0045010

W0801 - QES-451

December 22, 1995

DEC 1995
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SDLA

Karl Pool
Buyer's Technical Representative
Westinghouse Hanford
P.O. Box 1970
2355 Stevens Drive
Richland, WA 99352

Reference: **Contract MPV-SVV-239000.**

Dear Mr. Pool:

Accompanying this letter are the Data Package and Electronic Deliverables for Chemical analyses on the following WHC samples:

SDG NUMBER	SAF NUMBER
W0798	95-104
W0799	95-104
W0800	95-099
W0801	95-013
W0803	95-101
W0805	95-105

If you have any questions regarding this data package or require any additional information please contact me at 375-3131.

Sincerely,

Jodie Carnes
Document Control Officer

Receipt of this letter and the package are acknowledged by:

Sandra K Walls — Name
12-22-95 — Date
3:45 — Time

AUG 1996
RECEIVED
EDMC

XC: Vicki Parr
Van Pettey File

Analytical Data Package Prepared For

Westinghouse Hanford

Chemical Analysis By

Quanterra Environmental Services
St. Louis Laboratory

Sample Delivery Group Number: W0801

DEC 1995
RECEIVED
SDLA

WHC IDENTIFICATION NUMBER	QUANTERRA ID NUMBER
B0FBV1 (Tank F4) ew	9780-001
B0FBV2	9780-002
B0FBT8 (Tank M2) ew	9780-003
B0FBT9	9780-004

Quanterra Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CERTIFICATE OF ANALYSIS

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

December 11, 1995

Attention: Karl Pool

Project number	:	519.136
Date Received by Lab	:	November 10, 1995
Number of Samples	:	Four (4)
Sample Type	:	Water
SDG Number	:	W0801
Data Deliverable	:	Summary

I. Introduction

On November 10, 1995, four (4) water samples were received by Quanterra, Richland and transferred to Quanterra, St. Louis for chemical analysis. Upon receipt, the samples were given the following laboratory ID numbers to correspond with the specific client ID's:

St Louis ID	WHC ID	Richland ID	Matrix	Date of Receipt
9780-001	B0FBV1	51114903	Water	11/10/95
9780-002	B0FBV2	51114904	Water	11/10/95
9780-003	B0FBT8	51114901	Water	11/10/95
9780-004	B0FBT9	51114902	Water	11/10/95

II. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits.

Analyses requested: pH by EPA method 9040. TOC by EPA method 9060. VOA by EPA method 8240. TAL ICP Metals by EPA method 6010. Arsenic by EPA method 7060. Selenium by EPA 7740. Mercury by EPA method 7470.

III. Quality Control

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch. Matrix Spike and Matrix Spike Duplicate and/or Sample Duplicate analyses were performed per the protocol for each analyte. pH analysis uses only Sample Duplicate for matrix QC.

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike

V. Comments

Samples arrived in St. Louis at 9°C which is not within the recommended 4°C ± 2°C.

There are no comments or nonconformances associated with the VOA analysis.

For the Metals analysis; sample 9780-002 and its associated matrix QC were digested using a reduced sample size due to insufficient sample volume. The final volume of the digestate was adjusted so as not to affect the detection limits.

The Relative Percent Difference could not be calculated due to values being below the detection limits for sample 9780-002 and its duplicate for the TOC analysis.

Quanterra
Environmental Services

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Reviewed and approved:

Wade H. Price
Project Manager
e:\\sqtlmo01\price$\abbydave\hanford\hanw0801.nar

Quanterra November 14, 1995 08:50 am
Account: 10722 Project: 519.136 Quanterra-Richland QAS No. 861 Rev. 1
Master Sample Login: 9780

Project Manager: W. Price

Draft: Final; Entered and Reviewed by: Sue Mson PM Review: Abby Nold

Sample Header Template:

Sample No. / #	Client ID / Container Type	C-Matrix / Analysis	Date: Collected / Class	Received / Preservative	Due / Anal. Due Date	Shipper / Hold Date	Rad Category / Site	Rad Sample No. / (Container Numbers:% Filled)
9780-001	BOFBV1	Water	03-NOV-95 10:53	10-NOV-95 11:45	28-NOV-95	FED-EX	3	R4410-004
NOTE: RICHLAND ID 51114903 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L; As<5.0 mg/L; Se<1.0 mg/L; Hg<0.2 mg/L								
1	VI - Vial-40ml	PH/9040/Q4	S	COLD	27-NOV-95	04-NOV-95	109A	(195875:100)
1		TOC/9060/Q4	S	COLD	27-NOV-95	01-DEC-95	109A	(195874:100)
2		VOA/8240/Q4	S	COLD	27-NOV-95	17-NOV-95	R22E	(195876:100 195877:100)
1	AN - Amber Glass-1L	AS/7060/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195873:100)
1		HG/7470/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195873:100)
1		ICAP/6010/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195873:100)
1		SE/7740/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195873:100)
9780-002	BOFBV2	Water	03-NOV-95 10:15	10-NOV-95 11:45	28-NOV-95	FED-EX	1	R4410-003
NOTE: RICHLAND ID 51114904 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L; As<5.0 mg/L; Se<1.0 mg/L; Hg< 0.2 mg/L								
1	VI - Vial-40ml	PH/9040/Q4	S	COLD	27-NOV-95	04-NOV-95	R22E	(195881:100)
1		TOC/9060/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195882:100)
2		VOA/8240/Q4	S	COLD	27-NOV-95	17-NOV-95	109A	(195879:100 195880:100)
1	AN - Amber Glass-1L	AS/7060/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)
1		HG/7470/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195878:100)
1		ICAP/6010/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)
1		SE/7740/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)
9780-002DUP	BOFBV2	Water	03-NOV-95 10:15	10-NOV-95 11:45	28-NOV-95	FED-EX	1	R4410-003
NOTE: RICHLAND ID 51114904 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L; As<5.0 mg/L; Se<1.0 mg/L; Hg< 0.2 mg/L								
1	VI - Vial-40ml	PH/9040/Q4	S	COLD	27-NOV-95	04-NOV-95	R22E	(195881:100)
1		TOC/9060/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195882:100)
9780-002MS	BOFBV2	Water	03-NOV-95 10:15	10-NOV-95 11:45	28-NOV-95	FED-EX	1	R4410-003
NOTE: RICHLAND ID 51114904 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L; As<5.0 mg/L; Se<1.0 mg/L; Hg< 0.2 mg/L								
1	VI - Vial-40ml	TOC/9060/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195882:100)
2		VOA/8240/Q4	S	COLD	27-NOV-95	17-NOV-95	109A	(195879:100 195880:100)
1	AN - Amber Glass-1L	AS/7060/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)
1		HG/7470/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195878:100)
1		ICAP/6010/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)
1		SE/7740/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)
9780-002MSD	BOFBV2	Water	03-NOV-95 10:15	10-NOV-95 11:45	28-NOV-95	FED-EX	1	R4410-003
NOTE: RICHLAND ID 51114904 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L; As<5.0 mg/L; Se<1.0 mg/L; Hg< 0.2 mg/L								
2	VI - Vial-40ml	VOA/8240/Q4	S	COLD	27-NOV-95	17-NOV-95	109A	(195879:100 195880:100)
1	AN - Amber Glass-1L	AS/7060/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)

3*=Sample has not been rad screened.

00005

Quanterra November 14, 1995 08:50 am
Account: 10722 Project: 519.136 Quanterra-Richland QAS No. 861 Rev. 1
Master Sample Login: 9780

Project Manager: W. Price

Draft: Final: Entered and Reviewed by:_____ PM Review:_____

Sample Header Template: _____

Sample No. / Comments #	Client ID / Container Type	C-Matrix / Analysis	Date: Collected / Class	Received / Preservative	Due / Anal. Due Date	Shipper / Hold Date	Site	Rad Category / (Container Numbers:% Filled)	Rad Sample No.
Data:									
1		HG/7470/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195878:100)	
1		ICAP/6010/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)	
1		SE/7740/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195878:100)	
9780-003	B0FBT8	Water	03-NOV-95 10:23	10-NOV-95 11:45	28-NOV-95	FED-EX	1		R4410-002
NOTE: RICHLAND ID 51114901 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L As<50.0 mg/L; Se<1.0 mg/L; Hg<0.2 mg/L									
1	VI - Vial-40ml	PH/9040/Q4	S	COLD	27-NOV-95	04-NOV-95	R22E	(195886:100)	
1		TOC/9060/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195887:100)	
2		VOA/8240/Q4	S	COLD	27-NOV-95	17-NOV-95	109A	(195884:100 195885:100)	
1	AN - Amber Glass-1L	AS/7060/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195883:100)	
1		HG/7470/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195883:100)	
1		ICAP/6010/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195883:100)	
1		SE/7740/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195883:100)	
9780-004	B0FBT9	Water	03-NOV-95 10:15	10-NOV-95 11:45	28-NOV-95	FED-EX	1		R4410-001
NOTE: RICHLAND ID 51114902 Cr<5.0 mg/L; Ba<100.0 mg/L; Ag<5.0 mg/L; Cd<1.0 mg/L; Pb<5.0 mg/L; As<5.0 mg/L; Se<1.0 mg/L; Hg<0.2 mg/L									
1	VI - Vial-40ml	PH/9040/Q4	S	COLD	27-NOV-95	04-NOV-95	R22E	(195891:100)	
1		TOC/9060/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195892:100)	
2		VOA/8240/Q4	S	COLD	27-NOV-95	17-NOV-95	109A	(195889:100 195890:100)	
1	AN - Amber Glass-1L	AS/7060/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195888:100)	
1		HG/7470/Q4	S	COLD	27-NOV-95	01-DEC-95	R22E	(195888:100)	
1		ICAP/6010/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195888:100)	
1		SE/7740/Q4	S	COLD	27-NOV-95	01-MAY-96	R22E	(195888:100)	
9780-005	TRIP BLANK	Water	03-NOV-95 00:00	10-NOV-95 11:45	28-NOV-95	FED-EX	1		Screening not Required
4	VI - Vial-40ml	HOLD//Q4	S	COLD	11-&&&-**	11-&&&-**	109A	(195894:100 195895:100 195913:100 195914:100)	

3*=Sample has not been rad screened.

