0045011

W0831-QES-464

January 18, 1996

JAN 1996
RECEIVED
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
W0831	95-013
W0832	95-112
W0833	95-112
W0841	95-116

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 Wallo — Name
1-18-96 — Date
3:35 — Time

AUG 1996
RECEIVED
EDMC

XC: Vicki Parr
Van Pettey File

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-95-0132
Record of Disposition No.

DATE: December 14, 1995	LABORATORY: Quanterra
PROJECT TITLE/NO.: Flush PUREX Vessels-2/SAF# 95-013	NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS: BOFBV4, BOFBV5

DESCRIPTION OF EVENT: The samples listed above arrived at the Richland laboratory at 8°C. Under SW-846 Protocol samples should kept at 4° C ± 2° C.

DISPOSITION OF SAMPLES: With concurrence from the customer proceed with the analysis.

APPROVAL SIGNATURES:

L. D. Zuck — 12/19/95
HASM Project Coordinator (Print/Sign Name) — Date

C. N. Villalobos — 12/21/95
Technical Representative (Print/Sign Name) — Date

Quality Assurance (Print/Sign Name) — Date

Analytical Data Package Prepared For

Westinghouse Hanford

Chemical Analysis By

Quanterra Environmental Services
St. Louis Laboratory

Sample Delivery Group Number: W0831

JAN 1996
RECEIVED
SDLA

WHC IDENTIFICATION NUMBER	QUANTERRA ID NUMBER
B0FBV4	9953-001
B0FBV5	9953-002

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 20, 1995

Attention: Karl Pool

Project number	:	519.136
Date Received by Lab	:	December 5, 1995
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W0831
Data Deliverable	:	Summary

I. Introduction

On December 5, 1995, two (2) 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
9953-001	B0FBV4	51205201	Water	12/05/95
9953-002	B0FBV5	51205202	Water	12/05/95

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

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

The Matrix Spike recoveries for arsenic, selenium, cadmium, chromium, iron and silver were outside the 80-120% range. The Matrix Spike Duplicate recoveries were outside the acceptable range for arsenic, selenium and silver. The associated data was flagged with an "N" for each of the affected analytes. The Relative Percent Difference of the Matrix Spike/Matrix Spike Duplicate were outside the acceptable range for chromium and iron. The serial dilution result for calcium, chromium, iron and manganese were above the acceptable range. The associated data for each analyte was flagged with an "E".

Quanterra
Environmental Services

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:

for Wade Price

Wade H. Price
Project Manager
e:\\sqtlmo01\price$\abbydave\hanford\hanw0831.nar

Quanterra December 08, 1995 10:55 am

Account: 10722 Project: 519.136 Quanterra-Richland QAS No. 861 Rev. 1

Master Sample Login: 9953

Project Manager: W. Price

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

Sample Header Template:

Sample No. / Comments	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
# Container Type / Data:	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site		(Container Numbers:% Filled)
9953 001	B0FBV4	Water	30-NOV-95 10:50	05-DEC-95 14:15	19-DEC-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 51205201								
1 VI - Vial-40ml	PH/9040/Q4	S	COLD	15-DEC-95	01-DEC-95	T8C		(200371:99)
1	TOC/9060/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200372:98)
2	VOA/8240/Q4	S	COLD	15-DEC-95	14-DEC-95	109A		(200369:100 200370:100)
1 AN - Amber Glass-1L	AS/7060/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
1	HG/7470/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200373:100)
1	ICAP/6010/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
1	SE/7740/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
9953-001DUP	B0FBV4	Water	30-NOV-95 10:50	05-DEC-95 14:15	19-DEC-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 51205201								
1 VI - Vial-40ml	PH/9040/Q4	S	COLD	15-DEC-95	01-DEC-95	T8C		(200371:99)
1	TOC/9060/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200372:98)
9953-001MS	B0FBV4	Water	30-NOV-95 10:50	05-DEC-95 14:15	19-DEC-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 51205201								
1 VI - Vial-40ml	TOC/9060/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200372:98)
2	VOA/8240/Q4	S	COLD	15-DEC-95	14-DEC-95	109A		(200369:100 200370:100)
1 AN - Amber Glass-1L	AS/7060/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
1	HG/7470/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200373:100)
1	ICAP/6010/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
1	SE/7740/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
9953-001MSD	B0FBV4	Water	30-NOV-95 10:50	05-DEC-95 14:15	19-DEC-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 51205201								
2 VI - Vial-40ml	VOA/8240/Q4	S	COLD	15-DEC-95	14-DEC-95	109A		(200369:100 200370:100)
1 AN - Amber Glass-1L	AS/7060/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
1	HG/7470/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200373:100)
1	ICAP/6010/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
1	SE/7740/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200373:100)
9953-002	B0FBV5	Water	30-NOV-95 10:50	05-DEC-95 14:15	19-DEC-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 51205202								
1 VI - Vial-40ml	PH/9040/Q4	S	COLD	15-DEC-95	01-DEC-95	T8C		(200376:99)
1	TOC/9060/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C		(200377:98)
2	VOA/8240/Q4	S	COLD	15-DEC-95	14-DEC-95	109A		(200374:100 200375:100)
1 AN - Amber Glass-1L	AS/7060/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C		(200378:100)

3*=Sample has not been rad screened.

00005

Quanterra December 08, 1995 10:55 am

Account: 10722 Project: 519.136 Quanterra-Richland QAS No. 861 Rev. 1

Master Sample Login: 9953

Project Manager: W. Price

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

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)
Comments								
Data:								
1		HG/7470/Q4	S	COLD	15-DEC-95	28-DEC-95	T8C	(200378:100)
1		ICAP/6010/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C	(200378:100)
1		SE/7740/Q4	S	COLD	15-DEC-95	28-MAY-96	T8C	(200378:100)

00006

1*=Sample has not been rad screened.

Westinghouse Hanford Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C # 009603
		Page 1 of 1

Collector D.E. RICHARDS	Contact/Requestor VILLALOBOS, CARMEN	Tel. No. 373-4753 MSIN S6-19 FAX
SAF Number 95-013	Sample Origin PUREX/Tank P-4	Purchase Order/Charge Code KP51T/84132
Project Title Flush PUREX Vessels - 2	Logbook # WHC-N-205	Ice Chest # Temp.
Shipped To (Lab) Quanterra	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol RCRA	Data Turnaround PRIORITY - 15 DAY TURNAROUND	Offsite Property No. N/A

Sample No.	Lab. ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative
B0FBV4		W	11/30/95	1050	(1) 40 aGs	ACTIVITY SCAN (Lab Specific)		NONE
B0FBV4		W	11/30/95	1050	(1) 1000 aG	ICP METALS TAL (6010) to include lead As (7060), Se (7740), Hg (7470)	51205201 80%	4 deg. C
B0FBV4		W	11/30/95	1050	(1) 40 aGs	pH (9040)	95%	None
B0FBV4		W	11/30/95	1050	(1) 40 aGs	TOC (9060)	100	COOL TO 4 C
B0FBV4		W	11/30/95	1050	(1) 40 aGs	VOA (8240)	↓	4 deg. C
B0FBV4		W	11/30/95	1050	(1) 40 aGs	VOA (8240)	↓	4 deg. C
B0FBV5		W	11/30/95	1050	(1) 40 aGs	ACTIVITY SCAN (Lab Specific)		NONE
B0FBV5		W	11/30/95	1050	(1) 1000 aG	ICP METALS TAL (6010) to include lead As (7060), Se (7740), Hg (7470)	80%	4 deg. C
B0FBV5		W	11/30/95	1050	(1) 40 aGs	pH (9040)	95%	NONE
B0FBV5		W	11/30/95	1050	(1) 40 aGs	TOC (9060)	51205202 100%	4 deg. C
B0FBV5		W	11/30/95	1050	(1) 40 aGs	VOA (8240)	100%	4 deg. C
B0FBV5		W	11/30/95	1050	(1) 40 aGs	VOA (8240)	100%	4 deg. C

PRIORITY

POSSIBLE SAMPLE HAZARDS/REMARKS MSDS Yes ☐ No ☑

List all known wastes.

