 88.1 for Oil & Grease, which are within the recommended limits.

ACTION: None required.

000038

9613402.3007

GENERAL CHEMISTRY QC

Name: D.E. Stroup

Date: 12-29-93

QC Check: Duplicate Analysis

COMMENTS: The relative percent differences (RPD) range from 0.23 to 1.7 for the Chloride and Oil & Grease analyses.

ACTION: None required.

000033



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

GC/MS VOLATILE

The set of samples consisted of six (6) water samples collected on 09-27-93.

The samples were analyzed according to criteria set forth in SW 846 Method 8240 for TCL Volatile target compounds on 10-05-93.

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

1. Non-target compounds were not detected in these samples.
2. One (1) of thirty (30) surrogate recoveries was outside EPA QC limits. The analysis of samples 93261-10.I27 and 93261-10.I27 MS fulfilled the reanalysis requirement for sample 93261-10.I27 MSD.
3. All matrix spike recoveries were within EPA QC limits.
4. All blank spike recoveries were within EPA QC limits.
5. The laboratory blank contained the common contaminant Acetone at a level less than the CRQL.
6. All internal standard area and retention time criteria were met.

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

10.26.93

Date

9613402.3009



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

SEMIVOLATILE

The set of samples consisted of three (3) water samples collected on 09-27-93.

The samples were extracted on 10-01,04-93 and analyzed according to criteria set forth in SW 846 Method 8270 for TCL Semivolatile target compounds on 10-12,13,19,28-93.

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

1. Non-target compounds were detected in these samples.
2. All surrogate recoveries were within EPA QC limits.
3. Eight (8) of twenty-two (22) matrix spike recoveries were outside EPA QC limits.
4. Three (3) of thirty-three (33) blank spike recoveries were outside EPA QC limits.
5. All internal standard area and retention time criteria were met.

A handwritten signature in cursive script, appearing to read "J. Peter Hershey".

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

11.02.93

Date

000071

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

Client: WESTINGHOUSE HANFORD

RFW #: 9309L110

W.O. #: 06168-002-001-9999-00

Date Received: 09-29-93

PESTICIDE/PCB

1. The set of samples consisted of three (3) water samples collected on 09-27-93.
2. The samples were analyzed based on SW-846, 3rd Edition, procedures. The extraction procedure used was based on Method 3520 and the extracts were analyzed based on Method 8080.
3. All required holding times for extraction and analysis were met.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria with the exception of:

<u>Compound ID</u>	<u>% Recovery</u>	<u>Control Limit</u>
Gamma-BHC	50	56% - 127%
Dieldrin	56	57% - 131%

A Sample Discrepancy Report (SDR) has been enclosed.

6. All matrix spike recoveries were within acceptance criteria.
7. All surrogate recoveries were within acceptance criteria.
8. For continuing calibration standards analyzed prior to the sample extracts, the 15% criteria for calibration factors were exceeded for the following compound:

<u>Compound</u>	<u>Column</u>	<u>Date/Time of Analysis</u>
Methoxychlor	RTX5	10-06-93 at 1004
Methoxychlor	RTX35	10-06-93 at 1004
Methoxychlor	RTX5	10-07-93 at 0013
Methoxychlor	RTX35	10-07-93 at 0013

000002

0005



The data reflected an increase in instrument response for Methoxychlor so the ability to identify the target compound was not impaired. Since quantitation was not required, the data should not be impacted. A Sample Discrepancy Report (SDR) has been enclosed.

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

10.28.93

Date



SAMPLE DISCREPANCY REPORT (SDR)

SDR IN-PROGRESS ROUTING:
(see other side)

Initiator: J. HOHL
 Date: 10/14/93
 Client: Westinghouse Hanford
 RFW Lot #: 9309L109, 9309L110, 9309L111
 Samples: ALL exc. 9309L110-005

Parameter: 0608H
 Matrix: H₂O
 Prep Batch: 93LE1728
 Urgency: Immediate Other

Category for Discrepancy:
 Log-In
 LIMS
 Analysis/Sample
 Project Revision
 Other:

A. Reason for SDR:

A1a.
 Requires Verification By (circle):
 Log-In or Prep Group

Missing Sample/Extract
 Wrong Sample Pulled
 Improper Bottle Type
 Container Broken
 Preservation Wrong
 Received Past Hold
 Insufficient Sample
 Label ID's Illegible

A2.
 Verified By (circle):
 Log-In or Prep Group
 (signature) (date)

A1b.