00006

Temp 9°C / 4°C Cur # 5794

Chain of Custody Record

Quanterra Environmental Services

QUA-4124-1

Client	Project Manager	Date	Chain Of Custody Number
WHC St Louis	V Pettey	11/10/95	43679
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City / State / Zip Code	Site Contact / Lab Contact		
Project Name: 95-013	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH
51114901 BOFBT8												
2 BOF BT9												
3 BOF BV1												
4 BOF BV2												
11/10/95												
JM Recv 4X40ml Glass-A (no Label) H2O												

Possible Hazard Identification: Radioactive
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal: ☑ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify): SDG W0801

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	11/10/95	1600	1. M. Nelson	11-13-95	8:45
2.			2.		
3.			3.		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

00007

Westinghouse Hanford Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C# 9577 Page 1 of 2

Collector D.E. RICHARDS	Contact/Requestor VILLALOBOS, CARMEN	Tel. No. 373-4753 MSIN S6-19 FAX
SAF Number 95-013	Sample Origin PUREX/TANK F-4	Purchase Order/Charge Code BPS17/BH132
Project Title Flush PUREX Vessels - 2	Logbook # WHC-N-205 #51	Ice Chest # #See RSR #10331 SINL-329 Temp. 4°C
Shipped To (Lab) Quanterra	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol RCRA	Data Turnaround PRIORITY	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
* B0FBV1	~~5113~~ 5111013	W	11/3/95	1053	(1) 20 aGs	ACTIVITY SCAN (Lab Specific)	None
~~* B0FBV1~~		~~W~~	~~11/3/95~~		~~(1) 20 aGs~~	GEA, TOTAL ALPHA, TOTAL BETA (lab specific). KEL 11/10/95	None
* B0FBV1	5111490 3	W	11/3/95		(1) 1000 aG	ICP METALS TAL (6010) : to include Pb As (7060), Se (7740), Hg (7470) , PARAMETERS: Cr<5 0 mg/L, Ba<100 0 mg/L, Ag<5 0 mg/L, Cd<1 0 mg/L, Pb<5 0 mg/L, As<5 0 mg/L, Se<1 0 mg/L, Hg<0 2 mg/L. 70%	4 deg. C
* B0FBV1		W	11/3/95		(1) 40 aGs	pH (9040) 100%	None
* B0FBV1		W	11/3/95		(1) 40 aGs	TOC (9060)	4 deg. C
* B0FBV1		W	11/3/95		(1) 40 aGs	VOA (8240)	4 deg. C
* B0FBV1		W	11/3/95	1015	(1) 40 aGs	VOA (8240)	4 deg. C
B0FBV2	5111490 4	W	11/3/95		(1) 20 aGs	ACTIVITY SCAN (Lab Specific)	None
~~B0FBV2~~		~~W~~	~~11/3/95~~		~~(1) 20 aGs~~	GEA, TOTAL ALPHA, TOTAL BETA (lab specific) KEL 11/10/95	None
B0FBV2		W	11/3/95		(1) 1000 aG	ICP METALS TAL (6010) : to include Pb As (7060), Se (7740), Hg (7470) , PARAMETERS: Cr<5 0 mg/L, Ba<100 0 mg/L, Ag<5 0 mg/L, Cd<1 0 mg/L, Pb<5 0 mg/L, As<5 0 mg/L, Se<1 0 mg/L, Hg<0 2 mg/L. 78%	4 deg. C
B0FBV2		W	11/3/95		(1) 40 aGs	pH (9040) 100%	None
B0FBV2		W	11/3/95		(1) 40 aGs	TOC (9060)	4 deg. C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☒

* List all known wastes.

Sample #B0FBV1 is a Radioactive Material.

SPECIAL INSTRUCTIONS Hold Time

PRIORITY 15 DAY TURNAROUND.

SDG W0807

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DE Richards		DE Richards	11/10/95 1145	Kevin Gehrenberg		Kevin Gehrenberg	11-10-95 11:45
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method e g Return to customer, per lab procedure, used in process. Disposed By Date/Time

All samples containing hazardous materials shall be picked up by requestor and returned to parent container or site of origin.

A-6001-500 (07/95)

80000

Westinghouse Hanford Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C# 9577 Page 2 of 2

Collector D.E. RICHARDS	Contact/Requestor VILLALOBOS, CARMEN	Tel. No. 373-4753 MSIN S6-19 FAX
SAF Number 95-013	Sample Origin PUREX / TANK F-4	Purchase Order/Charge Code KP5IT / BH132
Project Title Flush PUREX Vessels - 2	Logbook # WHC-N-205 #51	Ice Chest # * See RSR# 10081 SIIL-3CY Temp. 4°C
Shipped To (Lab) Quanterra	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol RCRA	Data Turnaround PRIORITY	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B0FBV2	5114904	W	11/3/95	1015	(1) 40 aGs	VOA (8240) 100	4 deg. C
B0FBV2	1	W	11/3/95	1015	(1) 40 aGs	VOA (8240) ↓	4 deg. C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☒
List all known wastes.

SPECIAL INSTRUCTIONS Hold Time
PRIORITY 15 DAY TURNAROUND
SDG-W0801

Relinquished By Print / Sign	Date/Time	Received By Print / Sign	Date/Time
DE Richards, DE Richards	11/45 11/10/95	Karen Oldenburg	11-10-95 11.45
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By № 00009	Date/Time	Received By	Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SB	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method e.g. Return to customer, per lab procedure, used in process	Disposed By	Date/Time

All samples containing hazardous materials shall be picked up by requestor and returned to parent container or site of origin.

A-6001-500 (07/95)

Westinghouse Hanford Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C # 9575 Page 1 of 2

Collector D.E. RICHARDS	Contact/Requestor VILLALOBOS, CARMEN	Tel. No. 373-4753 MSIN S6-19 FAX
SAF Number 95-013	Sample Origin PUREX / Tank M-2	Purchase Order/Charge Code DP5IT / SH132
Project Title Flush PUREX Vessels - 2	Logbook # WHC-U-205 #51	Ice Chest # SML-369 Temp. 4°C
Shipped To (Lab) Quanterra	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol RCRA	Data Turnaround PRIORITY	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
* B0FBT8	5111490/	W	11/3/95	1023	(1) 20 aGs	ACTIVITY SCAN (Lab Specific)	4 deg. C
~~* B0FBT8~~		~~W~~	~~11/3/95~~		~~(1) 20 aGs~~	GEA, TOTAL ALPHA, TOTAL BETA (lab specific). FJK 11/10/95	None
* B0FBT8		W	11/3/95		(1) 1000 aG	ICP METALS TAL (6010) : to include Pb As (7060), Se (7740), Hg (7470) , PARAMETERS: Cr<5 0 mg/L, Ba<100 0 mg/L, Ag<5.0 mg/L, Cd<1 0 mg/L, Pb<5 0 mg/L, Ar<5 0 mg/L, Se<1 0 mg/L, Hg<0 2 mg/L. 100%	4 deg. C
* B0FBT8		W	11/3/95		(1) 40 aGs	pH (9040) 100	None
* B0FBT8		W	11/3/95		(1) 40 aGs	TOC (9060) 100	COOL TO 4 C
* B0FBT8		W	11/3/95		(1) 40 aGs	VOA (8240)	4 deg. C
* B0FBT8		W	11/3/95		(1) 40 aGs	VOA (8240)	4 deg. C
B0FBT9	02	W	11/3/95	1015	(1) 20 aGs	ACTIVITY SCAN (Lab Specific)	None
~~B0FBT9~~		~~W~~	~~11/3/95~~		~~(1) 20 aGs~~	GEA, TOTAL ALPHA, TOTAL BETA (lab specific). FJK 11/10/95	None
B0FBT9		W	11/3/95		(1) 1000 aG	ICP METALS TAL (6010) : to include Pb As (7060), Se (7740), Hg (7470) , PARAMETERS: Cr<5 0 mg/L, Ba<100 0 mg/L, Ag<5 0 mg/L, Cd<1 0 mg/L, Pb<5 0 mg/L, Ar<5 0 mg/L, Se<1 0 mg/L, Hg<0 2 mg/L. 100%	4 deg. C°
B0FBT9		W	11/3/95		(1) 40 aGs	pH (9040) 100	None
B0FBT9		W	11/3/95		(1) 40 aGs	TOC (9060)	4 deg. C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☒

List all known wastes.

~~* Sample # B0FBT8 is a Radioactive Material.~~ FJK 11-10-95

SPECIAL INSTRUCTIONS Hold Time

PRIORITY 15 DAY TURNAROUND.

5111490/2 SDG W0801

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DE Richards		DE Richards	11/10/95 11/4/95	Karen Gottling		Karen Gottling	11-10-95 11:45
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By	№ 00010		Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

All samples containing hazardous materials shall be picked up by requestor and returned to parent container or site of origin.

A-6001-500 (07/95)

Westinghouse Hanford Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C # 9575
		Page 2 of 2

Collector D.E. RICHARDS	Contact/Requestor VILLALOBOS, CARMEN	Tel. No. 373-4753 MSIN S6-19 FAX
SAF Number 95-013	Sample Origin PUREX/Tank M-2	Purchase Order/Charge Code DP51T/8H132
Project Title Flush PUREX Vessels - 2	Logbook # WHC-N-205 #51	Ice Chest # SML-369 Temp.
Shipped To (Lab) Quanterra	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol RCRA	Data Turnaround PRIORITY	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B0FBT9	5114902	W	11/3/95	1015	(1) 40 aGs	VOA (8240) 100%	4 deg. C
B0FBT9		W	11/3/95	1015	(1) 40 aGs	VOA (8240) ↓	4 deg. C

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☑
List all known wastes.

SPECIAL INSTRUCTIONS Hold Time
PRIORITY 15 DAY TURNAROUND SDG W0801

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
DE Richards, [signature]	11/4/95 11/10/95	Kevin Atkinson [signature]	11:45 11-10-95
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

00011

FINAL SAMPLE DISPOSITION Disposal Method e.g. Return to customer, per lab procedure, used in process. Disposed By Date/Time

All samples containing hazardous materials shall be picked up by requestor and returned to parent container or site of origin.

A-6001-500 (07/95)

tape 11/13/95 519.13p

Client Sample Screening Results

10-Nov-95

(R3) 11-10-95

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0FBT8		11/10/95 11:00:00 AM	QUAD21A	11/10/95 1:50:02 PM	B0FBT8	30	294	9.74625	13822	459.80333
	LIQUID		Bkg:	11/10/95 5:29:04 AM	BKG	800	43	0.05375	744	0.93

Anl Date: 11/10/95	Tot Sa, Alq: 1.00E+00	, 1.00E+01	Alp;	(Dpm/ 1.33E+01	(uCi/ 5.98E-04	(pCi/ 5.98E+02	± 5.0E+01	CAT	4.2E-02	Lab
Ppt mg: 0.7	Units: L	, ml	Bet;	Alq): 9.11E+02	Sa): 4.11E-02	L/g): 4.11E+04	± 3.5E+02	I	1.2E-03	Alq L/g

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0FBT9		11/10/95 11:00:00 AM	QUAD21B	11/10/95 1:50:02 PM	B0FBT9	30	3	0.045	29	0.0829167
	LIQUID		Bkg:	11/10/95 5:29:04 AM	BKG	800	44	0.055	707	0.88375

Anl Date: 11/10/95	Tot Sa, Alq: 1.00E+00	, 1.00E+01	Alp;	(Dpm/ 1.38E-01	(uCi/ 6.22E-06	(pCi/ 6.22E+00	± 2.0E+01	CAT	4.0E+00	Lab
Ppt mg: 0.2	Units: L	, ml	Bet;	Alq): 1.33E-01	Sa): 5.97E-06	L/g): 5.97E+00	± 1.6E+01	I	8.4E+00	Alq L/g

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0FBV1		11/10/95 11:00:00 AM	QUAD21A	11/10/95 1:00:01 PM	B0FBV1	30	415	13.7795833	24414	812.87
	LIQUID		Bkg:	11/10/95 5:29:04 AM	BKG	800	43	0.05375	744	0.93

Anl Date: 11/10/95	Tot Sa, Alq: 1.00E+00	, 2.00E-03	Alp;	(Dpm/ 1.32E+01	(uCi/ 2.97E+00	(pCi/ 2.97E+06	± 2.5E+05	CAT	8.4E-06	Lab
Ppt mg: 0.2	Units: L	, ml	Bet;	Alq): 1.61E+03	Sa): 3.63E+02	L/g): 3.63E+08	± 2.3E+06	III	1.4E-07	Alq L/g

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0FBV2		11/10/95 11:00:00 AM	QUAD21C	11/10/95 1:50:02 PM	B0FBV2	30	3	0.05625	29	0.0366667
	LIQUID		Bkg:	11/10/95 5:29:04 AM	BKG	800	35	0.04375	744	0.93