Contains Radioactive Material below DOT Limits and Laboratory Acceptance Criteria.

SPECIAL INSTRUCTIONS Hold Time

PRIORITY - 15 DAY TURNAROUND.
SDG-W0831

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DE Richards			12/5/95 0900	K.J. Young			12/5/95 0900
K.J. Young			12/5/95 1415	[illegible]			12/5/95 1415

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)

0000007

Client Sample Screening Results

06-Dec-95

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0FBV4		12 5 95 2:30:00 PM	QUAD21A	12/6 95 9:37:48 AM	B0FBV4	30	856	28.4745833	13645	453.89083
	LIQUID		Bkg:	12/5/95 4:38:41 AM	BKG	800	47	0.05875	754	0.9425
Anl Date: 12 6 95	Tot Sa, Alq: 1.00E+00	, 1.00E+01	Alp; (Dpm/ 1.45E+02	(uCi/ 6.55E-03	(pCi/ 6.55E+03	± 2.3E+02	CAT	3.8E-03	Lab	
Ppt mg: 77	Units: L	, ml	Bet; Alq): 1.01E+03	Sa): 4.56E-02	L/g): 4.56E+04	± 3.9E+02	I	1.1E-03	Alq L/g	
WHC B0FBV5		12 5 95 2:30:00 PM	QUAD21B	12 6 95 9:37:48 AM	B0FBV5	30	8	0.22541667	50	0 7391667
	LIQUID		Bkg:	12 5 95 4:38:41 AM	BKG	800	33	0.04125	742	0.9275
Anl Date: 12 6 95	Tot Sa, Alq: 1.00E+00	, 1.00E+01	Alp; (Dpm/ 6.82E-01	(uCi/ 3.07E-05	(pCi/ 3.07E+01	± 2.2E+01	CAT	8.1E-01	Lab	
Ppt mg: 0.3	Units: L	, ml	Bet; Alq): 1.29E+00	Sa): 5.81E-05	L/g): 5.81E+01	± 2.0E+01	I	8.6E-01	Alq L/g	
WHC B0GZ02		12 5 95 2:30:00 PM	QUAD21C	12 6 95 9:37:48 AM	B0GZ02	30	15	0.43875	53	0.8404167
	LIQUID		Bkg:	12 5 95 4:38:41 AM	BKG	800	49	0.06125	741	0.92625
Anl Date: 12 6 95	Tot Sa, Alq: 2 00E+00	, 1.00E+01	Alp; (Dpm/ 1.27E+00	(uCi/ 1.15E-04	(pCi/ 5.73E+01	± 2.4E+01	CAT	4.4E-01	Lab	
Ppt mg: 1.3	Units: L	, ml	Bet; Alq): 1.40E+00	Sa): 1.26E-04	L/g): 6.30E+01	± 2.1E+01	I	7.9E-01	Alq L/g	
WHC B0GZ07		12 5 95 2:30:00 PM	QUAD21D	12 6 95 9:37:48 AM	B0GZ07	30	8	0.20916667	79	1.6833333
	LIQUID		Bkg:	12 5 95 4:38:41 AM	BKG	800	46	0.0575	760	0.95
Anl Date: 12 6 95	Tot Sa, Alq: 2.00E+00	, 1.00E+01	Alp; (Dpm/ 6.17E-01	(uCi/ 5.55E-05	(pCi/ 2.78E+01	± 2.3E+01	CAT	9.0E-01	Lab	
Ppt mg: 3.1	Units: L	, ml	Bet; Alq): 3.20E+00	Sa): 2.89E-04	L/g): 1.44E+02	± 2.6E+01	I	3.5E-01	Alq L/g	
WHC B0H250		12/5/95 2:30.00 PM	QUAD22A	12/6 95 9.37:52 AM	B0H250	30	12	0.3475	54	0.8475
	LIQUID		Bkg:	12 5 95 4:38:51 AM	BKG	800	42	0.0525	762	0.9525
Anl Date: 12/6 95	Tot Sa, Alq: 1.00E+00	, 5.00E+00	Alp; (Dpm/ 2.14E+00	(uCi/ 1.92E-04	(pCi/ 1.92E+02	± 9.7E+01	CAT	1.3E-01	Lab	
Ppt mg: 86.1	Units: L	, ml	Bet; Alq): 1.59E+00	Sa): 1.43E-04	L/g): 1.43E+02	± 4.6E+01	I	3.5E-01	Alq L/g	

00008

SAMPLE STATUS REPORT FOR E 1130. PUREX 60FBV4 TIME: 12/ 4/95 9:49
DISPATCHED: 11/21/95 12:21 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/30/95 15: 0

EXT.	DETER.	RESULTS OR STATUS		OUT OF RANGE?	GOOD ANS?	CHARGE CODE
1213	TB-FLTRT	6.90000E-02 uCi/L		N	Y	KP51T
1223	AT-FLTRT	5.30000E-03 uCi/L		N	Y	KP51T
2162	GEA-LIQ	2.26000E-02 uCi/L	Cs-137	N	Y	KP51T
2162	GEA-LIQ	1.05E-01 uCi/L Ra-226	25% ERROR			KP51T

END OF REPORT

TB 69 nCi/L = 69 pCi/ml
TA 5.3 nCi/L = 5.3 pCi/ml

Cs^{137} 22.6 nCi/L = 22.6 pCi/ml
Ra^{226} 105 nCi/L = 105 pCi/ml

BOFBV5 11/12/5/95

SAMPLE STATUS REPORT FOR E 7977. E-BLANK ~~S3031-02~~ 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 RECEIPT VARIANCE REPORT
ITAS-RICHLAND LABORATORY

WORK ORDER NUMBER:_____ DATE INITIATED: 12/5/95

INITIATED BY: TGilmore

DATE/TIME OF SAMPLE (AND/OR RFA & COC) RECEIPT: 12/5/95 1415

CLIENT SAMPLE NUMBER	RFA/COC NUMBERS	ANALYSIS REQUESTED
B6FBV4		
B6FBV5		

Samples were received with the following deficiencies:

- ☐ 1. Not enough sample received for proper analysis.
- ☒ 2. Sample received without proper preservative.
- ☐ 3. No sample received in container.
- ☐ 4. Sample received without a RFA/COC form.
- ☐ 5. No sample ID on container.
- ☐ 6. Sample received broken or leaking.
- ☒ 7. Holding time exceeded at receipt.
- ☐ 8. Custody tape broken.
- ☐ 9. COC not relinquished by client.
- ☐ 10. Sample information on container does not match sample information on the paper work (Explain below).
- ☐ 11. All shipping containers (coolers) on waybill not received with shipment.
  - ☐ RFA/COC received
  - ☐ RFA/COC not received
- ☐ 12. Other (Explain below).