Re-Log: Tech Profile Error..Client Changed Request..
 Sampler Error on C-O-C..Transcription Error..
 Wrong Test Code, Re-Log As _____

Re-Leach: Metals/Inorg/VOA/BNA/Pest/Herb/ _____

Re-Digest: AA/ICP/HG/ _____

Re-Extract: BNA/PEST/ _____

QC Out: SURR/MS...High/Low/<10%/Missing/2X

QC Out: B/BS/BS/BS/LCS/LCS-D...High/Low

Hold Time Exceeded: Prep/Analysis/Report

Not Amenable to Analysis

Other (describe)

The BS recoveries for YBHC and dieldrin were outside lab criteria; however, all other target analyte recoveries were within criteria along with the MS/MSD recoveries and surrogates for all samples.

B. PM Instructions For Disposition (signature/date): J. Edwards 10-15-93

Cancel Add Subout Analysis
 Place On Hold Take Off Hold
 Change W.O. # to: _____
 MS/MSD on Sample _____, if enough sample: ORG/INORG
 MS/DUP on Sample _____, if enough sample: ORG/INORG
 Change Client name to: _____
 Wrong Test Code, Re-Log As _____
 Include in Narrative

Other, explain: _____

C. FINAL ACTION: a clear description of what was done for resolution, when it was done, and by whom it was done

Action Taken:

Revision To Chain-of-Custody Completed

LIMS Corrections Completed

Other, explain
included in narrative

Action By (name/date): J. Hohl 10/18/93
 Forward to Pat Feldman QA for distribution ---

D. Distribution of Completed SDR (include name):

Initiator: J. HOHL
 Lab Manager: J. PETER HERSHEY
 Project Mgr: J. Edwards
 Unit Leader: D. Skrzat
 QA (original): K. RYAN
 Log-In: _____
 Data Reporting: _____
 Billing: S. BRENER
 K. Cromer

_____ 000074

Distributed By: _____
 (signature/date) 0029



SAMPLE DISCREPANCY REPORT (SDR)

SDR IN-PROGRESS ROUTING:
(see other side)

Initiator J. HoHL
 Date 10/14/93
 Client Westinghouse Hanford
 RFW Lot # 9309L109, 9309L110, 9309L111
 Samples ALL exc. 9309L110-005

Parameter: 0608H
 Matrix: H₂O
 Prep Batch: 93LE1728
 Urgency: Immediate Other

Category for Discrepancy:
 Log-In
 LIMS
 Analysis/Sample
 Project Revision
 Other:

A. Reason for SDR:

A1a.

Requires Verification By (circle):
 Log-in or Prep Group

- Missing Sample/Extract
- Wrong Sample Pulled
- Improper Bottle Type
- Container Broken
- Preservation Wrong
- Received Past Hold
- Insufficient Sample
- Label ID's Illegible

A2.

Verified By (circle):
 Log-in or Prep Group
 (signature) (date)

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

A1b.

- Re-Log: Tech Profile Error..Client Changed Request..
- Sampler Error on C-O-C..Transcription Error..
- Wrong Test Code, Re-Log As _____
- Re-Leach: Metals/Inorg/VOA/BNA/Pest/Herb/ _____
- Re-Digest: AA/ICP/HG/ _____
- Re-Extract: BNA/PEST/ _____
- QC Out: SURR/MS...High/Low/<10%/Missing/2X
- QC Out: B/BS/BSD/LCS/LCS-D...High/Low
- Hold Time Exceeded: Prep/Analysis/Report
- Not Amenable to Analysis

Other (describe)
 methoxychlor exceeded ccv criteria $\pm 15\%$ on primary and confirmation columns. All other target analytes met ccv criteria, though. The condition was a result of an increase in ^{instrument} response for methoxychlor; and, since no methoxychlor was found in samples, data was not impacted.