Anl Date: 11/10/95	Tot Sa, Alq: 1.00E+00	, 1.00E+01	Alp;	(Dpm/ 1.62E-01	(uCi/ 7.29E-06	(pCi/ 7.29E+00	± 1.9E+01	CAT	3.4E+00	Lab
Ppt mg: 0.1	Units: L	, ml	Bet;	Alq): 3.92E-02	Sa): 1.76E-06	L/g): 1.76E+00	± 1.6E+01	I	2.8E+01	Alq L/g

Liquid Samples

Sample # BOFBV1				Total ml per sample		840ml	
isotope	A_2	pCi/ml	pCi/ sample	nCi/ sample	μCi/ sample	Ltd Qty Value in mCi	Unity for Ltd Qty
Total Beta	.4	174867	146,888,280.0000	146,888.28	146.8883	0.0400	3.6722
Total Alpha	.002	630	529,200.0000	529.20	0.5292	0.0002	2.6460
Cs-137	10	175000	147,000,000.0000	147,000.00	147.0000	1.0000	0.1470
Cs-134	10	0	0.0000	0.00	0.0000	1.0000	0.0000
Am-241	.008	1560	1,310,400.0000	1,310.40	1.3104	0.0008	1.6380
Co-60	7	0	0.0000	0.00	0.0000	0.7000	0.0000
Eu-152	10	0	0.0000	0.00	0.0000	1.0000	0.0000
Eu-154	5	133	111,720.0000	111.72	0.1117	0.5000	0.0002
Tritium	1000	0	0.0000	0.00	0.0000	100.0000	0.0000
Ra-226	.05	0	0.0000	0.00	0.0000	0.0050	0.0000
Th-234	10	0	0.0000	0.00	0.0000	1.0000	0.0000
Th-228	.008	0	0.0000	0.00	0.0000	0.0008	0.0000
U-235	.2	0	0.0000	0.00	0.0000	0.0200	0.0000
Pu-238	.003	0	0.0000	0.00	0.0000	0.0003	0.0000
Pu-239	.002	0	0.0000	0.00	0.0000	0.0002	0.0000
Sr-90	.4	0	0.0000	0.00	0.0000	0.0400	0.0000
Sb-125	25	0	0.0000	0.00	0.0000	2.5000	0.0000
TOTAL		352,190.00	295,839,600.0000	295,839.60	295.8396		8.1034.

Liquid Samples

Sample # BOFBV1				Total ml per sample		180ml	
isotope	A_2	pCi/ml	pCi/ sample	nCi/ sample	µCi/ sample	Ltd Qty Value in mCi	Unity for Ltd Qty
Total Beta	.4	174867	31,476,060.0000	31,476.06	31.4761	0.0400	0.7869
Total Alpha	.002	630	113,400.0000	113.40	0.1134	0.0002	0.5670
Cs-137	10	175000	31,500,000.0000	31,500.00	31.5000	1.0000	0.0315
Cs-134	10	0	0.0000	0.00	0.0000	1.0000	0.0000
Am-241	.008	1560	280,800.0000	280.80	0.2808	0.0008	0.3510
Co-60	7	0	0.0000	0.00	0.0000	0.7000	0.0000
Eu-152	10	0	0.0000	0.00	0.0000	1.0000	0.0000
Eu-154	5	133	23,940.0000	23.94	0.0239	0.5000	0.0000
Tritium	1000	0	0.0000	0.00	0.0000	100.0000	0.0000
Ra-226	.05	0	0.0000	0.00	0.0000	0.0050	0.0000
Th-234	10	0	0.0000	0.00	0.0000	1.0000	0.0000
Th-228	.008	0	0.0000	0.00	0.0000	0.0008	0.0000
U-235	.2	0	0.0000	0.00	0.0000	0.0200	0.0000
Pu-238	.003	0	0.0000	0.00	0.0000	0.0003	0.0000
Pu-239	.002	0	0.0000	0.00	0.0000	0.0002	0.0000
Sr-90	.4	0	0.0000	0.00	0.0000	0.0400	0.0000
Sb-125	25	0	0.0000	0.00	0.0000	2.5000	0.0000
TOTAL		352,190.00	63,394,200.0000	63,394.20	63.3942		1.7364

SAMPLE STATUS REPORT FOR E 1096. E-BLANK BOFBV1 TIME: 11/ 9/95 9: 7
DISPATCHED: 11/ 3/95 15:25 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/ 3/95 16:30

EXT.	DETER.	RESULTS OR STATUS		OUT OF RANGE?	GOOD ANS?	CHARGE CODE
1213	TB-FLTRT	3.50000E 02 uCi/L		N	Y	KP51T
1223	AT-FLTRT	2.19000E 00 uCi/L		N	Y	KP51T
2162	GEA LIQ	1.75000E 02 uCi/L	Cs-137	N	Y	KP51T
2162	GEA-LIQ	1.33E-01 uCi/L Eu-154	50% ERROR			KP51T
2162	GEA-LIQ	1.56E+00 uCi/L Am-241	25% ERROR			KP51T

END OF REPORT

TB 3.5^{2} uCi/L = 3.5^{2} uCi/ml = 350,000 pCi/ml

TA 2.19 uCi/L = 2.19 uCi/ml = 2,190 pCi/ml

Cs^{137} 1.75^{2} uCi/L = 1.75^{2} uCi/ml = 175,000 pCi/ml β^-

Eu^{154} 1.33^{-1} uCi/L = 1.33^{-1} uCi/ml = 133 pCi/ml β^-

Am^{241} 1.56 uCi/L = 1.56 uCi/ml = 1,560 pCi/ml α

unknown β^- = 173,440 pCi/ml

unknown α = 630 pCi/ml

Type A package = 840ml

Type A package = 180ml

BOFBV2 vol 4-9-95

SAMPLE STATUS REPORT FOR E 7977. E-BLANK ~~93091-02~~ 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

SAMPLE STATUS REPORT FOR E 1095. E BLANK BOTBTO TIME: 11/ 9/95 9: 7
DISPATCHED: 11/ 3/95 15:24 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/ 3/95 16:30

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
1213	TB-FLTRT	3.49000E-02 uCi/L	N	Y	KP51T
1223	AT-FLTRT	1.60000E-04 uCi/L	N	Y	KP51T
2162	GEA-LIQ	8.24E-03 uCi/L Cs-137 30% ERROR			KP51T

END OF REPORT

BOFBT9 per 11-9-95

SAMPLE STATUS REPORT FOR E 7977. E-BLANK ~~93031-02~~ 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

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 11-10-95 Client Name WHC

Project/Client # _____ Batch or Case # _____

Cooler ID (if noted on outside of cooler) 1-95-100006

1. Condition of shipping container? O.K
2. Custody Seals on cooler intact? Yes [✓] No [ ]
3. Custody Seals dated and signed? Yes [✓] No [ ]
4. Chain of Custody record is taped on inside of cooler lid? Yes [✓] No [X]
5. Vermiculite/packing material is: Wet [ ] Dry [✓] _____
6. Each sample is in a plastic bag? Yes [✓] No [ ] _____
7. Number of sample containers in cooler: 5
8. Samples have: ✓ tape ____ hazard labels
   ✓ custody seals ____ appropriate sample labels
9. Samples are: X in good condition ____ leaking
   ____ broken ____ have air bubbles
   ____ other
10. Coolant Present? Yes [X] No [ ] Sample Temperature _____
11. The following paperwork should be accounted for (N/A if not applicable):
    Chain of Custody #(s) N/A
    Request for Analysis #(s) N/A
    Airbill # N/A Carrier N/A
12. Have any anomalies been identified above? Yes [ ] No [X]
13. Memos have been initiated for all anomalies identified above? Yes [X]

Printed Name/Signature Karen Dahlstrand Date/Time 11-10-95

00019

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 11/10/95 Client Name WHC

Project/Client # _____ Batch or Case # _____

Cooler ID (if noted on outside of cooler) ~~BPS~~ 01-95/110005

1. Condition of shipping container? O.K.
2. Custody Seals on cooler intact? Yes [X] No [ ]
3. Custody Seals dated and signed? Yes [X] No [ ]
4. Chain of Custody record is taped on inside of cooler lid? Yes [ ] No [X]
5. Vermiculite/packing material is: Wet [ ] Dry [X] _____
6. Each sample is in a plastic bag? Yes [X] No [ ] _____
7. Number of sample containers in cooler: 1
8. Samples have:
   - X tape
   - X custody seals
   - ____ hazard labels
   - ____ appropriate sample labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ other
   - ____ leaking
   - ____ have air bubbles
10. Coolant Present? Yes [X] No [ ] Sample Temperature _____
11. The following paperwork should be accounted for (N/A if not applicable):
    - Chain of Custody #(s) n/a
    - Request for Analysis #(s) n/a
    - Airbill # _____ Carrier n/a
12. Have any anomalies been identified above? Yes [ ] No [X]
13. Memos have been initiated for all anomalies identified above? Yes [X]

Printed Name/Signature Karen Schlinlug Date/Time 11-10-95

00020

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 11/10/95 Client Name WHC

Project/Client # _____ Batch or Case # _____

Cooler ID (if noted on outside of cooler) SML-369

1. Condition of shipping container? _____
2. Custody Seals on cooler intact? Yes [X] No [ ]
3. Custody Seals dated and signed? Yes [X] No [ ]
4. Chain of Custody record is taped on inside of cooler lid? Yes [ ] No [X]
5. Vermiculite/packing material is: Wet [ ] Dry [X] _____
6. Each sample is in a plastic bag? Yes [X] No [ ] _____
7. Number of sample containers in cooler: 18
8. Samples have: X tape ____ hazard labels
   X custody seals ____ appropriate sample labels
9. Samples are: X in good condition ____ leaking
   ____ broken ____ have air bubbles
   ____ other
10. Coolant Present? Yes [X] No [ ] Sample Temperature 4°C
11. The following paperwork should be accounted for (N/A if not applicable):
    Chain of Custody #(s) N/A
    Request for Analysis #(s) N/A
    Airbill # N/A Carrier N/A
12. Have any anomalies been identified above? Yes [ ] No [X]
13. Memos have been initiated for all anomalies identified above? Yes [X]

Printed Name/Signature Terry D. Fielding Date/Time 11-10-95

00021

RADIOACTIVE SHIPMENT RECORD

3. Page 1 of 1

1. SHIP TO
Company: Quantera
Address: [illegible]
City, State, Zip: Richland WA 99352
Attention: Tom Hardeberg
Phone:

2. SHIP FROM U.S. DEPT. OF ENERGY C/O
Company: HC
Address: [illegible]
City, State, Zip: Richland WA 99352
Contact: Dave Richards
Phone: (509) 373-7112

4. Ship ☒ Prepaid ☐ Collect
Via: ☒ Motor ~~Rail~~ ☐ Air Psgr ☐ Excl. Use ☐ Air Cargo ☐ UPS Surface ☐ Mail ☐ Site Carrier
SHIPMENT AUTHORIZATION NUMBER: 100331

5. HM Proper Shipping Name: Radioactive Material,

	excepted package - empty packaging	7	UN2910
	excepted package - instruments or articles	7	UN2910
	excepted package - limited quantity of material	7	UN2910
	excepted package - articles manufactured from natural or depleted uranium or natural thorium	7	UN2910
	Special Form, n.o.s.	7	UN2974
	Low Specific Activity, n.o.s.	7	UN2912
X	n.o.s.	7	UN2982
	Fissile, n.o.s.	7	UN2918
	(other)		

6. Markings Applied
Package Orientation ☐
Gross Weight ☒
Radioactive - LSA ☐
Type A ☒
Type B ☐

7. For Normal Form
Identify
Physical Form: ☒ Liquid ☐ Gas ☐ Solid
Chemical Form: ☐ Metal ☐ Oxide ☐ Elemental ☒ Nitrate ☐ Mixture
Other:

8. Additional RAM Desc.
Limited Quantity Radioactive Material ☐
Highway Route Controlled Quantity N/A

9. Placards Applied ☐ Yes ☒ No
If Rail Specify Placards
Route Plan ☐ Yes ☒ No

10. EMERGENCY RESPONSE
Telephone: (509) 373-3550
Emergency Response Guide(s): #63

11a. TYPE PACKAGE
Strong Tight ☐
Type A ☒
Type B ☐
Type B(U) ☐
Type B(M) ☐

11b. CONSTRUCTION
☐ Box, FB
☐ Wood
☐ Steel
☐ Drum
☐ Cask
Other: Pl. box

11c. FISSILE CLASS
Non-Fissile ☒
Fissile Exempt ☐
Fissile I ☐
Fissile II ☐
Fissile III ☐
Gms Fissile

11d. Labels Applied
Empty ☐
Radioactive White I ☐
Radioactive Yellow II ☒
Radioactive Yellow III ☐
Subsidiary Hazard ☐

Warning -- Fissile Class III Shipment. Do Not Load More Than N/A Packages Per Vehicle. In Loading and Storage Areas, Keep at Least 20 Feet From Other Packages Bearing Radioactive Labels.