NOTES: cooler temp @ 8°c

SUPERVISOR REVIEW: Jani Heidelberg

PROJECT MANAGER REVIEW:_____

TELEPHONED TO:_____ ON_____ BY_____

TELEFAXED TO:_____ ON_____ BY_____

SIGNED ORIGINAL MUST BE RETAINED IN WORK ORDER FILE

FORM NO. LS-023, 3/92, Rev. 0

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 12/5/95 1415 Client Name WHC

Project/Client # 95-013 Batch or Case # _____

Cooler ID (if noted on outside of cooler) SML 201

1. Condition of shipping container? ok
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 [X] Dry [ ] _____
6. Each sample is in a plastic bag? Yes [X] No [ ] _____
7. Number of sample containers in cooler: 12
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 8°C
11. The following paperwork should be accounted for (N/A if not applicable):
    Chain of Custody #(s) 009603
    Request for Analysis #(s) N/A
    Airbill # _____ Carrier _____
12. Have any anomalies been identified above? Yes [X] No [ ]
13. Memos have been initiated for all anomalies identified above? Yes [X]

Printed Name/Signature Tom Gilmore [signature] Date/Time 12/5/95 1415

Quanterra Environmental Services

BW/WP
12-7-95
T - 200
BY: MN

Login No.: 9953

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland
Project No: 519.173136 ACC-00995
Shipper/No: 384 0228 427

Date: 12-7-95 Time: 9:50
Initiated by: Marvin Nelson
RFA/COC Numbers: 43713

Condition/Variance (Check all that apply):

1. ☐ Sample received broken/leaking.
2. ☐ Sample received without proper preservative.
   - ☐ Cooler temperature not within 4-C ± 2-C
     Record temperature: _____
   - ☐ pH _____
   - ☐ other: _____
3. ☐ Sample received in improper container.
4. ☐ Sample received without proper paperwork. Explain: _____
5. ☐ Paperwork received without sample.
6. ☐ No sample ID on sample container.
7. ☐ Custody tape disturbed/broken/missing.
8. ☐ Sample ID on container does not match sample ID on paperwork. Explain: _____
9. ☐ All coolers on airbill not received with shipment.
10. ☐ Other (explain below): _____

☑ No variances were noted during sample receipt. Cooler Temperature Upon Receipt: 4°C

Notes: _____

Corrective Action:

☐ Client's Name: _____ Informed verbally on: _____ By: _____

☐ Client's Name: _____ Informed in writing on: _____ By: _____

☐ Sample(s) processed "as is". _____

☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor Review: (or designate) [signature] Date: 12-7-95

Project Management Review: Abby Wilder Date: 12-8-95

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 11/24/95

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: 80FBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86085-1	12/12/95	12/12/95	1	UG/L	J	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dodecane	112-40-3	QCBLK86085-1	12/12/95	12/12/95	140	UG/L	J		1
Tridecane	629-50-5	QCBLK86085-1	12/12/95	12/12/95	540	UG/L	J		1
Unknown Alkane	TIC-40	QCBLK86085-1	12/12/95	12/12/95	53	UG/L	J		1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	100	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	95	%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: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	138	%REC			1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	98	%REC			1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	110	%REC			1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	102	%REC			1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	98	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	102	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	111	%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 : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Client ID: B0FBV4

Quanterra ID : 9953-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	129	%REC			1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	97	%REC			1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	109	%REC			1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	107	%REC			1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	103	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	101	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	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: B0FBV5

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	102	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	90	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	100	%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 : 12/18/95

Quanterra ID : QCBLK86247-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86247-1	12/13/95	12/13/95	6	UG/L		5	1
Acetone	67-64-1	QCBLK86247-1	12/13/95	12/13/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86247-1	12/13/95	12/13/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86247-1	12/13/95	12/13/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86247-1	12/13/95	12/13/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Unknown C12H26	TIC-3431	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	J		1
Unknown C13H28	TIC-71	QCBLK86247-1	12/13/95	12/13/95	55	UG/L	J		1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	93	%REC			1

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

Project: 519.136

Quanterra Environmental Services

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/18/95

Quanterra ID : QCBLK86085-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	100	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	93	%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 : NA
Receipt Date : NA
Report Date : 12/18/95

Client ID: NA

Quanterra ID : QCLCS86085-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	157	%REC			1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	103	%REC			1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	106	%REC			1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	101	%REC			1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	97	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	99	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	93	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	101	%REC			1

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

Quanterra Environmental Services

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/19/95

Quanterra ID : QCLCS86247-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	107	%REC			1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	92	%REC			1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	100	%REC			1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	96	%REC			1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	93	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	99	%REC			1

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	B0FBV4	100	92	95	0	0
02	B0FBV5	102	90	100	0	0
03	VSPK01	99	93	101	0	0
04	VSPK02	97	95	99	0	0
05	B0FBV4MS	102	95	111	0	0
06	B0FBV4MSD	101	92	101	0	0
07	VBLK01	100	92	93	0	0
08	VBLK02	97	92	93	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.

B0FBV4

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: 9953-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6591

Level: (low/med) LOW Date Received: 12/05/95

% Moisture: not dec. Date Analyzed: 12/12/95

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	1	J
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.

B0FBV4

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: 9953-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6591

Level: (low/med) LOW Date Received: 12/05/95

% Moisture: not dec. Date Analyzed: 12/12/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 112403	Dodecane	22.97	140	J
2. 629505	Tridecane	23.97	540	J
3.	Unknown Alkane	24.97	53	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBV5

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: 9953-002

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6592

Level: (low/med) LOW Date Received: 12/05/95

% Moisture: not dec. Date Analyzed: 12/12/95

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.

B0FBV5

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: 9953-002

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6592

Level: (low/med) LOW Date Received: 12/05/95

% Moisture: not dec. Date Analyzed: 12/12/95

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.: V95301 SDG No.: W0831

Matrix Spike - EPA Sample No.: B0FBV4

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0	69.0	138	61-145
Trichloroethene	50.0	0	49.0	98	71-120
Benzene	50.0	0	54.8	110	76-127
Toluene	50.0	0	51.1	102	76-125
Chlorobenzene	50.0	0	49.1	98	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	64.5	129	7	14	61-145
Trichloroethene	50.0	48.7	97	1	14	71-120
Benzene	50.0	54.3	109	1	11	76-127
Toluene	50.0	53.3	107	-5	13	76-125
Chlorobenzene	50.0	51.5	103	-5	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: 9953-001
MSB;PMK PORT#6 519.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0FBV4MS

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: 9953-001MS

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6611

Level: (low/med) LOW Date Received: 12/05/95

% Moisture: not dec. Date Analyzed: 12/13/95

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	6	B
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	69	
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	49	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	55	
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	51	
108-90-7	Chlorobenzene	49	
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.

B0FBV4MSD

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: 9953-001MSD

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6612

Level: (low/med) LOW Date Received: 12/05/95

% Moisture: not dec. Date Analyzed: 12/13/95

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	64	
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	49	
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	53	
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.: V95301 SDG No.: W0831

Lab File ID: B6584 Lab Sample ID: QCBLK86085

Date Analyzed: 12/12/95 Time Analyzed: 1327

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	B0FBV4	9953-001	B6591	1645
02	B0FBV5	9953-002	B6592	1715
03	VSPK01	QCSPK86085	B6590	1558

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: QCBLK86085

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6584

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 12/12/95

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.