B. PM Instructions For Disposition (signature/date):

J. Edwards
10-15-93

- Cancel Add Subout Analysis
- Place On Hold Take Off Hold
- Change W.O. # to: _____
- MS/MSD on Sample _____, if enough sample: ORG/INORG
- MS/DUP on Sample _____, if enough sample: ORG/INORG
- Change Client name to: _____
- Wrong Test Code, Re-Log As _____
- Include in Narrative

Other, explain: _____

C. FINAL ACTION: a clear description of what was done for resolution, when it was done, and by whom it was done

Action Taken:

- Revision To Chain-of-Custody Completed
- LMS Corrections Completed
- Other, explain
included in narrative

Action By (name/date): J. HoHL 10/17/93
 Forward to Pat Feldman, QA for distribution ---

D. Distribution of Completed SDR (include name):

- Initiator: J. HoHL
- Lab Manager: J. PETER HERSHEY
- Project Mgr: J. Edwards
- Unit Leader: D. Skrzat
- QA (original): K. RYAN
- Log-In: _____
- Data Reporting: _____
- Billing: S. BRENER
- K. Cromer

Distributed By: _____
 (signature/date) 000075
0028



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

Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

CLP METALS

1. This narrative covers the analyses of three (3) water samples.
2. The samples were prepared and analyzed in accordance with the following protocols: SW-846.
3. ICVs, CCVs, and LCSs stock standards were purchased from Inorganic Ventures Laboratory and High Purity.
4. All analyses were performed within the required holding times.
5. All Initial and Continuing Calibration Verifications (ICV/CCV's) were within control limits.
6. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.
7. All Preparation/Method Blanks were below Reporting Limits.
8. All ICP Interference Check Samples (ICSA and ICSAB) were within control limits.
9. All Laboratory Control Samples (LCS) were within the 80-120% control limits.
10. All Serial Dilution percent differences were within SW-846 control limits.
11. All Matrix Spike recoveries were within the 75-125% control limits (exception allowed when sample concentration exceeds the spike added concentration by a factor of 4 or more).

Matrix spike analyses are not required for Ca, Mg, Na, and K in waters.

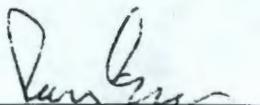
12. All Matrix Spike Duplicates were within the 20% Relative Percent Difference (RPD) control limits.

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0021



13. All Duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits for samples values greater than 5X Reporting Limit, or +/- the Reporting Limits for sample values less than 5X Reporting Limit.
14. The code CV is currently in use by the laboratory for both mercury instruments in operation (HG1 and HG2). HG1 is complete with autosampler and software, but still requires manual digestion; HG2 is operated by the analyst, produces a strip chart and also requires manual digestion.
15. HG1 requires less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionally scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 ml. For soils, 0.1 gram of sample is taken to a final volume of 50 ml (including all reagents).
16. ICP Interelement Correction Factors for IC1 and IC3 are included in this package, but do not appear on EDD.
17. The graphite furnace time that appears on form XIV is the time of the first injection. The time that appears on the data is the print time.
18. All sample ID's were changed to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP Forms. Refer to the Cover Page of the CLP Forms to correlate the modified sample ID's to the RFW#'s. Refer to the Chain of Custody to correlate RFW#'s to the original client ID.



Raymond A. Siery
Inorganic Section Manager
Lionville Analytical Laboratory

11.4.93

Date

9615402.5016

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



Client: WESTINGHOUSE HANFORD
RFW #: 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