12. No. Pkgs.	Model Package	COC/Spec	Serial No.	Seal No.	Isotopes	T.I.	Curies/Pkg	Gr. Wt.
1	Type A	HH2Y/X21/S/95	CH5/1005	Tape	Cs137 Am241 Fe152	.6	296 uCi	43 lbs
1	Type A	HH2Y/X21/S/95	CH5/1006	Tape	Cs137 Am241 Fe152	N/A	63 uCi	41 lbs
(See # 8 BCFBVA 11c # 95 71)								
					TOTALS	.6	359 uCi	84 lbs

(Shipper may describe package in detail on one of the unused lines above)

13. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable federal, state, local and international regulations for the transportation of hazardous materials.
Certifier's Signature On behalf of DOE-RL: [signature] | Date: 11/10/95 | Organization: Sampling & Mobile Labs | Complete Cost Code (Inc. End Function): 1PS1T 1H132

14. Surface Dose Rate of Package: ☐ <0.5 or _____ mrem/hr (N + β γ)
Dose Rate at 1 Meter from Surface of Package: ☒ <0.5 or _____ mrem/hr (N + β γ)
Smears of Outer Container: ☒ <22 dpm β γ/cm² ☒ <2.2 dpm α/cm² ☐ <Tbl. 2-2 HSRCM Onsite Limits
TRUCK LOAD OR EXCLUSIVE USE: Surface ☒ <200 mrem/hr (N + β γ); @ 6 feet ☒ <10 mrem/hr (N + β γ); @ Cab or sleeper ☐ <2 mrem/hr (N + β γ)
Additional Data and Instructions (inc. Readings on Internal Packaging)
Signature - Radiation Monitoring: [signature] | Bldg. | Survey No. | Date

15. PICKUP OF SHIPMENT: Vehicle: [illegible] | Driver: DE Richards
RECEIPT: Signature: [signature] | Date: 11/10/95

16. Shipment has been inspected and verified to be in compliance with DOT regulations
Authorized Signature: M. G. Sams | Printed Name: M.A. SAMS | Date: 11-10-95

17. AIR TRANSPORT CERTIFICATION
CARGO AIRCRAFT: ☐ Cargo Aircraft Only Labels Applied
PASSENGER AIRCRAFT: ☐ 1. Ltd Qty ☐ 2. <3 T.I. ☐ 3. Research/Medical Diagnosis ☐ 4. Human Medical Research
Pkg. Dimensions: N/A

18. OFFSITE AUTHORIZATION
B/L: [illegible] 11/10/95 | Date Shipped: 11-11-95 | Routing: WHC [illegible] | ETA: 11-10-95
Surveyed By: — | Date: — | Approved for Shipment Offsite: [signature] | Date: 11-10-95

11-10-95

54-6000-088 (07/95)

Quanterra Environmental Services

C.U.R. and C.O.C.
COPIED TO: SLU/WP
DATE: 11-13-95
TIME: 10:05
BY: MN

Work Order No.: 9780

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland
Date: 11-13-95 8:45
Project No: 519.136
Initiated by: M. Nelson
Analysis Requested: Refer to RFA/COC
RFA/COC Numbers: 43679
Client Sample Numbers Affected: Entire Login

Condition/Variance (Check all that apply): Circle Number to Denote that Item was Evaluated. "NA" = "Not Applicable".

1. NA Not enough sample received for proper analysis. Received approximately: ____
2. ☐ Sample received broken/leaking.
3. ☐ Sample received without proper preservative.
   - ☑ Cooler temperature not within 4°C ± 2°C. Record temperature: 9°C / 4°C
   - ☐ pH ____
   - ☐ other: ____
4. ☐ Sample received in improper container.
5. ☑ Sample received without proper paperwork. Explain: 4 x 40 ml GA (1 L.) no label
6. ☐ Paperwork received without sample.
7. ☐ No sample ID on sample container.
8. ☐ Custody tape disturbed/broken/missing.
9. NA Sample splits performed by lab.
10. NA Volatile sample received with approximately ____ mm headspace.
11. ☐ Sample ID on container does not match sample ID on paperwork. Explain: ____
12. ☐ All coolers on airbill not received with shipment.
13. ☐ Other (explain below): Shipping containers not rad surveyed.
    9°C - 332 8946 311
    4°C - 332 8946 765

Notes: Blue Ice not cold enough

Corrective Action:

☐ Client's Name: ____ Informed verbally on: ____ By: ____
☑ Client's Name: Lori Cunnen. Informed in writing on: 11/13/95 by e-mail By: ~~11-13~~ 11/13/95
☑ Sample(s) processed "as is". Comments: note temp violation in case narrative
☐ Sample(s) on hold until: ____ If released, notify: ____

Sample Control Supervisor Review: (or designate) 2nd Mtg Date: 11-13-95
Project Management Review: Abby Wolf Date: 11-13-95

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

00023

5794

VOLATILE ORGANICS

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: B0FBV1

Quanterra ID : 9780-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	103	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: BOFBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	104	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
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Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: 80FBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/16/95	11/16/95	110	%REC			1
Trichloroethene	79-01-6	QCBLK83694-1	11/16/95	11/16/95	93	%REC			1
Benzene	71-43-2	QCBLK83694-1	11/16/95	11/16/95	107	%REC			1
Toluene	108-88-3	QCBLK83694-1	11/16/95	11/16/95	100	%REC			1
Chlorobenzene	108-90-7	QCBLK83694-1	11/16/95	11/16/95	100	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/16/95	11/16/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/16/95	11/16/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/16/95	11/16/95	102	%REC			1

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Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: 80FBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/16/95	11/16/95	103	%REC			1
Trichloroethene	79-01-6	QCBLK83694-1	11/16/95	11/16/95	93	%REC			1
Benzene	71-43-2	QCBLK83694-1	11/16/95	11/16/95	107	%REC			1
Toluene	108-88-3	QCBLK83694-1	11/16/95	11/16/95	103	%REC			1
Chlorobenzene	108-90-7	QCBLK83694-1	11/16/95	11/16/95	104	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/16/95	11/16/95	95	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/16/95	11/16/95	98	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/16/95	11/16/95	104	%REC			1

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Environmental Services

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Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: BOFBT8

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-003

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	99	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	108	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
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Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: B0FBT9

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-004

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	109	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCBLK83694-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	14	UG/L		5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	13	UG/L	J	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	92	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	101	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	101	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCLCS83694-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	100	%REC			1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	107	%REC			1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	100	%REC			1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	102	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	95	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	107	%REC			1

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	B0FBT8	96	99	108	0	0
02	B0FBT9	96	97	109	0	0
03	B0FBV1	96	97	103	0	0
04	B0FBV2	97	95	104	0	0
05	VSPK01	95	97	107	0	0
06	B0FBV2MS	97	95	102	0	0
07	B0FBV2MSD	95	98	104	0	0
08	VBLK01	92	101	101	0	0

		QC LIMITS
S1 (TOL)	= Toluene-d8	(88-110)
S2 (BFB)	= Bromofluorobenzene	(86-115)
S3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBT8

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-003

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6207

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	50	U
591-78-6	2-Hexanone	50	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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0FBT8

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-003

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6207

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBT9

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-004

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6208

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	50	U
591-78-6	2-Hexanone	50	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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0FBT9

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-004

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6208

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBV1

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6205

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	50	U
591-78-6	2-Hexanone	50	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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0FBV1

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6205

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBV2

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-002

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6206

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	50	U
591-78-6	2-Hexanone	50	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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0FBV2

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-002

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6206

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/15/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix Spike - EPA Sample No.: B0FBV2

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0	55.2	110	61-145
Trichloroethene	50.0	0	46.4	93	71-120
Benzene	50.0	0	53.7	107	76-127
Toluene	50.0	0	50.2	100	76-125
Chlorobenzene	50.0	0	50.0	100	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.0	51.4	103	7	14	61-145
Trichloroethene	50.0	46.6	93	0	14	71-120
Benzene	50.0	53.5	107	0	11	76-127
Toluene	50.0	51.6	103	-3	13	76-125
Chlorobenzene	50.0	52.0	104	-4	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBV2MS

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-002MS

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6212

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/16/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	55	
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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	46	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	54	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	50	
108-90-7	Chlorobenzene	50	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBV2MSD

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: 9780-002MSD

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6213

Level: (low/med) LOW Date Received: 11/10/95

% Moisture: not dec. Date Analyzed: 11/16/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	51	
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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	47	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	53	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	52	
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Lab File ID: B6198 Lab Sample ID: QCBLK83694

Date Analyzed: 11/15/95 Time Analyzed: 1544

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: MSB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	B0FBT8	9780-003	B6207	2147
02	B0FBT9	9780-004	B6208	2223
03	B0FBV1	9780-001	B6205	2034
04	B0FBV2	9780-002	B6206	2111
05	VSPK01	QCSPK83694	B6209	2259
06	B0FBV2MS	9780-002MS	B6212	0058
07	B0FBV2MSD	9780-002MSD	B6213	0134

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: QCBLK83694

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6198

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/15/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	14	
67-64-1	Acetone	13	J
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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	50	U
591-78-6	2-Hexanone	50	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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: QCBLK83694

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6198

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/15/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9A-LCS
VOA WATER LCS RECOVERY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SAS No.: SDG No.: W0801

EPA Sample No.: VSPK01 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	50	100	1-234
Trichloroethene	50	48	96	71-157
Benzene	50	53	107	37-151
Toluene	50	50	100	47-150
Chlorobenzene	50	51	102	37-160

\# Column to be used to flag recovery values with an asterisk.
* Values outside of QC limits.
D Detected.
NG: Not Given. Determined by QC Charting Procedures.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSPK01

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V78001 SDG No.: W0801

Matrix: (soil/water) WATER Lab Sample ID: QCSPK83694

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6209

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/15/95

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	100	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	50	
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	100	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	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	48	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	53	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	50	
108-90-7	Chlorobenzene	51	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