VBLK01

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: QCBLK86085

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6584

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 12/12/95

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

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Lab File ID: B6605 Lab Sample ID: QCBLK86247

Date Analyzed: 12/13/95 Time Analyzed: 1138

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	VSPK02	QCSPK86247	B6606	1228
02	B0FBV4MS	9953-001MS	B6611	1457
03	B0FBV4MSD	9953-001MSD	B6612	1527

COMMENTS: QCBLK
MSB;PMK PORT#7 H2O

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: QCBLK86247

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6605

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 12/13/95

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	6	
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.

VBLK02

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: QCBLK86247

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6605

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 12/13/95

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown C12H26	22.95	10	J
2.	Unknown C13H28	23.95	55	J

9A-LCS
VOA WATER LCS RECOVERY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SAS No.: SDG No.: W0831

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	78	157	1-234
Trichloroethene	50	52	103	71-157
Benzene	50	53	106	37-151
Toluene	50	50	101	47-150
Chlorobenzene	50	49	97	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.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: QCSPK86085

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6590

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 12/12/95

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	3	J
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	78	
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	52	
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	49	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

9A-LCS
VOA WATER LCS RECOVERY

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SAS No.: SDG No.: W0831

EPA Sample No.: VSPK02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	107	61-145
Trichloroethene	50	46	92	71-120
Benzene	50	50	100	76-127
Toluene	50	48	96	76-125
Chlorobenzene	50	47	93	75-130

\# 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.

VSPK02

Lab Name: QUANTERRA MO Contract: 519-136

Lab Code: ITMO Case No.: V95301 SDG No.: W0831

Matrix: (soil/water) WATER Lab Sample ID: QCSPK86247

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B6606

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 12/13/95

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	B
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	53	
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	50	
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	48	
108-90-7	Chlorobenzene	47	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

METALS

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: B0FBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	1040	UG/L		200	1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	11.8	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	6130	UG/L		5000	1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	580	UG/L		20.0	1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	68.2	UG/L		25.0	1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	2820	UG/L		100	1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	56.5	UG/L		3.0	1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	1490	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	48.8	UG/L		15.0	1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	270	UG/L		40.0	1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	367000	UG/L		100000	20
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	1750000	UG/L		20000	20
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	31.6	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	81.1	UG/L		20.0	1

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	87	%REC			1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	98	%REC			1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	84	%REC			1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	88	%REC			1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	79	%REC			1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	66	%REC			1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	90	%REC			1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	91	%REC			1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	70	%REC			1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	93	%REC			1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	88	%REC			1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	89	%REC			1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	47	%REC			1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	87	%REC			1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	93	%REC			1

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

Project: 519.136

Quanterra Environmental Services

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	112	%REC			1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	95	%REC			1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	98	%REC			1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	91	%REC			1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	108	%REC			1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	100	%REC			1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	95	%REC			1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	98	%REC			1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	105	%REC			1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	51	%REC			1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	96	%REC			1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	104	%REC			1

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: BOFBV5

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	22.3	MG/L	U	200	1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	27.6	MG/L	U	100	1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	6.8	MG/L	B	200	1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	0.69	MG/L	B	7.0	1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	2.3	MG/L	U	20.0	1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	2370	MG/L	B	5000	1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	3.7	MG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	4.2	MG/L	U	50.0	1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	5.1	MG/L	B	25.0	1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	51.6	MG/L	B	100	1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	38.2	MG/L	U	3.0	1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	1010	MG/L	B	5000	1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	5.8	MG/L	B	15.0	1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	11.3	MG/L	U	40.0	1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	1390	MG/L	U	5000	1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	6.0	MG/L	U	200	1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	1080	MG/L		1000	1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	36.0	MG/L	B	50.0	1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	12.1	MG/L	B	20.0	1

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/19/95

Quanterra ID : QCBLK86007-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	80.3	MG/L	B	200	1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	27.6	MG/L	U	100	1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	0.80	MG/L	U	200	1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	0.60	MG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	2.3	MG/L	U	20.0	1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	93.0	MG/L	B	5000	1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	3.7	MG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	4.2	MG/L	U	50.0	1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	-10.8	MG/L	B	25.0	1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	43.8	MG/L	B	100	1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	38.2	MG/L	U	3.0	1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	141	MG/L	B	5000	1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	0.90	MG/L	U	15.0	1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	11.3	MG/L	U	40.0	1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	1390	MG/L	U	5000	1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	6.0	MG/L	U	200	1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	91.1	MG/L	B	1000	1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	4.3	MG/L	U	50.0	1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	1.7	MG/L	U	20.0	1

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Sample Date : NA
Receipt Date : NA
Report Date : 12/19/95

Client ID: NA

Quanterra ID : QCLCS86007-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	104	%REC			1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	100	%REC			1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	101	%REC			1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	108	%REC			1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	106	%REC			1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	108	%REC			1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	100	%REC			1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	104	%REC			1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	101	%REC			1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	84	%REC			1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	99	%REC			1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	106	%REC			1

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

Quanterra Environmental Services

Project: 519.136

Category: Arsenic
Method: EPA 7060
Matrix: LIQUID

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil
BOFBV4	9953-001	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	2.0	UG/L	B	10.0	1
BOFBV4	9953-001MS	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	71	%REC			1
BOFBV4	9953-001MSD	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	75	%REC			1
BOFBV5	9953-002	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	0.90	UG/L	U	10.0	1
NA	QCLCS86014-1	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	102	%REC			1
NA	QCBLK86014-1	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	0.90	UG/L	U	10.0	1

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

Quanterra Environmental Services

Project: 519.136

Category: Selenium
Method: EPA 7740
Matrix: LIQUID

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV4	9953-001	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	0.80	UG/L	U	5.0	1
B0FBV4	9953-001MS	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	11	%REC			1
B0FBV4	9953-001MSD	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	10	%REC			1
B0FBV5	9953-002	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	0.80	UG/L	U	5.0	1
NA	QCLCS86014-1	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	103	%REC			1
NA	QCBLK86014-1	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	0.80	UG/L	U	5.0	1

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

Project: 519.136

Quanterra Environmental Services

Category: Mercury
Method: EPA 7470
Matrix: LIQUID

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV4	9953-001	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	0.38	UG/L		0.20	1
B0FBV4	9953-001MS	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	89	%REC			1
B0FBV4	9953-001MSD	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	92	%REC			1
B0FBV5	9953-002	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	0.13	UG/L	B	0.20	1
NA	QCLCS86005-1	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	113	%REC			1
NA	QCBLK86005-1	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	0.17	UG/L	B	0.20	1

