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0044393

W0724-QES

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Quanterra Incorporated
2800 George Washington Way
Richland, Washington 99352

509 375-3131 Telephone
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CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
345 Hills
Richland, WA 99352

October 2, 1995

Attention: Joan Kessner



SAF Number	:	B95-097
Date SDG Closed	:	September 18, 1995
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W0724
Data Deliverable	:	Summary

I. Introduction

On September 18, 1995, one water sample was received by the Quanterra Environmental Services Richland Laboratory (QTESRL) for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

<u>QTESRL ID</u>	<u>BHI ID</u>	<u>Matrix</u>	<u>Date of Receipt</u>
50926301	B0GKJ4	Water	9/18/95

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analysis was: **Gas Proportional Counting**
Strontium-90 by method ITAS-RD-3204

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III. Quality Control

The analytical results for each analysis performed under SDG W0724 include a minimum of one Laboratory Control Sample (LCS), one method (reagent) blank, and one duplicate. Any exceptions have been noted in the "Comments" section.

Quality control sample results are reported in the same units as sample results.

IV. Comments

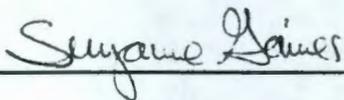
Gas Proportional Counting

Strontium-90 by method ITAS-RD-3204

The LCS, batch blank, sample and sample duplicate (B0GKJ4) results are within contractual requirements.

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

Reviewed and approved:



Suzanne Gaines
Project Manager

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND **SDG:** W0724
LAB SAMPLE ID: 50926301 **MATRIX:** WATER
CLIENT ID: B0GKJ4 **DATE RECEIVED:** 9/18/95 11:20:00 AM

ISOTOPE	RESULT	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
STRONTIUM	4.32E-01	3.0E-01	3.2E-01	7.74E-01	pCi/L	98.80%	RD3204

Number of Results:

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector	Company Contact Jane Borghese	Telephone 509-373-4790
Project Designation 100-NR-2 Pump and Treat Acceptance Test, Injection Water	Sampling Location N Springs ERA Pump and Treat	SAF No. B95-097
Ice Chest No. I-24	Field Logbook No. EFC-1154	Method of Shipment Hand Delivery - Government Vehicle
Shipped To Quanterra	Offsite Property No. N/A	Bill of Lading/Air Bill No. N/A

Possible Sample Hazards/Remarks	Preservation	HNO3	None	Sr-90	Activity Scan
	None Known	Type of Container	P		
	No. of Container(s)	3	1		
Special Handling and/or Storage None	Volume	1 Liter	20 ml.		

SAMPLE ANALYSIS
 50926301
 SDW
 W0724

Sample No.	Matrix*	Date Sampled	Time Sampled	X	X
B06 K34	w	09-15-95	0955	X	X

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix*
Relinquished By <i>DS1 John</i> Date/Time <i>12:15</i>	Received By <i>Eric</i> Date/Time <i>12:15</i>		S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By <i>Eric</i> Date/Time <i>09-15-95</i>	Received By <i>Quanterra</i> Date/Time <i>9-15-95</i>		
Relinquished By <i>Paula B. Batten</i> Date/Time <i>9-18-95</i>	Received By <i>Nancy Schenker</i> Date/Time <i>9-18-95</i>		
Relinquished By _____ Date/Time _____	Received By _____ Date/Time _____		

LABORATORY SECTION	Received By _____ Title _____ Date/Time _____
FINAL SAMPLE DISPOSITION	Disposal Method _____ Disposed By _____ Date/Time _____

0010

SAMPLE STATUS REPORT FOR N 5916. RAD SCREEN BOGKJ4 TIME: 9/18/95 7:50
 DISPATCHED: 9/12/95 14:40 SAMPLE HAS NOT BEEN SLURPED
 RECEIVED: 9/15/95 13:16

EXT.	DETER.	RESULTS OR STATUS	OUT OF RANGE?	GOOD ANS?	CHARGE CODE
****	*****	*****	***	***	*****
4271	TOT-ACT	< 5.00000E 01 pCi/G	N	Y	XR5807