METALS

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: B0FBV1

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	2140	UG/L		200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	59.0	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	1.2	UG/L	B	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	27.1	UG/L		20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	30300	UG/L		5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	415	UG/L		20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	18.2	UG/L	B	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	82.3	UG/L		25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	35400	UG/L		100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	7080	UG/L		5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	514	UG/L		15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	550	UG/L		40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	214	UG/L		200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	9060	UG/L		1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	44.1	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	73.9	UG/L		20.0	1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: BOFBV2

Quanterra ID : 9780-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	25.2	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	10.0	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	1.9	UG/L	B	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	3590	UG/L	B	5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	3.6	UG/L	U	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	95.6	UG/L	B	100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	1280	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	9.9	UG/L	B	15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	671	UG/L	B	1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	40.5	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	16.3	UG/L	B	20.0	1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: B0FBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	99	%REC			1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	111	%REC			1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	94	%REC			1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	109	%REC			1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	110	%REC			1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	112	%REC			1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	106	%REC			1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	111	%REC			1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	99	%REC			1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	108	%REC			1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	119	%REC			1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	98	%REC			1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	106	%REC			1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	111	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: B0FBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	105	%REC			1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	108	%REC			1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	105	%REC			1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	98	%REC			1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	98	%REC			1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	99	%REC			1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	100	%REC			1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	116	%REC			1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	92	%REC			1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: 80F8T8

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-003

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	181	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	37.9	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	16800	UG/L		5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	3.6	UG/L	U	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	511	UG/L		100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	3180	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	49.8	UG/L		15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	4060	UG/L		1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	4.3	UG/L	U	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	84.2	UG/L		20.0	1

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P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: BOFBT9

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-004

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	1.4	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	1990	UG/L	B	5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	3.6	UG/L	U	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	8.7	UG/L	B	100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	73.2	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	0.90	UG/L	U	15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	385	UG/L	B	1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	4.3	UG/L	U	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	6.6	UG/L	B	20.0	1

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Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCBLK83576-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	64.8	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	1.1	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	123	UG/L	B	5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	7.0	UG/L	B	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	44.9	UG/L	B	100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	131	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	0.98	UG/L	B	15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	115	UG/L	B	1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	4.6	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	3.0	UG/L	B	20.0	1

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Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCLCS83576-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	112	%REC			1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	110	%REC			1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	100	%REC			1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	83	%REC			1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	105	%REC			1

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Project: 519.136

Category: Arsenic
Method: EPA 7060
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV1	9780-001	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	2.2	UG/L	B	10.0	1
B0FBV2	9780-002	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
B0FBV2	9780-002MS	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	95	%REC			1
B0FBV2	9780-002MSD	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	95	%REC			1
B0FBT8	9780-003	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
B0FBT9	9780-004	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
NA	QCBLK83578-1	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
NA	QCLCS83578-1	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	96	%REC			1

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Quanterra Environmental Services

Project: 519.136

Category: Selenium
Method: EPA 7740
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV1	9780-001	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	1
B0FBV2	9780-002	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	1
B0FBV2	9780-002MS	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	96	%REC			1
B0FBV2	9780-002MSD	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	98	%REC			1
B0FBT8	9780-003	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	1
B0FBT9	9780-004	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	1
NA	QCBLK83578-1	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	1
NA	QCLCS83578-1	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	101	%REC			1

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Quanterra-Richland
Westinghouse Hanford Company
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Richland, WA 99352

Project: 519.136

Category: Mercury
Method: EPA 7470
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
80FBV1	9780-001	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	4.9	UG/L		0.20	1
80FBV2	9780-002	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.10	UG/L	U	0.20	1
80FBV2	9780-002MS	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	94	%REC			1
80FBV2	9780-002MSD	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	95	%REC			1
80FBT8	9780-003	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.98	UG/L		0.20	1
80FBT9	9780-004	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.10	UG/L	U	0.20	1
NA	QCBLK83577-1	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.10	UG/L	U	0.20	1
NA	QCLCS83577-1	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	100	%REC			1

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EPA SAMPLE NO.

B0FBT8

Lab Name: QUANTERRA MO Contract: 519.136
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801
Matrix (soil/water): WATER Lab Sample ID: 9780-003
Level (low/med): LOW Date Received: 11/10/95
% 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	181	B		P
7440-36-0	Antimony	27.6	U		P
7440-38-2	Arsenic	0.90	U		F
7440-39-3	Barium	37.9	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	2.3	U		P
7440-70-2	Calcium	16800			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	4.2	U		P
7440-50-8	Copper	3.6	U		P
7439-89-6	Iron	511			P
7439-92-1	Lead	38.2	U		P
7439-95-4	Magnesium	3180	B		P
7439-96-5	Manganese	49.8			P
7439-97-6	Mercury	0.98			CV
7440-02-0	Nickel	11.3	U		P
7440-09-7	Potassium	1390	U		P
7782-49-2	Selenium	0.80	U		F
7440-22-4	Silver	6.0	U		P
7440-23-5	Sodium	4060			P
7440-62-2	Vanadium	4.3	U		P
7440-66-6	Zinc	84.2			P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0FBT9

Lab Name: QUANTERRA MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801

Matrix (soil/water): WATER Lab Sample ID: 9780-004

Level (low/med): LOW Date Received: 11/10/95

% 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	27.6	B		P
7440-36-0	Antimony	27.6	U		P
7440-38-2	Arsenic	0.90	U		F
7440-39-3	Barium	1.4	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	2.3	U		P
7440-70-2	Calcium	1990	B		P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	4.2	U		P
7440-50-8	Copper	3.6	U		P
7439-89-6	Iron	8.7	B		P
7439-92-1	Lead	38.2	U		P
7439-95-4	Magnesium	73.2	B		P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	11.3	U		P
7440-09-7	Potassium	1390	U		P
7782-49-2	Selenium	0.80	U		F
7440-22-4	Silver	6.0	U		P
7440-23-5	Sodium	385	B		P
7440-62-2	Vanadium	4.3	U		P
7440-66-6	Zinc	6.6	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0FBV1

Lab Name: QUANTERRA MO Contract: 519.136
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801
Matrix (soil/water): WATER Lab Sample ID: 9780-001
Level (low/med): LOW Date Received: 11/10/95
% 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	2140			P
7440-36-0	Antimony	27.6	U		P
7440-38-2	Arsenic	2.2	B		F
7440-39-3	Barium	59.0	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	27.1			P
7440-70-2	Calcium	30300			P
7440-47-3	Chromium	415			P
7440-48-4	Cobalt	18.2	B		P
7440-50-8	Copper	82.3			P
7439-89-6	Iron	35400			P
7439-92-1	Lead	38.2	U		P
7439-95-4	Magnesium	7080			P
7439-96-5	Manganese	514			P
7439-97-6	Mercury	4.9			CV
7440-02-0	Nickel	550			P
7440-09-7	Potassium	1390	U		P
7782-49-2	Selenium	0.80	U		F
7440-22-4	Silver	214			P
7440-23-5	Sodium	9060			P
7440-62-2	Vanadium	44.1	B		P
7440-66-6	Zinc	73.9			P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0FBV2

Lab Name: QUANTERRA_MO Contract: 519.136
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801
Matrix (soil/water): WATER Lab Sample ID: 9780-002
Level (low/med): LOW Date Received: 11/10/95
% 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	25.2	B		P
7440-36-0	Antimony	27.6	U		P
7440-38-2	Arsenic	0.90	U		F
7440-39-3	Barium	10.0	B		P
7440-41-7	Beryllium	1.9	B		P
7440-43-9	Cadmium	2.3	U		P
7440-70-2	Calcium	3590	B		P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	4.2	U		P
7440-50-8	Copper	3.6	U		P
7439-89-6	Iron	95.6	B		P
7439-92-1	Lead	38.2	U		P
7439-95-4	Magnesium	1280	B		P
7439-96-5	Manganese	9.9	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	11.3	U		P
7440-09-7	Potassium	1390	U		P
7782-49-2	Selenium	0.80	U		F
7440-22-4	Silver	6.0	U		P
7440-23-5	Sodium	671	B		P
7440-62-2	Vanadium	40.5	B		P
7440-66-6	Zinc	16.3	B		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:

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Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Quanterra Environmental Services

Project: 519.136

Category: pH
Method: EPA 9040
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
BOFBV1	9780-001	pH	C-006	QCBLK83376-1	11/14/95	11/14/95	2.52	PH			1
BOFBV2	9780-002	pH	C-006	QCBLK83376-1	11/14/95	11/14/95	8.31	PH			1
BOFBV2	9780-002DUP	pH	C-006	QCBLK83376-1	11/14/95	11/14/95	8.30	PH			1
BOFBT8	9780-003	pH	C-006	QCBLK83376-1	11/14/95	11/14/95	6.75	PH.			1
BOFBT9	9780-004	pH	C-006	QCBLK83376-1	11/14/95	11/14/95	8.35	PH			1
NA	QCBLK83376-1	pH	C-006	QCBLK83376-1	11/14/95	11/14/95	5.01	PH			1

Quanterra Environmental Services

Quanterra-Richland
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P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Total Organic Carbon
Method: EPA 9060
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV1	9780-001	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	3.67	MG/L		1.00	1
B0FBV2	9780-002	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
B0FBV2	9780-002DUP	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
B0FBV2	9780-002MS	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	109	%REC			1
B0FBT8	9780-003	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	3.02	MG/L		1.00	1
B0FBT9	9780-004	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
NA	QCBLK83309-1	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
NA	QCLCS83309-1	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	96	%REC			1

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3
BLANKS

Lab Name: QUANTERRA_MO_____ Contract: 519.136___

Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: W0801_____

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	22.3	U	22.3	U	22.3	U	22.3	U	64.750	B	P
Antimony	27.6	U	27.6	U	27.6	U	27.6	U	27.600	U	P
Arsenic	0.9	U	0.9	U	0.9	U	0.9	U	0.900	U	F
Barium	1.1	B	1.3	B	5.3	B	1.0	B	1.110	B	P
Beryllium	1.1	B	0.9	B	2.1	B	0.7	B	0.600	U	P
Cadmium	2.3	U	2.3	U	-2.5	B	2.3	U	2.300	U	P
Calcium	18.8	U	18.8	U	18.8	U	18.8	U	122.730	B	P
Chromium	3.7	U	3.7	U	3.7	U	3.7	U	3.700	U	P
Cobalt	4.2	U	4.2	U	4.2	U	4.2	U	4.200	U	P
Copper	6.8	B	6.6	B	3.6	U	-11.0	B	7.000	B	P
Iron	13.5	B	14.2	B	46.5	B	8.4	B	44.860	B	P
Lead	38.2	U	38.2	U	38.2	U	38.2	U	38.200	U	P
Magnesium	63.3	U	82.9	B	63.3	U	-221.8	B	131.360	B	P
Manganese	1.7	B	2.0	B	7.2	B	0.9	B	0.980	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	CV
Nickel	11.3	U	11.3	U	11.3	U	11.3	U	11.300	U	P
Potassium	1390.0	U	1390.0	U	1390.0	U	1390.0	U	1390.000	U	P
Selenium	0.8	U	0.8	U	0.8	U	0.8	U	0.800	U	F
Silver	6.0	U	6.0	U	6.0	U	6.0	U	6.000	U	P
Sodium	56.2	B	76.9	B	27.7	U	-131.1	B	114.620	B	P
Vanadium	4.3	U	6.7	B	41.3	B	4.3	U	4.630	B	P
Zinc	2.3	B	1.7	U	1.7	U	1.7	U	3.030	B	P