CLP METALS ADDENDUM

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

Raymond A. Siery
Inorganic Section Manager
Lionville Analytical Laboratory

11. 4. 93

Date

000078

9613402-3017



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

Client : WESTINGHOUSE HANFORD
RFW# : 9309L110

W.O. #: 06168-002-001-9999-00
Date Received: 09-29-93

INORGANIC

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

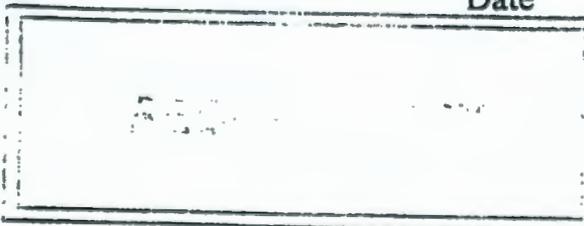
1. All sample holding times as required by 40CFR136 were met.
2. All preparation blank results were below the required detection limits.
3. All laboratory control standards (blank spikes) were within the control limits of 80-120%. All %RPD were within the 20% guidance limit.
4. All calibration verification checks were within the required control limits of 90-110%. Calibration verification is performed using independent standards.
5. Matrix spike recoveries are summarized on the Inorganic Accuracy Report contained within this document. All recoveries were within the 75-125% guidance limits. All %RPD were within the 20% guidance limit.
6. Replicate results are summarized on the Inorganic Precision Report contained within this document. All results were within the 20% RPD guidance limit.
7. The analytical methods applied by the laboratory, unless otherwise requested, for all inorganic analyses are derived from the USEPA Method for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), Standard Methods for the Examination of Water and Wastewater 16 ed. and Test Methods for Evaluating Solid Waste (USEPA SW846).



[Handwritten signature]

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

12-29-93
Date



000079
0001

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4865

page: 1 of 2

00216
COC-30

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N CELL SUMP
 SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
 Laboratory: Weston Protocol: RCRA Log book #: WML-N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	EN/R#	IC#
() 93261-07.127	AMERICIUM-241 (Lab Specific) Pu-238, -239, -240, -241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	0400mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	GAMMA SCAN (Lab Specific) Sr89/90, Ra-226, TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	0400mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	ICP METALS (6010) TIN, TITANIUM, ARSENIC(7060), SELENIUM(7740), THALLIUM(7841), MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 12/17		N/A	
() 93261-07.127	PCB/PEST (8080)	WATER	4 deg. C	01000mL eG	9/27/93 / 12/17		N/A	
() 93261-07.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL eG	9/27/93 / 12/17		N/A	
() 93261-07.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL eG	9/27/93 / 12/17		N/A	
() 93261-07.127	TRITIUM (Lab Specific)	WATER	None	00250mL eGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA (8240)	WATER	4 deg. C	00040mL eGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA (8240)	WATER	4 deg. C	00040mL eGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL eGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL eGs	9/27/93 / 12/17		N/A	
() 93261-07.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL eGs	9/27/93 / 12/17		N/A	

9613402-5018
2019/09/27

TLMR=510

(sign and print names)				Special Instructions/Conditions
Relinquished By: RZ Steffler	Date/Time: 9-28-93 1100	Received By:	Date/Time:	
Relinquished By: BURLINGTON	Date/Time: 9-29-93 310	Received By: M. Derril	Date/Time: 9/30/93 310	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4865

page: 2 of 2

ES010001

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N CELL SUMP
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916
Laboratory: Weston Protocol: RCRA Log book #: WMC-N-205-28 pages:

Bill of Lading #: _____
Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / time	Serial #	EH/RH	IC#
() 93261-07.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 12/7		N/A	
() 93261-08.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/7		N/A	
() 93261-08.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 12/7		N/A	

9613402.3019

Time: 3:50

(sign and print names)				Special Instructions/Conditions
Relinquished By: <i>RZ Steffler</i>	Date/Time: 9-28-93 1100	Received By:	Date/Time:	
Relinquished By: <i>BURLINGTON</i>	Date/Time: 9-29-93 3110	Received By: <i>M. Donnie</i>	Date/Time: 9/29/93 0310	
Relinquished By:	Date/Time:	Received By:	Date/Time:	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

9613402.3021

93261-08.I27

SAMPLE STATUS REPORT FOR E 7977. E-BLANK ~~63831-02~~ TIME: 3/15/93 8:25
DISPATCHED: 3/12/93 10:20 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 3/12/93 10:30

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	VOGEL

END OF REPORT

0028

000033

9615402.3022

SAMPLE STATUS REPORT FOR E 2329. E-BLANK 93261-07 TIME: 9/28/93 10: 5
DISPATCHED: 9/27/93 15:20 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 9/28/93 10: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	VOGEL

END OF REPORT

0029
00034

OVERNIGHT AIR

9613402.3023

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Unit SAMPLING & MOBILE LABS
The following items are to be shipped from		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Routing BURLINGTON AIR EXPRESS		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING	
		Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Code # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-384</u>	
<input type="checkbox"/> Classified <input checked="" type="checkbox"/> Unclassified <input type="checkbox"/> Shipped Under DOE Contract <input type="checkbox"/> Shipped Under Contractor's Use Permit Contract		