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0FBV4

Lab Name: QUANTERRA MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831

Matrix (soil/water): WATER Lab Sample ID: 9953-001

Level (low/med): LOW Date Received: 12/05/95

% 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	1040			P
7440-36-0	Antimony	27.6	U		P
7440-38-2	Arsenic	2.0	B	N	F
7440-39-3	Barium	11.8	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	2.3	U		P
7440-70-2	Calcium	6130		E	P
7440-47-3	Chromium	580		EN	P
7440-48-4	Cobalt	4.2	U		P
7440-50-8	Copper	68.2			P
7439-89-6	Iron	2820		EN	P
7439-92-1	Lead	56.5			P
7439-95-4	Magnesium	1490	B		P
7439-96-5	Manganese	48.8		E	P
7439-97-6	Mercury	0.38			CV
7440-02-0	Nickel	270			P
7440-09-7	Potassium	367000			P
7782-49-2	Selenium	0.80	U	N	F
7440-22-4	Silver	6.0	U	N	P
7440-23-5	Sodium	1750000			P
7440-62-2	Vanadium	31.6	B		P
7440-66-6	Zinc	81.1			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0FBV5

Lab Name: QUANTERRA MO Contract: 519.136
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831
Matrix (soil/water): WATER Lab Sample ID: 9953-002
Level (low/med): LOW Date Received: 12/05/95
% 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	22.3	U		P
7440-36-0	Antimony	27.6	U		P
7440-38-2	Arsenic	0.90	U	N	F
7440-39-3	Barium	6.8	B		P
7440-41-7	Beryllium	0.69	B		P
7440-43-9	Cadmium	2.3	U		P
7440-70-2	Calcium	2370	B	E	P
7440-47-3	Chromium	3.7	U	EN	P
7440-48-4	Cobalt	4.2	U		P
7440-50-8	Copper	5.1	B		P
7439-89-6	Iron	51.6	B	EN	P
7439-92-1	Lead	38.2	U		P
7439-95-4	Magnesium	1010	B		P
7439-96-5	Manganese	5.8	B	E	P
7439-97-6	Mercury	0.13	B		CV
7440-02-0	Nickel	11.3	U		P
7440-09-7	Potassium	1390	U		P
7782-49-2	Selenium	0.80	U	N	F
7440-22-4	Silver	6.0	U	N	P
7440-23-5	Sodium	1080			P
7440-62-2	Vanadium	36.0	B		P
7440-66-6	Zinc	12.1	B		P

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

Comments:

FORM I - IN

SW-846

U.S. EPA - CLP

3
BLANKS

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831

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	27.0	B	22.3	U	28.9	B	80.290	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			0.900	U	F
Barium	0.8	U	1.3	B	4.3	B	2.1	B	0.800	U	P
Beryllium	0.7	B	0.6	B	1.5	B	0.9	B	0.600	U	P
Cadmium	2.3	U	2.3	U	2.3	U	2.3	U	2.300	U	P
Calcium	18.8	U	18.8	U	53.8	B	39.9	B	92.950	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	-5.1	B	-16.9	B	-14.3	B			-10.770	B	P
Iron	12.5	B	11.8	B	34.5	B	28.0	B	43.770	B	P
Lead	38.2	U	38.2	U	38.2	U	38.2	U	38.200	U	P
Magnesium	63.3	U	153.4	B	531.0	B	218.9	B	140.540	B	P
Manganese	0.9	U	1.0	B	5.0	B	2.2	B	0.900	U	P
Mercury	0.2	B	0.2	B	0.1	B			0.174	B	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			0.800	U	F
Silver	6.0	U	6.0	U	6.0	U	6.0	U	6.000	U	P
Sodium	27.7	U	127.4	B	383.1	B	159.0	B	91.110	B	P
Vanadium	4.3	U	6.4	B	28.2	B	11.5	B	4.300	U	P
Zinc	1.7	U	1.7	U	1.7	U	1.7	U	1.700	U	P

FORM III - IN

SW-846

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

B0FBV4S

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831

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	80-120	2777.3900		1039.2200		2000.00	86.9		P
Antimony	80-120	491.4500		27.6000	U	500.00	98.3		P
Arsenic	80-120	30.2800		2.0000	B	40.00	70.7	N	F
Barium	80-120	1700.5500		11.7800	B	2000.00	84.4		P
Beryllium	80-120	43.9700		0.6000	U	50.00	87.9		P
Cadmium	80-120	39.7100		2.3000	U	50.00	79.4	N	P
Calcium									NR
Chromium	80-120	711.1900		580.2700		200.00	65.5	N	P
Cobalt	80-120	450.7100		4.2000	U	500.00	90.1		P
Copper	80-120	295.7700		68.1800		250.00	91.0		P
Iron	80-120	3515.3600		2818.4900		1000.00	69.7	N	P
Lead	80-120	522.5900		56.4800		500.00	93.2		P
Magnesium									NR
Manganese	80-120	488.6500		48.8100		500.00	88.0		P
Mercury	80-120	1.2700		0.3830		1.00	88.7		CV
Nickel	80-120	716.5800		270.2200		500.00	89.3		P
Potassium									NR
Selenium	80-120	1.1000	B	0.8000	U	10.00	11.0	N	F
Silver	80-120	23.7200	B	6.0000	U	50.00	47.4	N	P
Sodium									NR
Vanadium	80-120	464.9900		31.6400	B	500.00	86.7		P
Zinc	80-120	544.3100		81.1300		500.00	92.6		P

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

B0FBV4SD

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831

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	80-120	3097.2100		1039.2200		2000.00	102.9		P
Antimony	80-120	558.4200		27.6000	U	500.00	111.7		P
Arsenic	80-120	32.1400		2.0000	B	40.00	75.4	N	F
Barium	80-120	1911.8700		11.7800	B	2000.00	95.0		P
Beryllium	80-120	48.9200		0.6000	U	50.00	97.8		P
Cadmium	80-120	45.6700		2.3000	U	50.00	91.3		P
Calcium									NR
Chromium	80-120	796.9000		580.2700		200.00	108.3		P
Cobalt	80-120	499.8800		4.2000	U	500.00	100.0		P
Copper	80-120	305.6200		68.1800		250.00	95.0		P
Iron	80-120	3852.3800		2818.4900		1000.00	103.4		P
Lead	80-120	563.9800		56.4800		500.00	101.5		P
Magnesium									NR
Manganese	80-120	539.2900		48.8100		500.00	98.1		P
Mercury	80-120	1.3000		0.3830		1.00	91.7		CV
Nickel	80-120	795.8300		270.2200		500.00	105.1		P
Potassium									NR
Selenium	80-120	0.9500	B	0.8000	U	10.00	9.5	N	F
Silver	80-120	25.3900	B	6.0000	U	50.00	50.8	N	P
Sodium									NR
Vanadium	80-120	509.5400		31.6400	B	500.00	95.6		P
Zinc	80-120	598.8100		81.1300		500.00	103.5		P

Comments:

U.S. EPA - CLP

6A
MATRIX SPIKE DUPLICATES

EPA SAMPLE NO.