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3
BLANKS

Lab Name: QUANTERRA_MO_____ Contract: 519.136___

Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: W0801_____

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			22.3	U	51.0	B	30.1	B			P
Antimony			34.4	B	27.6	U	27.6	U			P
Arsenic											NR
Barium			0.8	U	0.8	U	0.8	U			P
Beryllium			0.9	B	0.8	B	0.7	B			P
Cadmium			2.3	U	2.3	U	2.3	U			P
Calcium			18.8	U	18.8	U					P
Chromium			3.7	U	3.7	U	3.7	U			P
Cobalt			4.2	U	4.2	U	4.2	U			P
Copper			-12.5	B	-9.4	B					P
Iron			6.6	U	18.6	B	14.0	B			P
Lead			38.2	U	38.2	U					P
Magnesium			-197.2	B	-185.2	B					P
Manganese			0.9	U	0.9	U	0.9	U			P
Mercury											NR
Nickel			11.3	U	11.3	U	11.3	U			P
Potassium			1390.0	U	1390.0	U	1390.0	U			P
Selenium											NR
Silver			6.0	U	6.0	U	6.0	U			P
Sodium			-121.5	B	-113.6	B					P
Vanadium			-10.1	B	-12.0	B	-9.5	B			P
Zinc			1.8	B	1.7	U	1.7	B			P

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U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

B0FBV2S

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2006.1900		25.1600	B	2000.00	99.1		P
Antimony	75-125	553.9100		27.6000	U	500.00	110.8		P
Arsenic	75-125	37.9400		0.9000	U	40.00	94.8		F
Barium	75-125	1881.4900		10.0200	B	2000.00	93.6		P
Beryllium	75-125	56.3300		1.8900	B	50.00	108.9		P
Cadmium	75-125	52.2500		2.3000	U	50.00	104.5		P
Calcium									NR
Chromium	75-125	220.8500		3.7000	U	200.00	110.4		P
Cobalt	75-125	559.3700		4.2000	U	500.00	111.9		P
Copper	75-125	263.7600		3.6000	U	250.00	105.5		P
Iron	75-125	1206.5400		95.6100	B	1000.00	111.1		P
Lead	75-125	493.4300		38.2000	U	500.00	98.7		P
Magnesium									NR
Manganese	75-125	551.6200		9.8700	B	500.00	108.4		P
Mercury	75-125	0.9420		0.1000	U	1.00	94.2		CV
Nickel	75-125	594.8700		11.3000	U	500.00	119.0		P
Potassium									NR
Selenium	75-125	9.6500		0.8000	U	10.00	96.5		F
Silver	75-125	49.1200	B	6.0000	U	50.00	98.2		P
Sodium									NR
Vanadium	75-125	568.9500		40.4600	B	500.00	105.7		P
Zinc	75-125	569.8900		16.2600	B	500.00	110.7		P

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

B0FBV2SD

Lab Name: QUANTERRA_MO_____ Contract: 519.136___

Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: W0801_____

Matrix (soil/water): WATER_ Level (low/med): LOW___

% Solids for Sample: __0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2132.6600		25.1600	B	2000.00	105.4		P
Antimony	75-125	540.4700		27.6000	U	500.00	108.1		P
Arsenic	75-125	37.9000		0.9000	U	40.00	94.8		F
Barium	75-125	2112.3000		10.0200	B	2000.00	105.1		P
Beryllium	75-125	53.3600		1.8900	B	50.00	102.9		P
Cadmium	75-125	48.9400		2.3000	U	50.00	97.9		P
Calcium									NR
Chromium	75-125	204.9000		3.7000	U	200.00	102.4		P
Cobalt	75-125	507.3900		4.2000	U	500.00	101.5		P
Copper	75-125	258.8300		3.6000	U	250.00	103.5		P
Iron	75-125	1080.4400		95.6100	B	1000.00	98.5		P
Lead	75-125	492.8000		38.2000	U	500.00	98.6		P
Magnesium									NR
Manganese	75-125	511.8000		9.8700	B	500.00	100.4		P
Mercury	75-125	0.9510		0.1000	U	1.00	95.1		CV
Nickel	75-125	518.7000		11.3000	U	500.00	103.7		P
Potassium									NR
Selenium	75-125	9.7700		0.8000	U	10.00	97.7		F
Silver	75-125	58.0200	B	6.0000	U	50.00	116.0		P
Sodium									NR
Vanadium	75-125	502.5100		40.4600	B	500.00	92.4		P
Zinc	75-125	526.9200		16.2600	B	500.00	102.1		P

Comments:

U.S. EPA - CLP

6A
MATRIX SPIKE DUPLICATES

EPA SAMPLE NO.

B0FBV2SD

Lab Name: QUANTERRA MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801

Matrix (soil/water): WATER Level (low/med): LOW

% Solids: 0.0

Percent recoveries:

Analyte	Control Limit	Matrix Spike (S)		Matrix Spike Duplicate (SD)		RPD	Q	M
Al	20%	99.10		105.40		6.2		P
Sb	20%	110.80		108.10		2.5		P
As	20%	94.80		94.80		0.0		F
Ba	20%	93.60		105.10		11.6		P
Be	20%	108.90		102.90		5.7		P
Cd	20%	104.50		97.90		6.5		P
Ca	20%							NR
Cr	20%	110.40		102.40		7.5		P
Co	20%	111.90		101.50		9.7		P
Cu	20%	105.50		103.50		1.9		P
Fe	20%	111.10		98.50		12.0		P
Pb	20%	98.70		98.60		0.1		P
Mg	20%							NR
Mn	20%	108.40		100.40		7.7		P
Hg	20%	94.20		95.10		1.0		CV
Ni	20%	119.00		103.70		13.7		P
K	20%							NR
Se	20%	96.50		97.70		1.2		F
Ag	20%	98.20		116.00		16.6		P
Na	20%							NR
V	20%	105.70		92.40		13.4		P
Zn	20%	110.70		102.10		8.1		P

FORM VI - IN

U.S. EPA - CLP

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LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801

Solid LCS Source:

Aqueous LCS Source: SOL+/LL

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	1000.0	1032.04	103.2						
Antimony	1000.0	1025.17	102.5						
Arsenic									
Barium	1000.0	1007.19	100.7						
Beryllium	1000.0	1024.58	102.5						
Cadmium	1000.0	1012.60	101.3						
Calcium	20000.0	22302.39	111.5						
Chromium	1000.0	1027.12	102.7						
Cobalt	1000.0	1011.30	101.1						
Copper	1000.0	1038.01	103.8						
Iron	1000.0	1095.41	109.5						
Lead	1000.0	1038.57	103.9						
Magnesium	20000.0	20705.18	103.5						
Manganese	1000.0	1018.21	101.8						
Mercury									
Nickel	1000.0	1033.38	103.3						
Potassium	20000.0	19895.87	99.5						
Selenium									
Silver	250.0	206.79	82.7						
Sodium	20000.0	20251.12	101.3						
Vanadium	1000.0	1027.80	102.8						
Zinc	1000.0	1045.92	104.6						

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7
LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0801

Solid LCS Source:

Aqueous LCS Source: SOL+/LL

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury	3.0	2.99	99.7						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Vanadium									
Zinc									

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7

LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: W0801

Solid LCS Source: _____

Aqueous LCS Source: SOL+/LL

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic	40.0	38.52	96.3						
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium	40.0	40.32	100.8						
Silver									
Sodium									
Vanadium									
Zinc									

FORM VII - IN

SW-846

WET CHEMISTRY

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

January 2, 1996 9650016

J. E. Mecca, Director
Transition Programs Division
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Mecca:

TRANSMITTAL OF PLUTONIUM-URANIUM EXTRACTION PLANT F4 AND M2 VESSELS, LOOP FLUSH ANALYTICAL RESULTS

Attachment 1 is the laboratory analytical results conducted on the final flush for the Plutonium Uranium Extraction Plant (PUREX) F4 and M2 Vessels. These results are transmitted in accordance with U.S. Department of Energy, Richland Operations Office/Westinghouse Hanford Company agreement with State of Washington Department of Ecology (Ecology) and the U. S. Environmental Protection Agency (EPA).

Analytical results from future flushes will be transmitted as they are obtained.

A copy of the Predetermination Reports, designating the final flush solution based on the analytical results, are also included in Attachment 1. The final flush for these vessels were designated as non-dangerous waste.

Attachment 2 is a letter for your transmittal of these results to Ecology and the EPA.

If you have any questions, please contact Mr. G. J. LeBaron (373-1792) of my staff.

Very truly yours,

D. G. Hamrick, Director
PUREX Transition Project
Transition Project Division

jft

Attachments 2
DOE-HQ - B. K. Nelson (w/o attachment)

RL - w/o attachments
B. L. Charboneau
L. E. Rogers
L. D. Romine
A. H. Wirkkala

9650016

Attachment 2

TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION PLANT F4 AND M2 VESSELS, LOOP FLUSH ANALYTICAL RESULTS

Ghost Letter

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Mr. Douglas R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352

Mr. David Lundstrom
200 Area Section Manager
State of Washington
Department of Ecology
1315 W. 4th Avenue
Kennewick, Washington 99336

Dear Messrs. Sherwood and Lundstrom:

TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION PLANT F4 AND M2 VESSELS, LOOP FLUSH ANALYTICAL RESULTS

Enclosed is the laboratory analytical results conducted on the final flush for the Plutonium Uranium Extraction (PUREX) F4 and M2 Vessels. These results are transmitted in accordance with U.S. Department of Energy, Richland Operations Office/Westinghouse Hanford Company agreement with State of Washington Department of Ecology (Ecology) and the U. S. Environmental Protection Agency (EPA).

Analytical results from future flushes will be transmitted as they are obtained.

A copy of the Predetermination Reports, designating the final flush solution based on the analytical results, are also included in the enclosure. The final flush for these vessels were designated as non-dangerous waste.

If you have any questions, please contact L. D. Romine (376-4747) of my staff.

Sincerely,

J. E. Mecca, Director
Transition Programs Division

jft

Enclosure

cc: J. K. Bartz, Ecology
D. L. Duncan, EPA
M. N. Jaraysi, Ecology
D. G. Hamrick, WHC, w/o encl.
G. J. LeBaron, WHC, w/o encl.