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859
93261	93258-02.I27	" 4862
93262	93258-03.I27	" 4861
	93262-01.I27	" 4871
	93261-09.I27	" 4868
	93261-07.I27	" 4865
	<u>93261-05.I27</u>	<u>4867</u>

RECEIVED

SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 5167057	Date 9-28-93
Location of Property (Area & Bldg.) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to White - Property Management Yellow - Retain	Green - Property Control Custodian (Issuing Office) Pink - Originator
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54-3000-479 (09/89)

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4868

page: 1 of 2

Collector: Steffler RZ

Project Designation: 1325N Waste Stream-4

Sampling Location: 1325N ~~EVAPORATOR PIT~~ ^{R25} 9-28-93

SAF #: 93-261

Sample Date: 9/27/93

Company Contact: MS HENDRIX

Phone #: 372-3916

Sample # 6

Bill of Lading #:

Laboratory: Weston

Protocol: RCRA

Log book #: WMC N-205-25 pages:

Offsite Prop #:

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / time	Serial #	EA/R#	IC#
(93261-09.127	AMERICIUM-241 (Lab Specific) Pu-238, -239, -240, -241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1300		N/A	
(93261-09.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 / 1300		N/A	
(93261-09.127	GAMMA SCAN (Lab Specific) Sr89/90, Ra-226, TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 / 1300		N/A	
(93261-09.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 / 1300		N/A	
(93261-09.127	ICP METALS (6010) TIN, TITANIUM, ARSENIC(7060), SELENIUM(7740), THALLIUM(7841), MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 / 1300		N/A	
(93261-09.127	PCB/PEST (8080)	WATER	4 deg. C	01000mL aG	9/27/93 / 1300		N/A	
(93261-09.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 / 1300		N/A	
(93261-09.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 / 1300		N/A	
(93261-09.127	TRITIUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 / 1300		N/A	
(93261-09.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
(93261-09.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 / 1300		N/A	
(93261-09.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
(93261-09.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	
(93261-09.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 / 1300		N/A	

9613402 3024 2016198

TEMP = 4.3

Relinquished By:	(sign and print names)	Date/Time:	Received By:	Date/Time:	Special Instructions/Conditions
RZ Steffler	R.Z. Steffler	9-28-93 1100			
BURLINGTON		9-29-93 5:10			

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

00000000

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4868

page: 2 of 2
R/E
0
AS-3000

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N G-EVAPORATOR PIT-^{RIS} 4-26 43
SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 ^{SUMP #6} Bill of Lading #: _____
Laboratory: Weston Protocol: RCRA Log book #: *W.A. N 265-28* pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	ER/R#	IC#
() 93261-09.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL eGs	9/27/93 1 1300		N/A	
() 93261-10.127	VOA (8240)	WATER	4 deg. C	00040mL eGs	9/27/93 1 1300		N/A	
() 93261-10.127	VOA (8240)	WATER	4 deg. C	00040mL eGs	9/27/93 1 1300		N/A	

9613402.3025

Temp = 4.3

(sign and print names)

Special Instructions/Conditions

Relinquished By: <i>RZ Steffler</i> <i>R.Z. Steffler</i>	Date/Time: <i>9-28-93 1100</i>	Received By: _____	Date/Time: _____	Special Instructions/Conditions
Relinquished By: _____	Date/Time: <i>9-29-93 3110</i>	Received By: <i>[Signature]</i>	Date/Time: <i>9/29/93 0810</i>	
Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

9613402.3026

SAMPLE STATUS REPORT FOR E 2330. E-BLANK 93261-09 TIME: 9/28/93 10: 5
DISPATCHED: 9/27/93 15:21 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 9/28/93 10: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	VOGEL

END OF REPORT

0033
000038

7615906 3027

93261-10.F27

SAMPLE STATUS REPORT FOR E 7977. E-BLANK ~~83031-02~~ TIME: 3/15/93 8:25
 DISPATCHED: 3/12/93 10:20 SAMPLE HAS NOT BEEN SLURPED
 RECEIVED: 3/12/93 10:30

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pci/G	N	Y	VOGEL

END OF REPORT

0034
000039

OVERNIGHT AIR

9613402.3028

Contractor WESTINGHOUSE HANFORD	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Unit SAMPLING & MOBILE LABS
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The following items are to be shipped from Contractor Vendor