B0FBV4S

Lab Name: QUANTERRA MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831

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%	86.90		102.90		16.9		P
Sb	20%	98.30		111.70		12.8		P
As	20%	70.70		75.40		6.4		F
Ba	20%	84.40		95.00		11.8		P
Be	20%	87.90		97.80		10.7		P
Cd	20%	79.40		91.30		13.9		P
Ca	20%							NR
Cr	20%	65.50		108.30		49.3		P
Co	20%	90.10		100.00		10.4		P
Cu	20%	91.00		95.00		4.3		P
Fe	20%	69.70		103.40		38.9		P
Pb	20%	93.20		101.50		8.5		P
Mg	20%							NR
Mn	20%	88.00		98.10		10.9		P
Hg	20%	88.70		91.70		3.3		CV
Ni	20%	89.30		105.10		16.3		P
K	20%							NR
Se	20%	11.00		9.50		14.6		F
Ag	20%	47.40		50.80		6.9		P
Na	20%							NR
V	20%	86.70		95.60		9.8		P
Zn	20%	92.60		103.50		11.1		P

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0831

Solid LCS Source:

Aqueous LCS Source: SOL+/CHEMPUR

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	1000.0	1038.36	103.8						
Antimony	1000.0	1030.97	103.1						
Arsenic									
Barium	1000.0	1019.64	102.0						
Beryllium	1000.0	1024.92	102.5						
Cadmium	1000.0	1016.78	101.7						
Calcium	20000.0	19939.58	99.7						
Chromium	1000.0	1021.03	102.1						
Cobalt	1000.0	1007.67	100.8						
Copper	1000.0	1080.84	108.1						
Iron	1000.0	1061.21	106.1						
Lead	1000.0	1075.84	107.6						
Magnesium	20000.0	20009.24	100.0						
Manganese	1000.0	1025.65	102.6						
Mercury									
Nickel	1000.0	1036.24	103.6						
Potassium	20000.0	20258.43	101.3						
Selenium									
Silver	250.0	211.23	84.5						
Sodium	20000.0	19889.21	99.4						
Vanadium	1000.0	1018.16	101.8						
Zinc	1000.0	1058.38	105.8						

FORM VII - IN

SW-846

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO Contract: 519.136

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: W0831

Solid LCS Source: _____

Aqueous LCS Source: SOL+/CHEMPUR

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic	40.0	40.91	102.3						
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium	40.0	41.33	103.3						
Silver									
Sodium									
Vanadium									
Zinc									

FORM VII - IN

SW-846

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: QUANTERRA_MO_____ Contract: 519.136___

Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: W0831_____

Solid LCS Source: _____

Aqueous LCS Source: SOL+/CHEMPUR

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	3.40	113.3						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Vanadium									
Zinc									

FORM VII - IN

SW-846

WET CHEMISTRY

Quanterra
Environmental Services

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

Project: 519.136

Category: pH
Method: EPA 9040
Matrix: Water

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
BOFBV4	9953-001	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	11.73	PH			1
BOFBV4	9953-001DUP	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	11.73	PH			1
BOFBV5	9953-002	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	6.41	PH			1
NA	QCBLK86175-1	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	4.90	PH			1

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: Water

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil
BOFBV4	9953-001	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	9.04	MG/L		1.00	1
BOFBV4	9953-001DUP	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	9.04	MG/L		1.00	1
BOFBV4	9953-001MS	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	98	%REC			1
BOFBV5	9953-002	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	1.04	MG/L		1.00	1
NA	QCBLK86064-1	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	1.00	MG/L	U	1.00	1
NA	QCLCS86064-1	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	98	%REC			1

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

January 29, 1996 9650391

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 TANK P4 LOOP FLUSH ANALYTICAL RESULTS

Attachment 1 are laboratory analytical results conducted on the final flush for the Plutonium Uranium Extraction (PUREX) Plant Tank P4. 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 Report, designating the final flush solution based on the analytical results, is also included in Attachment 1. The final flush for this vessel was 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 Projects Division

sah

Attachments 2

DOE-HQ - B. K. Nelson (w/o attachments)

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

9650391

ATTACHMENT 1

TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION PLANT TANK P4
LOOP FLUSH ANALYTICAL RESULTS

PUREX TANK P4 RCRA ANALYTICAL DATA
TABLE OF CONTENTS

PAGE

DESCRIPTION
RCRA Analytical Data Summary 1

RAD SCREENING SAMPLE
RAD Screening Sample by 222-S lab (E1130) 3

RCRA PROTOCOL SAMPLE
Certificate of Analysis 4
Analytical Data Summary: Metals
- ICAP Metals for RCRA Protocol Sample (BOFBV4) 8
- ICAP Metals Matrix Spike 9
- ICAP Metals Matrix Spike Duplicate 10
- ICAP Metals Field Sample Blank (BOFBV5) 11
- ICAP Metals Quality Control Blank 12
- ICAP Metals Quality Laboratory Control Blank 13
- Arsenic Analysis (incl. all spikes/QC blanks) 14
- Selenium Analysis (incl. all spikes/QC blanks) 15
- Mercury Analysis (incl. all spikes/QC blanks) 16

Analytical Data Summary: Wet Chemistry
- pH Analysis for RCRA Protocol Sample (incl. QC blanks) 18
- Total Organic Carbon (TOC) Analysis (incl. all spikes/QC blanks) . . 19

Analytical Data Summary: Volatile Organics
- VOA for RCRA Sample (BOFBV4) 21
- VOA Matrix Spike 22
- VOA Matrix Spike Duplicate 23
- VOA Field Sample Blank (BOFBV5) 24
- VOA Quality Control Blank 25
- VOA Quality Laboratory Control Blank 27

Predetermination Report 29

RCRA ANALYTICAL DATA SUMMARY
PUREX Tank P4
SAMPLE LOCATION: TANK P4
SAMPLE ID# BOFBV4

Analyte	Dangerous Waste Designation Threshold (mg/L)	RCRA Sample Results (mg/L)
Cadmium	1.0	0.0023
Chromium	5.0	0.58
Lead	5.0	0.0565
Barium	100.0	0.0118 (B)
Silver	5.0	0.006 (U)
Arsenic	5.0	0.002 (B)
Selenium	1.0	0.0008 (U)
Mercury	0.2	0.00038
pH	pH<2 or pH>12.5	11.73
Total Organic Carbon (TOC)	100,000 (10wt% based upon designation limits for tri-butyl phosphate)	9.04
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)

Definitions:
U = compound not detected
B = compound was found in the blank

RAD SCREENING DATA

Tank P4 RAD Screening Data

SAMPLE STATUS REPORT FOR E 1130. PUREX BOFBV4 TIME: 12/ 4/95 9:49
DISPATCHED: 11/21/95 12:21 SAMPLE HAS NOT BEEN SLURPED
RECEIVED: 11/30/95 15: 0

EXT.	DETER.	RESULTS OR STATUS		OUT OF RANGE?	GOOD ANS?	CHARGE CODE
1213	TB-FLTRT	6.90000E-02 uCi/L		N	Y	KP51T
1223	AT-FLTRT	5.30000E-03 uCi/L		N	Y	KP51T
2162	GEA LIQ	2.26000E-02 uCi/L	Cs-137	N	Y	KP51T
2162	GEA-LIQ	1.05E-01 uCi/L Ra-226	25% 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

DEC 1995
RECEIVED
SDLA

December 19, 1995

Attention: Karl Pool

Project number	:	519.136
Date Received by Lab	:	December 5, 1995
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W0831
Data Deliverable	:	Summary

PRIORITY

I. Introduction

On December 5, 1995, two (2) 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	
9953-001	B0FBV4	51205201	Water	12/05/95	RCRA Sample
9953-002	B0FBV5	51205202	Water	12/05/95	Field Blank

CW. 1/19/96

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.

PRIORITY

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

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

The Matrix Spike recoveries for arsenic, selenium, cadmium, chromium, iron and silver were outside the 80-120% range. The Matrix Spike Duplicate recoveries were outside the acceptable range for arsenic, selenium and silver. The associated data was flagged with an "N" for each of the affected analytes. The Relative Percent Difference of the Matrix Spike/Matrix Spike Duplicate were outside the acceptable range for chromium and iron. The serial dilution result for calcium, chromium, iron and manganese were above the acceptable range. The associated data for each analyte was flagged with an "E".