PUREX F4 AND M2 VESSELS RCRA ANALYTICAL DATA
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Attachment 1

TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION PLANT F4 AND M2 VESSELS, LOOP FLUSH ANALYTICAL RESULTS

RCRA ANALYTICAL DATA SUMMARY
PUREX TK-F4 VESSEL
SAMPLE LOCATION: TANK F4
SAMPLE ID# B0FBV1

Analyte	Dangerous Waste Designation Threshold (ppm)	Results (ppm)
Cadmium	1.0	0.027
Chromium	5.0	0.615
Lead	5.0	0.038 (U)
Barium	100.0	0.059 (B)
Silver	5.0	0.214
Arsenic	5.0	0.002 (B)
Selenium	1.0	0.0008 (U)
Mercury	0.2	0.005
pH	pH<2 or pH>12.5	2.52
Total Organic Carbon (TOC)	100,000 (10wt% based upon designation limits for tri-butyl phosphate)	3.67
Benzene	0.5	undetect (U)
Carbon Tetrachloride	0.5	undetect (U)
Chlorobenzene	100	undetect (U)
Chloroform	6.0	undetect (U)
1,2-Dichloroethane	0.5	undetect (U)
1,1 Dichloroethylene	0.7	undetect (U)
2-Butanone	200	undetect (U)
Tetrachloroethylene	0.7	undetect (U)
Trichloroethylene	0.5	undetect (U)
Vinyl Chloride	0.2	undetect (U)

U = compound was analyzed for but not detected
B = compound was found in the blank

RCRA ANALYTICAL DATA SUMMARY
PUREX TK-M2 VESSEL
SAMPLE LOCATION: TANK M2
SAMPLE ID# B0FBT8

Analyte	Dangerous Waste Designation Threshold (ppm)	Results (ppm)
Cadmium	1.0	0.0023 (U)
Chromium	5.0	0.0037 (U)
Lead	5.0	0.038 (U)
Barium	100.0	0.038 (B)
Silver	5.0	0.006 (U)
Arsenic	5.0	0.0009 (U)
Selenium	1.0	0.0008 (U)
Mercury	0.2	0.0009 ~~(U)~~
pH	pH<2 or pH>12.5	6.75
Total Organic Carbon (TOC)	100,000 (10wt% based upon designation limits for tri-butyl phosphate)	3.02
Benzene	0.5	undetect (U)
Carbon Tetrachloride	0.5	undetect (U)
Chlorobenzene	100	undetect (U)
Chloroform	6.0	undetect (U)
1,2-Dichloroethane	0.5	undetect (U)
1,1 Dichloroethylene	0.7	undetect (U)
2-Butanone	200	undetect (U)
Tetrachloroethylene	0.7	undetect (U)
Trichloroethylene	0.5	undetect (U)
Vinyl Chloride	0.2	undetect (U)

U = compound was analyzed for but not detected
B = compound was found in the blank

PROCESS SCREENING DATA

TK-F4

SAMPLE STATUS REPORT FOR P 3489. P-BLANK TIME: 10/30/95 8:37
DISPATCHED: 10/26/95 8:26 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 10/27/95 10: 9

EXT.	DETER.	RESULTS OR STATUS		OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********		***	***	******
1001	APPR/OTR	COLORLESS,CLEAR, <1% SOLIDS, NO PHASES,				R43B1
1001	APPR/OTR	25 mrad/hr AT 1/2".				R43B1
1266	TB	3.46000E 02 uCi/L		N	Y	KP42J
1266	AT	2.57000E 00 uCi/L		N	Y	KP42J
1621	TOC	6.10000E-03 G/L C		N	Y	KP42J
2101	GEA	1.99500E 02 uCi/L	Cs-137	N	Y	KP42J
3201	pH	2.55200E 00 NONE		N	Y	KP42J
3410	Pu/AEA	< 4.80000E-06 G/L	PU239/240	N	Y	KP42J
3410	Pu/AEA	< 4.80000E-06 G/L	PU-238	N	Y	KP42J
3595	SAVE	INCOMPLETE				KP42J
4419	U	2.31000E-02 G/L		N	Y	KP42J
5750	ICP-LIQ	INCOMPLETE				KP42J

END OF REPORT

TK-M2

SAMPLE STATUS REPORT FOR P 3490. P-BLANK TIME: 10/30/95 8:37
DISPATCHED: 10/26/95 8:26 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 10/27/95 10: 9

EXT.	DETER.	RESULTS OR STATUS		OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********		***	***	******
1001	APPR/OTR	COLORLESS, CLEAR, <1% SOLIDS, NO PHASES,				R43B1
1001	APPR/OTR	25 mrad/hr AT 1\2".				R43B1
1206	TB	4.85000E-02 uCi/L		N	Y	KP42J
1266	AT	1.42000E-02 uCi/L		N	Y	KP42J
1621	TOC	9.40000E-03 G/L C		N	Y	KP42J
2101	GEA	4.80000E-02 uCi/L	Cs-137	N	Y	KP42J
2101	GEA	Cs-137 has a high degree of uncertainty				KP42J
3201	pH	7.26500E 00 NONE		N	Y	KP42J
3410	Pu/AEA	< 4.36000E-06 G/L	PU239/240	N	Y	KP42J
3410	Pu/AEA	< 4.36000E-06 G/L	PU-238	N	Y	KP42J
3595	SAVE	INCOMPLETE				KP42J
4419	U	1.01000E-03 G/L		N	Y	KP42J
5750	ICP-LIQ	INCOMPLETE				KP42J

END OF REPORT

RAD SCREENING DATA

Tank F4

SAMPLE STATUS REPORT FOR E 1096. E-BLANK BOFBV1 TIME: 11/ 9/95 9: 7
DISPATCHED: 11/ 3/95 15:25 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/ 3/95 16:30

EXT.	DETER.	RESULTS OR STATUS		OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********		***	***	******
1213	TB-FLTRT	3.50000E 02 uCi/L		N	Y	KP51T
1223	AT-FLTRT	2.19000E 00 uCi/L		N	Y	KP51T
2162	GEA-LIQ	1.75000E 02 uCi/L	Cs-137	N	Y	KP51T
2162	GEA-LIQ	1.33E-01 uCi/L Eu-154	50% ERROR			KP51T
2162	GEA-LIQ	1.56E+00 uCi/L Am-241	25% ERROR			KP51T

END OF REPORT

2P-1d

Common [illegible] paper

Tank M2

SAMPLE STATUS REPORT FOR E 1095. E-BLANK BOFBT8 TIME: 11/ 9/95 9: 7
DISPATCHED: 11/ 3/95 15:24 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/ 3/95 16:30

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	********	**********	***	***	******
1213	TB-FLTRT	3.49000E-02 uCi/L	N	Y	KP51T
1223	AT-FLTRT	1.60000E-04 uCi/L	N	Y	KP51T
2162	GEA-LIQ	8.24E-03 uCi/L Cs-137 30% ERROR			KP51T

END OF REPORT

Quanterra Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CERTIFICATE OF ANALYSIS

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

November 28, 1995

Attention: Karl Pool

Project number	:	519.136
Date Received by Lab	:	November 10, 1995
Number of Samples	:	Four (4)
Sample Type	:	Water
SDG Number	:	W0801
Data Deliverable	:	Summary

I. Introduction

On November 10, 1995, four (4) water samples were received by Quanterra, Richland and transferred to Quanterra, St. Louis for chemical analysis. Upon receipt, the samples were given the following laboratory ID numbers to correspond with the specific client ID's:

St Louis ID	WHC ID	Richland ID	Matrix	Date of Receipt	
9780-001	B0FBV1	51114903	Water	11/10/95	Tank F4
9780-002	B0FBV2	51114904	Water	11/10/95	Tank F4 QA blank
9780-003	B0FBT8	51114901	Water	11/10/95	Tank M2
9780-004	B0FBT9	51114902	Water	11/10/95	Tank M2 QA blank

12/15/95 CL

II. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits.

Analyses requested: pH by EPA method 9040. TOC by EPA method 9060. VOA by EPA method 8240. TAL ICP Metals by EPA method 6010. Arsenic by EPA method 7060. Selenium by EPA 7740. Mercury by EPA method 7470.

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Environmental Services

III. Quality Control

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch. Matrix Spike and Matrix Spike Duplicate and/or Sample Duplicate analyses were performed per the protocol for each analyte. pH analysis uses only Sample Duplicate for matrix QC.

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike

V. Comments

Samples arrived in St. Louis at 9°C which is not within the recommended 4°C ± 2°C.

There are no comments or nonconformances associated with the VOA and TOC analyses.

Sample 9780-002 and its associated matrix QC were digested using a reduced sample size due to insufficient sample volume. The final volume of the digestate was adjusted so as not to affect the detection limits.

Quanterra
Environmental Services

Westinghouse Hanford Company
November 28, 1995
Project Number: 519.136
SDG: W0801
Page 3

I certify that this Certificate of Analysis is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Reviewed and approved:

Wade H. Price
Project Manager
s:\\squimo01\price5\abbydave\hanford\hanw0801.coa

METALS ANALYSIS

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: B0FBV1 Tank F4

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analysis Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	2140	UG/L		200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	59.0	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	1.2	UG/L	B	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	27.1	UG/L		20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	30300	UG/L		5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	415	UG/L		20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	18.2	UG/L	B	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	82.3	UG/L		25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	35400	UG/L		100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	7080	UG/L		5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	514	UG/L		15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	550	UG/L		40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	214	UG/L		200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	9060	UG/L		1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	44.1	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	73.9	UG/L		20.0	1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: 8DFBTB Tank M2

Quanterra ID : 9780-003

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	181	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	37.9	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	16800	UG/L		5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	3.6	UG/L	U	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	511	UG/L		100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	3180	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	49.8	UG/L		15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	4060	UG/L		1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	4.3	UG/L	U	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	84.2	UG/L		20.0	1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: B0FBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	25.2	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	10.0	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	1.9	UG/L	B	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	3590	UG/L	B	5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	3.6	UG/L	U	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	95.6	UG/L	B	100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	1280	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	9.9	UG/L	B	15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	671	UG/L	B	1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	40.5	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	16.3	UG/L	B	20.0	1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: 8078V2

Quanterra ID : 9780-002MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	99	%REC			1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	111	%REC			1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	94	%REC			1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	109	%REC			1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	110	%REC			1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	112	%REC			1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	106	%REC			1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	111	%REC			1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	99	%REC			1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	108	%REC			1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	119	%REC			1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	98	%REC			1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	106	%REC			1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	111	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: BOFBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	105	%REC			1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	108	%REC			1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	105	%REC			1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	98	%REC			1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	98	%REC			1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	99	%REC			1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	100	%REC			1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	116	%REC			1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	92	%REC			1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Client ID: NA

Quanterra ID : QCBLK83576-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	64.8	UG/L	B	200	1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	1.1	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	125	UG/L	B	5000	1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	3.7	UG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	7.0	UG/L	B	25.0	1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	44.9	UG/L	B	100	1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	38.2	UG/L	U	100	1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	131	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	0.98	UG/L	B	15.0	1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	11.3	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	1390	UG/L	U	5000	1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	115	UG/L	B	1000	1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	4.6	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	3.0	UG/L	B	20.0	1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCLCS83576-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Antimony	7440-36-0	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Barium	7440-39-3	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Beryllium	7440-41-7	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Cadmium	7440-43-9	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Calcium	7440-70-2	QCBLK83576-1	11/16/95	11/17/95	112	%REC			1
Chromium	7440-47-3	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Cobalt	7440-48-4	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Copper	7440-50-8	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Iron	7439-89-6	QCBLK83576-1	11/16/95	11/17/95	110	%REC			1
Lead	7439-92-1	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Magnesium	7439-95-4	QCBLK83576-1	11/16/95	11/17/95	104	%REC			1
Manganese	7439-96-5	QCBLK83576-1	11/16/95	11/17/95	102	%REC			1
Nickel	7440-02-0	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Potassium	7440-09-7	QCBLK83576-1	11/16/95	11/17/95	100	%REC			1
Silver	7440-22-4	QCBLK83576-1	11/16/95	11/17/95	83	%REC			1
Sodium	7440-23-5	QCBLK83576-1	11/16/95	11/17/95	101	%REC			1
Vanadium	7440-62-2	QCBLK83576-1	11/16/95	11/17/95	103	%REC			1
Zinc	7440-66-6	QCBLK83576-1	11/16/95	11/17/95	105	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Arsenic
Method: EPA 7060
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analysis Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV1	9780-001	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	2.2	UG/L	B	10.0	1
B0FBV2	9780-002	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
B0FBV2	9780-002MS	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	95	%REC			1
B0FBV2	9780-002MSD	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	95	%REC			1
B0FBT8	9780-003	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
B0FBT9	9780-004	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
NA	QCBLK83578-1	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	0.90	UG/L	U	10.0	1
NA	QCLCS83578-1	Arsenic	7440-38-2	QCBLK83578-1	11/16/95	11/16/95	96	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Selenium
Method: EPA 7740
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analysis Date	Result	Unit	Qual.	Detection Limit	DI
BOFBV1	9780-001	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	
BOFBV2	9780-002	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	
BOFBV2	9780-002MS	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	96	%REC			
BOFBV2	9780-002MSD	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	98	%REC			
BOFBT8	9780-003	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	
BOFBT9	9780-004	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	
NA	QCBLK83578-1	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	0.80	UG/L	U	5.0	
NA	QCLCS83578-1	Selenium	7782-49-2	QCBLK83578-1	11/16/95	11/16/95	101	%REC			