Routing **BURLINGTON AIR EXPRESS** Contractor Vendor

Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING
	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Code # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-384</u>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859	RECEIVED SEP 28 1993 PROPERTY RECORDS BILL OF LADING # 997332674
93261	93258-02.I27	" 4862	
93262	93258-03.I27	" 4861	
	93262-01.I27	" 4871	
	93261-09.I27	" 4868	
	93261-07.I27	" 4865	
	93261-05.I27	4867	

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No. 5167057	Date 9-28-93
Location of Property (Area & Bldg.) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator	Shipping Operation - Sign all Copies and Forward to: 25
White, Green, Yellow, Pink - Property Management	White - Property Management Green - Property Control Custodian (Issuing Office)
Goldenrod - Retain	Yellow - Retain Pink - Originator

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4867

page: 1 of 20

0030

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N EMERGENCY DUMP BASIN
 SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
 Laboratory: Weston Protocol: RCRA Log book #: WNC-N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / Time	Serial #	EW/RB	ICB
() 93261-05.127	AMERICIUM-241 (Lab Specific) Pu-238, -239, -240, -241. TOTAL URANIUM (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 1 1420		N/A	
() 93261-05.127	CHLORIDE (9250)	WATER	NONE	00250mL P	9/27/93 1 1420		N/A	
() 93261-05.127	GAMMA SCAN (Lab Specific) Sr89/90, Ra-226, TOTAL RADIUM, (ALL LAB SPECIFIC)	WATER	HNO3	04000mL P	9/27/93 1 1420		N/A	
() 93261-05.127	GROSS ALPHA/BETA (Lab Specific)	WATER	HNO3	01000mL P	9/27/93 1 1420		N/A	
() 93261-05.127	ICP METALS (6010) TIN, TITANIUM, ARSENIC(7060), SELENIUM(7740), THALLIUM(7841), MERCURY(7470)	WATER	HNO3	01000mL P	9/27/93 1 1420		N/A	
() 93261-05.127	PCB/PEST (8080)	WATER	4 deg. C	0.000mL aG	9/27/93 1 1420		N/A	
() 93261-05.127	SEMI-VOA (8270)	WATER	4 deg. C	02500mL aG	9/27/93 1 1420		N/A	
() 93261-05.127	TOTAL RECOVERABLE OIL & GREASE (9070)	WATER	H2SO4	01000mL aG	9/27/93 1 1420		N/A	
() 93261-05.127	TRITUM (Lab Specific)	WATER	None	00250mL aGs	9/27/93 1 1420		N/A	
() 93261-05.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 1 1420		N/A	
() 93261-05.127	VOA (8240)	WATER	4 deg. C	00040mL aGs	9/27/93 1 1420		N/A	
() 93261-05.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 1 1420		N/A	
() 93261-05.127	VOA AROMATIC (8020)	WATER	Na2S2O3	00040mL aGs	9/27/93 1 1420		N/A	
() 93261-05.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040mL aGs	9/27/93 1 1420		N/A	

9313402

Temp = 3.3

Relinquished By:	(sign and print names)	Date/Time:	Received By:	Date/Time:	Special Instructions/Conditions
RZ Steffler	<i>RZ Steffler</i>	9-28-93 1100			
R.Z. Steffler	<i>R.Z. Steffler</i>				
BURLINGTON	<i>BURLINGTON</i>	9-29-93 3110	<i>[Signature]</i>	9-29-93 6310	

Laboratory Section	Received By:	Title:	Date/Time:
(Sample Disposition)	Disposal Method:	Disposed of By:	Date/Time:

Westinghouse
Hanford Company

Chain of Custody / Sample Analysis Request

COC # 4667

page: 2 of 2

0131
00032

Collector: Steffler RZ Project Designation: 1325N Waste Stream-4 Sampling Location: 1325N EMERGENCY DUMP BASIN
 SAF #: 93-261 Sample Date: 9/27/93 Company Contact: MS HENDRIX Phone #: 372-3916 Bill of Lading #: _____
 Laboratory: Weston Protocol: RCRA Log book #: WNL-N-205-28 pages: _____ Offsite Prop #: _____