Quanterra
Environmental Services

PRIORITY

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
e:\\sqtlmo01\priceS\abbydave\hanford\hanw0831.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

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID: B0FBV4

Quanterra ID : 9953-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	1040	UG/L		200	1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	27.6	UG/L	U	100	1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	11.8	UG/L	B	200	1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	0.60	UG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	2.3	UG/L	U	20.0	1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	6130	UG/L		5000	1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	580	UG/L		20.0	1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	4.2	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	68.2	UG/L		25.0	1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	2820	UG/L		100	1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	56.5	UG/L		3.0	1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	1490	UG/L	B	5000	1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	48.8	UG/L		15.0	1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	270	UG/L		40.0	1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	367000	UG/L		100000	20
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	6.0	UG/L	U	200	1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	1750000	UG/L		20000	20
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	31.6	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	81.1	UG/L		20.0	1

PRIORITY

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: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	87	%REC			1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	98	%REC			1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	84	%REC			1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	88	%REC			1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	79	%REC			1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	66	%REC			1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	90	%REC			1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	91	%REC			1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	70	%REC			1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	93	%REC			1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	88	%REC			1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	89	%REC			1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	47	%REC			1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	87	%REC			1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	93	%REC			1

PRIORITY

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: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	112	%REC			1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	95	%REC			1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	98	%REC			1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	91	%REC			1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	108	%REC			1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	100	%REC			1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	95	%REC			1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	98	%REC			1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	105	%REC			1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	51	%REC			1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	96	%REC			1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	104	%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: B0FBV5

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Quanterra ID : 9953-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	22.3	MG/L	U	200	1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	27.6	MG/L	U	100	1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	6.8	MG/L	B	200	1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	0.69	MG/L	B	7.0	1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	2.3	MG/L	U	20.0	1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	2370	MG/L	B	5000	1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	3.7	MG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	4.2	MG/L	U	50.0	1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	5.1	MG/L	B	25.0	1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	51.6	MG/L	B	100	1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	38.2	MG/L	U	3.0	1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	1010	MG/L	B	5000	1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	5.8	MG/L	B	15.0	1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	11.3	MG/L	U	40.0	1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	1390	MG/L	U	5000	1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	6.0	MG/L	U	200	1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	1080	MG/L		1000	1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	36.0	MG/L	B	50.0	1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	12.1	MG/L	B	20.0	1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/19/95

Quanterra ID : QCBLK86007-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	80.3	MG/L	B	200	1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	27.6	MG/L	U	100	1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	0.80	MG/L	U	200	1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	0.60	MG/L	U	7.0	1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	2.3	MG/L	U	20.0	1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	93.0	MG/L	B	5000	1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	3.7	MG/L	U	20.0	1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	4.2	MG/L	U	50.0	1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	-10.8	MG/L	B	25.0	1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	43.8	MG/L	B	100	1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	38.2	MG/L	U	3.0	1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	141	MG/L	B	5000	1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	0.90	MG/L	U	15.0	1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	11.3	MG/L	U	40.0	1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	1390	MG/L	U	5000	1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	6.0	MG/L	U	200	1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	91.1	MG/L	B	1000	1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	4.3	MG/L	U	50.0	1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	1.7	MG/L	U	20.0	1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: ICAP Metals
Method: EPA 6010
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/19/95

Quanterra ID : QCLCS86007-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK86007-1	12/12/95	12/12/95	104	%REC			1
Antimony	7440-36-0	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Barium	7440-39-3	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Beryllium	7440-41-7	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Cadmium	7440-43-9	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Calcium	7440-70-2	QCBLK86007-1	12/12/95	12/12/95	100	%REC			1
Chromium	7440-47-3	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Cobalt	7440-48-4	QCBLK86007-1	12/12/95	12/12/95	101	%REC			1
Copper	7440-50-8	QCBLK86007-1	12/12/95	12/12/95	108	%REC			1
Iron	7439-89-6	QCBLK86007-1	12/12/95	12/12/95	106	%REC			1
Lead	7439-92-1	QCBLK86007-1	12/12/95	12/12/95	108	%REC			1
Magnesium	7439-95-4	QCBLK86007-1	12/12/95	12/12/95	100	%REC			1
Manganese	7439-96-5	QCBLK86007-1	12/12/95	12/12/95	103	%REC			1
Nickel	7440-02-0	QCBLK86007-1	12/12/95	12/12/95	104	%REC			1
Potassium	7440-09-7	QCBLK86007-1	12/12/95	12/12/95	101	%REC			1
Silver	7440-22-4	QCBLK86007-1	12/12/95	12/12/95	84	%REC			1
Sodium	7440-23-5	QCBLK86007-1	12/12/95	12/12/95	99	%REC			1
Vanadium	7440-62-2	QCBLK86007-1	12/12/95	12/12/95	102	%REC			1
Zinc	7440-66-6	QCBLK86007-1	12/12/95	12/12/95	106	%REC			1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: Arsenic
Method: EPA 7060
Matrix: LIQUID

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
BOFBV4	9953-001	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	2.0	UG/L	B	10.0	1
BOFBV4	9953-001MS	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	71	%REC			1
BOFBV4	9953-001MSD	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	75	%REC			1
BOFBV5	9953-002	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	0.90	UG/L	U	10.0	1
NA	QCLCS86014-1	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	102	%REC			1
NA	QCBLK86014-1	Arsenic	7440-38-2	QCBLK86014-1	12/12/95	12/18/95	0.90	UG/L	U	10.0	1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: Selenium
Method: EPA 7740
Matrix: LIQUID

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
BOFBV4	9953-001	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	0.80	UG/L	U	5.0	1
BOFBV4	9953-001MS	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	11	%REC			1
BOFBV4	9953-001MSD	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	10	%REC			1
BOFBV5	9953-002	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	0.80	UG/L	U	5.0	1
NA	QCLCS86014-1	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	103	%REC			1
NA	QCBLK86014-1	Selenium	7782-49-2	QCBLK86014-1	12/12/95	12/18/95	0.80	UG/L	U	5.0	1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: Mercury
Method: EPA 7470
Matrix: LIQUID

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV4	9953-001	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	0.38	UG/L		0.20	1
B0FBV4	9953-001MS	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	89	%REC			1
B0FBV4	9953-001MSD	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	92	%REC			1
B0FBV5	9953-002	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	0.13	UG/L	B	0.20	1
NA	QCLCS86005-1	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	113	%REC			1
NA	QCBLK86005-1	Mercury	7439-97-6	QCBLK86005-1	12/12/95	12/12/95	0.17	UG/L	B	0.20	1

PRIORITY

WET CHEMISTRY

Quanterra Environmental Services

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

Project: 519.136

Category: pH
Method: EPA 9040
Matrix: Water

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV4	9953-001	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	11.73	PH			1
B0FBV4	9953-001DUP	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	11.73	PH			1
B0FBV5	9953-002	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	6.41	PH			1
NA	QCBLK86175-1	pH	C-006	QCBLK86175-1	12/13/95	12/13/95	4.90	PH			1