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Mercury
Method: EPA 7470
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analysis Date	Result	Unit	Qual.	Detection Limit	Dil.
BOFBV1	9780-001	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	4.9	UG/L		0.20	1
BOFBV2	9780-002	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.10	UG/L	U	0.20	1
BOFBV2	9780-002MS	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	94	%REC			1
BOFBV2	9780-002MSD	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	95	%REC			1
BOFBT8	9780-003	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.98	UG/L		0.20	1
BOFBT9	9780-004	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.10	UG/L	U	0.20	1
NA	QCBLK83577-1	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	0.10	UG/L	U	0.20	1
NA	QCLCS83577-1	Mercury	7439-97-6	QCBLK83577-1	11/16/95	11/16/95	100	%REC			1

WET CHEMISTRY

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Total Organic Carbon
Method: EPA 9060
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil
80FBV1	9780-001	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	3.67	MG/L		1.00	1
80FBV2	9780-002	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
80FBV2	9780-002DUP	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
80FBV2	9780-002MS	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	109	%REC			1
80FBT8	9780-003	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	3.02	MG/L		1.00	1
80FBT9	9780-004	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
NA	QCBLK83309-1	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	1.00	MG/L	U	1.00	1
NA	QCLCS83309-1	Total Organic C	C-012	QCBLK83309-1	11/14/95	11/14/95	96	%REC			

VOLATILE ORGANICS

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: B0FBV1 Tank F4

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analysis Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Ethylbenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	103	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: 80FBV2

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	104	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: 80FBV2

Quanterra ID : 9780-002KS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/16/95	11/16/95	110	%REC			1
Trichloroethene	79-01-6	QCBLK83694-1	11/16/95	11/16/95	93	%REC			1
Benzene	71-43-2	QCBLK83694-1	11/16/95	11/16/95	107	%REC			1
Toluene	108-88-3	QCBLK83694-1	11/16/95	11/16/95	100	%REC			1
Chlorobenzene	108-90-7	QCBLK83694-1	11/16/95	11/16/95	100	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/16/95	11/16/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/16/95	11/16/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/16/95	11/16/95	102	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8260
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: B0FBV2

Quanterra ID : 9780-002MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/16/95	11/16/95	103	%REC			1
Trichloroethene	79-01-6	QCBLK83694-1	11/16/95	11/16/95	93	%REC			1
Benzene	71-43-2	QCBLK83694-1	11/16/95	11/16/95	107	%REC			1
Toluene	108-88-3	QCBLK83694-1	11/16/95	11/16/95	103	%REC			1
Chlorobenzene	108-90-7	QCBLK83694-1	11/16/95	11/16/95	106	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/16/95	11/16/95	95	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/16/95	11/16/95	98	%REC			1
1,2-Dichloroethane-d4 (SURR)	17060-07-0	QCBLK83694-1	11/16/95	11/16/95	104	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Client ID: 80FBT8 Tank H2

Quanterra ID : 9780-003

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analysis Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Ethylbenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	99	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	108	%REC			1

Quanterra Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: 80F8T9

Sample Date : 11/03/95
Receipt Date : 11/10/95
Report Date : 11/28/95

Quanterra ID : 9780-004

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Ethylbenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
1,2-Dichloroethane-d4 (SURR)	17060-07-0	QCBLK83694-1	11/15/95	11/15/95	109	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCBLK83694-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK83694-1	11/15/95	11/15/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK83694-1	11/15/95	11/15/95	14	UG/L		5	1
Acetone	67-64-1	QCBLK83694-1	11/15/95	11/15/95	13	UG/L	J	100	1
Carbon Disulfide	75-15-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK83694-1	11/15/95	11/15/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK83694-1	11/15/95	11/15/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Ethylbenzene	100-41-4	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK83694-1	11/15/95	11/15/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	92	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	101	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	101	%REC			1

Quanterra
Environmental Services

Quanterra-Richland
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 11/28/95

Quanterra ID : QCLCS83694-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK83694-1	11/15/95	11/15/95	100	%REC			1
Trichloroethene	79-01-6	QCBLK83694-1	11/15/95	11/15/95	96	%REC			1
Benzene	71-43-2	QCBLK83694-1	11/15/95	11/15/95	107	%REC			1
Toluene	108-88-3	QCBLK83694-1	11/15/95	11/15/95	100	%REC			1
Chlorobenzene	108-90-7	QCBLK83694-1	11/15/95	11/15/95	102	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK83694-1	11/15/95	11/15/95	95	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK83694-1	11/15/95	11/15/95	97	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK83694-1	11/15/95	11/15/95	107	%REC			1

WESTINGHOUSE HANFORD COMPANY
GENERATOR & WASTE ACCEPTANCE SERVICES

PREDETERMINATION REPORT

REQUEST #: 27067 *DATE:* December 11, 1995

PRODUCT	PREDETERMINATION OF PUREX TANK F4 FLUSH WATER

TO	Carmen N. Villalobos	*COMPANY*	S6-19
PHONE	373-4753 (FAX #373-4539)	*ADDRESS*	200E
FACILITY	MO273/200E	*MSIN*	S6-19

ANALYST	K. W. (Katie) Chang	*MSIN*	T3-05	*PHONE*	372-0679
REVIEWER	Mandrake Garrard 12-11-95	*MSIN*	T3-05	*PHONE*	
cc	File				

Based on the information of lab analysis, PUREX Tank F4 Flushed solution is considered non-regulated waste according to current state and Federal laws (WAC 173-303 and 40 CFR 261). **The solution does not designate as a Washington dangerous or extremely dangerous waste.** If you have any questions regarding this analysis, please call Acceptance Services' analyst above and refer the request number.

			REGULATED ?				
Item #	MSDS #	Product/Material	Unused Product	Used Product	Empty Container	Rags with 10% Product	Possible Waste Codes
1	Sample # BOFBV1	PUREX TANK F4 FLUSH SOLUTION	No	No	No	No	None

Comments: Waste analysis worksheet attached for your record.

********** *DISCLAIMER* **********

This predetermination is believed accurate based on the information provided. Predeterminations are performed to assist generators in selecting less hazardous products. Since solid waste regulations are subject to constant revision, waste status may change without notice. *Waste designations must be performed on all wastes* by Generator & Waste Acceptance Services to assure proper disposal in the event products are spilled or contained within a waste matrix.

WESTINGHOUSE HANFORD COMPANY

GENERATOR & WASTE ACCEPTANCE SERVICES

PREDETERMINATION REPORT

REQUEST #: 27066 DATE: December 11, 1995

SUBJECT	PRODUCT PREDETERMINATION		
TO	C.N. Villalobos	COMPANY	WHC
PHONE	373-4753	ADDRESS	200 East/PUREX
FACILITY	PUREX	MSIN	S6-19
ANALYST	C.L. Edwards	MSIN	T3-05
PHONE	372-0715		
REVIEWER	Mondrak Parsons 12-11-95		
cc	File		

This waste predetermination is based on the MSDS information for products/materials listed in the predetermination request and was performed according to current state and Federal law (WAC 173-303 and 40 CFR 261). For questions or comments, please contact the Generator & Waste Acceptance Services analyst above and reference the request #. Thank you for your interest in waste predetermination.

			REGULATED ?				
Item #	MSDS #	Product/Material	Unused Product	Used Product	Empty Container	Rags with 10% Product	Possible Waste Codes
1	N/A	PUREX Tank M2 Flush Solution	N	N	N	N	NONE

Comments:"Based on the lab analysis, the Flush Solution Does not designate as Dangerous Waste"

DISCLAIMER

This predetermination is believed accurate based on the information provided. Predeterminations are performed to assist generators in selecting less hazardous products. Since solid waste regulations are subject to constant revision, waste status may change without notice. *Waste designations must be performed on all wastes* by Generator & Waste Acceptance Services to assure proper disposal in the event products are spilled or contained within a waste matrix.

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
C. N. Villalobos, 373-4753	J. E. Mecca, RL	9650016

Subject: TRANSMITTAL OF PLUTONIUM-URANIUM EXTRACTION PLANT F4 and M2 VESSELS, LOOP FLUSH ANALYTICAL RESULTS

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
		Correspondence Control	A3-01	X
		R. W. Bailey	S6-15	
		R. J. Bliss	B3-04	
		A. A. Grasher	S6-15	
		D. G. Hamrick	S6-15	X
		D. G. Harlow	S6-19	
		J. P. Hayfield	S6-55	X
		W. G. Jasen	S6-17	
	5 JAN '95	G. J. LeBaron	S6-19	X
		W. A. Peiffer	S6-19	
		J. R. Robertson	H6-21	X
		M. J. Stephenson	H6-20	
		J. F. Tea	S6-19	X
		C. N. Villalobos	S6-19	X
		DGH/LB	S6-15	

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

FEB 26 1996

96-PUREX-007

Mr. Michael Wilson, Manager
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Wilson:

TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION PLANT (PUREX) F4 and M2 VESSELS LOOP FLUSH ANALYTICAL RESULTS

The laboratory analytical results from the final flush of the PUREX F4 and M2 vessels are enclosed. These results are transmitted in accordance with the U.S. Department of Energy, Richland Operations Office/Westinghouse Hanford Company agreement with the State of Washington Department of Ecology and the U.S. Environmental Protection Agency.

Analytical results from future flushes will be transmitted as they are obtained.

A copy of the predetermination reports, designating the final flush solution and based on analytical results, is also included in the enclosure. The final flush of these vessels was designated as non-dangerous waste.

If you have any questions, please contact Mr. Larry D. Romine, PUREX Program Manager, on (509) 376-4747.

Sincerely,

Paul F.X. Dunigan Jr.

P. F. X. Dunigan, Jr., Administrator
Hanford Tri-Party Agreement

TPD:LDR

Enclosure

cc w/encl:
David Lundstrom, Ecology
J. K. Bartz, Ecology
M. N. Jaraysi, Ecology
D. R. Sherwood, EPA
D. L. Duncan, EPA

cc w/o encl:
D. G. Hamrick, WHC
G. J. LeBaron, WHC

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
P.F.X. Dunigan, Jr., RL (D. G. Hamrick, WHC)	M. Wilson, Ecology	Incoming: 9600501 Xref: 9650016

Subject: TRANSMITTAL OF PLUTOIUM URANIUM EXTRACTION PLANT (PUREX) F4 AND M2 VESSELS LOOP FLUSH ANALYTICAL RESULTS

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
		Correspondence Control	A3-01	
		R. W. Bailey	S6-15	
		R. J. Bliss, (Sr. Staff, Assignee)	B3-04	
		A. A. Grasher	S6-15	
		D. G. Hamrick	S6-15	
		D. G. Harlow	S6-19	
		J. P. Hayfield	S6-18	
		W. G. Jasen	S6-17	
		G. J. LeBaron	S6-19	
		W. A. Peiffer	S6-19	
		M. J. Stephenson	H6-20	
		C. N. Villalobos	S6-19	