Sample Id #	Analysis (Parameters)	Matrix	Preservative(s)	Container	Date / time	Serial #	EN/R#	ICH
() 93261-05.127	VOA HALOGENATED (8010)	WATER	Na2S2O3	00040ml aGc	9/27/93 / 1420			N/A
() 93261-06.127	VOA (8240)	WATER	4 deg. C	00040ml aGc	9/27/93 / 1420			N/A
() 93261-06.127	VOA (8240)	WATER	4 deg. C	00040ml aGc	9/27/93 / 1420			N/A

9613402-3030

Temp = 3.5

(sign and print names)

Relinquished By: <i>RZ Steffler</i>	Date/Time: 9-28-93 1100	Received By: _____	Date/Time: _____	Special Instructions/Conditions
Relinquished By: <i>R.J. Steffler</i>	Date/Time: 9-29-93 3110	Received By: <i>[Signature]</i>	Date/Time: 9/29/93 3110	
Relinquished By: <i>BURLINGTON</i>	Date/Time: _____	Received By: _____	Date/Time: _____	

Laboratory Section Received By: _____ Title: _____ Date/Time: _____
 (Sample Disposition) Disposal Method: _____ Disposed of By: _____ Date/Time: _____

9613402.3031

SAMPLE STATUS REPORT FOR E 2328. E-BLANK 93261-05 TIME: 9/28/93 10: 5
DISPATCHED: 9/27/93 15:20 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 9/28/93 10: 1

EXT.	DETER.	RESULTS OR STATUS	OUT OF GOOD RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	79.78 PCI/ML, 34.31 PCI/ML POSSIBLE ALPHA			VOGEL

END OF REPORT

0038

000033

9613402.3032

93261-06.I27

SAMPLE STATUS REPORT FOR E 7977. E-BLANK ~~S3831-82~~ TIME: 3/15/93 8:25
 DISPATCHED: 3/12/93 10:20 SAMPLE HAS NOT BEEN SLURPED
 RECEIVED: 3/12/93 10:30

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	VOGEL

END OF REPORT

0039
000034

OVERNIGHT AIR

Contractor WESTINGHOUSE HANFORD	9613402.3053 OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W93-0-0764-30
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PART I - TO BE COMPLETED BY ORIGINATOR

Department PROCESSING & ANALYTICAL LABS	Section ANALYTICAL CHEMISTRY	Use SAMPLING & MOBILE LABS
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The following items are to be shipped from Contractor Vendor

Routing **BURLINGTON AIR EXPRESS** Contractor Vendor

Shipped to WESTON LAB 256 WELSH POOL ROAD LIONVILLE, PA.19341-1313	Off-site Custodian JOSIE KING Full Title
--	---

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
	POLYCOOLERS. WATER SAMPLES THAT ARE DOUBLE BAGGED AND STORED ON WET ICE.	
WEIGHT <u>97</u>	COOLER # <u>SML-413</u> Weight <u>65</u> Code # <u>SML-144</u>	
WEIGHT <u>63</u>	COOLER # <u>OT-5</u>	
WEIGHT <u>75</u>	COOLER # <u>SML-87</u>	
WEIGHT <u>84</u>	COOLER # <u>SML-389</u>	

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

Necessity for the Off-Site Use of this Property

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

SAF#s 93258	93258-01.I27	CoC# 4859
93261	93258-02.I27	" 4862
93262	93258-03.I27	" 4861
	93262-01.I27	" 4871
	93261-09.I27	" 4868
	93261-07.I27	" 4865
	<u>93261-05.I27</u>	<u>4867</u>

RECEIVED

SEP 28 1993

PROPERTY RECORDS

BILL OF LADING # 997332674

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 5167057	Date 9-28-93
Location of Property (Area & Bldg) 200 WEST AREA 202-S ANNEX	Contact RZ STEFFLER	Phone 373-9146
Date Ready for Shipment 9-28-93	Cost Code to be Charged Org Code 12911 E17205	Approximate Date This Property will be Returned N/A
Originated By RZ STEFFLER	Date 9-28-93	Authorized By JE HYATT
Signature and Name of Property Control <i>[Signature]</i>	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i>
		Date 9/28/93

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No	Date Issued	Purchase Order No.	Date Issued
Date				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Green - Property Control Custodian (Issuing Office) Yellow - Retain Pink - Originator
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0040