END OF REPORT

509263. Rad.

(P3) 9/18/95

CLIENT CODE	ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B		
WHC	B0GJW2		9/18/95 11:20:00 AM	QUAD23A	9/18/95 2:34:11 PM	B0GJW2	30	11	0.31791667	65	1.1179167		
		LIQUID		Bkg:	9/16/95 5:10:33 AM	BKG	800	39	0.04875	839	1.04875		
Anl Date:	9/18/95	Tot Sa, Alq:	1.00E+00 ✓	1.00E+01	Alp; (Dpm/	9.76E-01	(uCV	4.40E-05	(pCV	4.40E+01 ± 2.5E+01	CAT I	5.7E-01	Lab Alq L/g
Ppt mg:	6.6 ✓	Units:	L	ml	Bet; Alq:	1.96E+00	Sa):	8.82E-05	L/g):	8.82E+01 ± 2.3E+01	✓	5.7E-01	L/g
WHC	B0GJW6		9/18/95 11:20:00 AM	QUAD23B	9/18/95 2:34:11 PM	B0GJW6	30	1	-0.0429167	28	-0.056667		
		LIQUID		Bkg:	9/16/95 5:10:33 AM	BKG	800	61	0.07625	792	0.99		
Anl Date:	9/18/95	Tot Sa, Alq:	1.00E+00 ✓	1.00E+01	Alp; (Dpm/	-1.27E-01	(uCV	-5.72E-06	(pCV	-5.72E+00 ± 2.0E+01	CAT I	1.0E+00	Lab Alq L/g
Ppt mg:	0 ✓	Units:	L	ml	Bet; Alq):	-7.99E-02	Sa):	-3.60E-06	L/g):	-3.60E+00 ± 1.7E+01	✓	1.0E+00	L/g
WHC	B0GJX2		9/18/95 11:20:00 AM	QUAD23C	9/18/95 2:34:11 PM	B0GJX2	30	2	0.02416667	39	0.2875		
		LIQUID		Bkg:	9/16/95 5:10:33 AM	BKG	800	34	0.0425	810	1.0125		
Anl Date:	9/18/95	Tot Sa, Alq:	1.00E+00 ✓	1.00E+01	Alp; (Dpm/	6.15E-02	(uCV	2.77E-06	(pCV	2.77E+00 ± 1.9E+01	CAT I	9.0E+00	Lab Alq L/g
Ppt mg:	0 ✓	Units:	L	ml	Bet; Alq):	5.42E-01	Sa):	2.44E-05	L/g):	2.44E+01 ± 1.8E+01	✓	2.0E+00	L/g
WHC	B0GKJ4		9/18/95 11:20:00 AM	QUAD23D	9/18/95 2:34:11 PM	B0GKJ4	30	10	0.28458333	100	2.3933333		
		LIQUID		Bkg:	9/16/95 5:10:33 AM	BKG	800	39	0.04875	752	0.94		
Anl Date:	9/18/95	Tot Sa, Alq:	1.00E+00 ✓	1.00E+01	Alp; (Dpm/	8.02E-01	(uCV	3.61E-05	(pCV	3.61E+01 ± 2.2E+01	CAT I	6.9E-01	Lab Alq L/g
Ppt mg:	1.7 ✓	Units:	L	ml	Bet; Alq):	4.39E+00	Sa):	1.98E-04	L/g):	1.98E+02 ± 2.8E+01	✓	2.5E-01	L/g
WHC	B0GKW4		9/18/95 11:20:00 AM	QUAD24A	9/18/95 2:34:02 PM	B0GKW4	30	10	0.25208333	55	0.8145833		
		LIQUID		Bkg:	9/16/95 5:10:18 AM	BKG	800	65	0.08125	815	1.01875		
Anl Date:	9/18/95	Tot Sa, Alq:	1.00E+00 ✓	1.00E+01	Alp; (Dpm/	7.88E-01	(uCV	3.55E-05	(pCV	3.55E+01 ± 2.5E+01	CAT I	7.0E-01	Lab Alq L/g
Ppt mg:	2.9 ✓	Units:	L	ml	Bet; Alq):	1.45E+00	Sa):	6.52E-05	L/g):	6.52E+01 ± 2.2E+01	✓	7.7E-01	L/g
WHC	TEDF091895001		9/18/95 11:20:00 AM	QUAD24C	9/18/95 2:34:02 PM	TEDF091895001	30	6	0.1375	40	0.2708333		
		LIQUID		Bkg:	9/16/95 5:10:18 AM	BKG	800	50	0.0625	850	1.0625		
Anl Date:	9/18/95	Tot Sa, Alq:	5.00E-01 ✓	1.00E+01	Alp; (Dpm/	4.52E-01	(uCV	1.02E-05	(pCV	2.04E+01 ± 2.5E+01	CAT I	1.2E+00	Lab Alq L/g
Ppt mg:	9.2 ✓	Units:	L	ml	Bet; Alq):	4.44E-01	Sa):	9.99E-06	L/g):	2.00E+01 ± 1.8E+01	✓	2.5E+00	L/g

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Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 9-18-95 11:20 Client Name BHF
 Project/Client # B95-097 Batch or Case # _____
 Cooler ID (if noted on outside of cooler) I 24

1. Condition of shipping container? O.K.
2. Custody Seals on cooler intact? Yes No
3. Custody Seals dated and signed? Yes No
4. Chain of Custody record is taped on inside of cooler lid? Yes No
5. Vermiculite/packing material is: Wet Dry _____
6. Each sample is in a plastic bag? Yes No _____
7. Number of sample containers in cooler: 32
8. Samples have: tape _____ hazard labels
 custody seals _____ appropriate sample labels
9. Samples are: in good condition _____ leaking
 broken _____ have air bubbles
 other _____
10. Coolant Present? Yes No Sample Temperature 4°C
11. The following paperwork should be accounted for (N/A if not applicable):
 Chain of Custody #(s) N/A
 Request for Analysis #(s) ✓
 Airbill # _____ Carrier _____
12. Have any anomalies been identified above? Yes No
13. Memos have been initiated for all anomalies identified above? Yes

Printed Name/Signature Karin J. G. G. G. Date/Time 9-18-95 11:20

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*** TOTAL-SR ***

CHAIN-OF-CUSTODY BATCH ANALYSIS RECORD

18-Sep-1995
Page 1

*DWL
10-3-95*

CUSTOMER: BHI

SAF

SAMPLE DELIVERY GROUP

W0724

MATRIX : WATER

B95-097

BATCH NUMBER

09-263

ITAS ID	DUP	ACCOUNT	CUSTOMER ID	COMMENTS
*) M092631B		BHI		
*) M092631S		BHI		
	<i>EQL1327</i>			<i>30.09 ± 0.44046 DPM</i>
3) 50926301		BHI	BOGKJ4	
	<i>60926301</i>			

ACTIONS (Initial & Date)

1) INITIATED

JA 9/18/95

5) COUNTING/MEASUREMENT LAB

OP 9/21/95

2) PREP LAB RECEIVED

RTM 9/19/95

6) DATA REVIEWED AND ANALYTICAL PREP STORED

JK 9-25-95

3) SAMPLE REMAINDER STORED

N/A

4) SEPARATION LAB RECEIVED

RTM 9/19/95

PRIORITY