PRIORITY

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: Water

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0FBV4	9953-001	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	9.04	MG/L		1.00	1
B0FBV4	9953-001DUP	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	9.04	MG/L		1.00	1
B0FBV4	9953-001MS	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	98	%REC			1
B0FBV5	9953-002	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	1.04	MG/L		1.00	1
NA	QCBLK86064-1	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	1.00	MG/L	U	1.00	1
NA	QCLCS86064-1	Total Organic C	C-012	QCBLK86064-1	12/12/95	12/12/95	98	%REC			1

QUALITY

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: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86085-1	12/12/95	12/12/95	1	UG/L	J	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dodecane	112-40-3	QCBLK86085-1	12/12/95	12/12/95	140	UG/L	J		1
Tridecane	629-50-5	QCBLK86085-1	12/12/95	12/12/95	540	UG/L	J		1
Unknown Alkane	TIC-40	QCBLK86085-1	12/12/95	12/12/95	53	UG/L	J		1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	100	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	95	%REC			1

RITY

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: BOFBV4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	138	%REC			1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	98	%REC			1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	110	%REC			1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	102	%REC			1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	98	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	102	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	111	%REC			1

RTY

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: B0F8V4

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	129	%REC			1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	97	%REC			1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	109	%REC			1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	107	%REC			1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	103	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	101	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	101	%REC			1

PRIORITY

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: BOFBV5

Sample Date : 11/30/95
Receipt Date : 12/05/95
Report Date : 12/18/95

Quanterra ID : 9953-002

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	102	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	90	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	100	%REC			1

PRIORITY

2

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 : 12/18/95

Quanterra ID : QCBLK86247-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86247-1	12/13/95	12/13/95	6	UG/L		5	1
Acetone	67-64-1	QCBLK86247-1	12/13/95	12/13/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86247-1	12/13/95	12/13/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86247-1	12/13/95	12/13/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86247-1	12/13/95	12/13/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86247-1	12/13/95	12/13/95	5	UG/L	U	5	1
Unknown C12H26	TIC-3431	QCBLK86247-1	12/13/95	12/13/95	10	UG/L	J		1
Unknown C13H28	TIC-71	QCBLK86247-1	12/13/95	12/13/95	55	UG/L	J		1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	93	%REC			1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/18/95

Quanterra ID : QCBLK86085-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK86085-1	12/12/95	12/12/95	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
Carbon Disulfide	75-15-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
2-Butanone	78-93-3	QCBLK86085-1	12/12/95	12/12/95	100	UG/L	U	100	1
1,1,1-Trichloroethane	71-55-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
4-Methyl-2-Pentanone	108-10-1	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
2-Hexanone	591-78-6	QCBLK86085-1	12/12/95	12/12/95	50	UG/L	U	50	1
Tetrachloroethene	127-18-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK86085-1	12/12/95	12/12/95	5	UG/L	U	5	1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	100	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	92	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	93	%REC			1

PRIORITY

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 : 12/18/95

Quanterra ID : QCLCS86085-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86085-1	12/12/95	12/12/95	157	%REC			1
Trichloroethene	79-01-6	QCBLK86085-1	12/12/95	12/12/95	103	%REC			1
Benzene	71-43-2	QCBLK86085-1	12/12/95	12/12/95	106	%REC			1
Toluene	108-88-3	QCBLK86085-1	12/12/95	12/12/95	101	%REC			1
Chlorobenzene	108-90-7	QCBLK86085-1	12/12/95	12/12/95	97	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86085-1	12/12/95	12/12/95	99	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86085-1	12/12/95	12/12/95	93	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86085-1	12/12/95	12/12/95	101	%REC			1

PRIORITY

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

Quanterra Environmental Services

Project: 519.136

Category: Volatiles
Method: EPA 8240
Matrix: LIQUID

Client ID: NA

Sample Date : NA
Receipt Date : NA
Report Date : 12/19/95

Quanterra ID : QCLCS86247-1

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK86247-1	12/13/95	12/13/95	107	%REC			1
Trichloroethene	79-01-6	QCBLK86247-1	12/13/95	12/13/95	92	%REC			1
Benzene	71-43-2	QCBLK86247-1	12/13/95	12/13/95	100	%REC			1
Toluene	108-88-3	QCBLK86247-1	12/13/95	12/13/95	96	%REC			1
Chlorobenzene	108-90-7	QCBLK86247-1	12/13/95	12/13/95	93	%REC			1
Toluene-d8 (SURR)	2037-26-5	QCBLK86247-1	12/13/95	12/13/95	97	%REC			1
Bromofluorobenzene (SURR)	460-00-4	QCBLK86247-1	12/13/95	12/13/95	95	%REC			1
1,2-Dichloroethane-d4 (SURR)	17070-07-0	QCBLK86247-1	12/13/95	12/13/95	99	%REC			1

PRIORITY

WESTINGHOUSE HANFORD COMPANY

GENERATOR & WASTE ACCEPTANCE SERVICES

PREDETERMINATION REPORT

REQUEST #: 27194 **DATE:** January 4, 1996

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	Richard L. Christ 1-4-96				
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 P4 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.

2

9650391

ATTACHMENT 2

LETTER FOR TRANSMITTAL TO ECOLOGY AND EPA - TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION PLANT TANK P4 LOOP FLUSH ANALYTICAL RESULTS

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 TANK P4 LOOP FLUSH ANALYTICAL RESULTS

Enclosed are laboratory analytical results conducted on the final flush for the Plutonium Uranium Extraction (PUREX) Plant Tank P4. 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 and the U. S. Environmental Protection Agency.

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

A copy of the Predetermination Report, designating the final flush solution based on the analytical results, is also included in the enclosure. The final flush for this vessel was 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

Enclosure:
Predetermination Report

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.

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
C. N. Villalobos, 373-4753	J. E. Mecca, RL	9650391

Subject: TRANSMITTAL OF PLUTONIUM-URANIUM EXTRACTION PLANT TANK P4 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	S5-66	
		S. A. Hays	S6-19	
	1 FEB '96	G. J. LeBaron	S6-19	
	1-29-96	W. A. Peiffer	S6-19	
		M. J. Stephenson	H6-20	
		C. N. Villalobos	S6-19	X
		DGH File/LB		

A-6001-538 (01/95) WEF008

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

APR 5 1996

96-PUREX-011

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. 4th Avenue
Kennewick, Washington

Dear Mr. Wilson:

TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION (PUREX) PLANT TANK P4 LOOP FLUSH ANALYTICAL RESULTS

Laboratory analytical results conducted on the final flush for PUREX Plant Tank P4 are enclosed. 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 and U.S. Environmental Protection Agency.

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

A copy of the Predetermination Report, designating the final flush solution based on the analytical results, is also included in the enclosure. The final flush for this vessel was designated as non-dangerous waste.

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

Sincerely,

J. E. Mecca, Director
Transition Program Division

TPD:LDR

Enclosure

cc w/encl:
Robert J. Julian, Ecology

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

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
J. E. Mecca, RL (D. G. Hamrick, WHC)	M. A. Wilson, Ecology	Incoming: 9600880 Xref: 9650391

Subject: TRANSMITTAL OF PLUTONIUM URANIUM EXTRACTION (PUREX) PLANT TANK P4 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	
		G. J. LeBaron	S6-19	
		W. A. Peiffer	S6-19	
		M. J. Stephenson	H6-20	
		C. N. Villalobos	S6-19	