00035

001001



CORPORATE SUPPORT GROUP
18200 VON KARMAN AVE
RYVIE, CA 92715

9309L109
9309L110

997 332 674

9309L111

DATE: 09-28-93
ORIGIN: PHL
DEST. SORT CODE: []

SHIPPER'S REFERENCE NO. 12911 E17205 W93-0764#30
SHIPPER'S ACCOUNT NO. 1-014-419

COMPANY: U S STEFFLER
DEPT./FLOOR: C/O WESTINGHOUSE

FROM (YOUR NAME): HANFORD COMPANY
PHONE NO. []

WESTINGHOUSE SHIPPING DEPT. (509) 376-6665
STREET ADDRESS: 2355 STEVENS DR

CITY: RICHLAND
STATE: WA
ZIP (REQUIRED): []

CONSIGNEE'S REFERENCE NO. 2
CONSIGNEE'S ACCOUNT NO. []

AIRBILL NUMBER: 997 332 674

COMPANY: RF WESTON INC
DEPT./FLOOR: []

TO (CONSIGNEE NAME): RF WESTON INC
PHONE NO. []

ACCURATE STREET ADDRESS (BURLINGTON CANNOT DELIVER TO A P.O. BOX)
256 WELSH POOL ROAD
CITY: LIONVILLE PA
STATE: PA
ZIP (REQUIRED): 19341

3 C.O.D.
\$

CONSIGNEE'S CHECK O.K.
MARK E []
APPLICABLE []
CONSIGNEE IS LIABLE FOR LOSS OF GOODS & OTHER CHARGES INCURRED BY THE SHIPPER FOR THE VALUE OF THE GOODS IN THE EVENT GOODS ARE DESTROYED

DECLARED VALUE \$

LIMIT OF LIABILITY
LIABILITY IS AGREED AND UNDERSTOOD TO BE \$50.00 OR \$50 PER POUND, WHICHEVER IS GREATER, UNLESS A HIGHER VALUE IS DECLARED AND APPLICABLE CHARGES PAID. SEE REVERSE SIDE OF AIRBILL PARAGRAPH 8 FOR DECLARED VALUE LIMITATIONS.

1-800-CALL-BAX
FOR INFORMATION OR THE BAX OFFICE NEAREST YOU

4 BILLING INFORMATION

PREPAID (SHIPPER) \$ []
CASH RECEIVED (PAID IN ADVANCE)

COLLECT (CONSIGNEE)

3RD PARTY (ACCT. NO. OR BILLING ADDRESS RECD.)

ACCOUNT NO. []

COMPANY/NAME []

STREET ADDRESS []

CITY [] STATE [] ZIP []

5 SERVICE REQUESTED

OVERNIGHT (NEXT BUSINESS DAY)

SECOND DAY

NEXT FLIGHT OUT

CHECK BELOW IF PACKAGE IS

LETTER

G.O.H. (GARMENT ON HANGER)

6 HANDLING INFORMATION (*SPECIAL RATE MAY APPLY)

HOLD AT BAX DANGEROUS GOODS SATURDAY DELIVERY SPECIAL DELIVERY CONVENTION GOVERNMENT SHIPMENT

SPECIAL INSTRUCTIONS / ADDITIONAL REFERENCE INFORMATION:
WATER SAMPLES

NO. OF PCS	WEIGHT	LENGTH	WIDTH	HEIGHT	DESCRIPTION
5	384				COOLERS 10: SML413 97#; 01-5 63#; SML87 75#; SML389 84#; SML144 65#
TOTAL PCS	TOTAL WT				
5	384				

SKID(S) SAID TO CONTAIN [] NO. OF PIECES []

RECEIVED BY BAX AT SHIPPER'S DOOR BAX TERMINAL

TIME/DATE OF PICK-UP [] DRIVER NO. []

7 SIGNATURE OF SHIPPER: [Signature]

RELEASE SIGNATURE: [Signature]

X

OUTSIDE CARRIER: []

CHARGES ADVANCED \$ []

PRO NUMBER []

CARRIER NAME []

997 332 674

AIRBILL NUMBER

NON NEGOTIABLE AIRBILL SUBJECT TO TERMS AND CONDITIONS OF CONTRACT ON REVERSE SIDE

CONSIGNEE COPY

1400
9309L111