

START

9613453.1982

0044671
Quanterra
Environmental
Services

W0965
82

Quanterra Incorporated
2800 George Washington Way
Richland, Washington 99352

509 375-3131 Telephone
509 375-5590 Fax

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

April 16, 1996

Attention: Joan Kessner

SAF Number	:	B96-083
Date SDG Closed	:	April 1, 1996
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W0965
Data Deliverable	:	Summary



I. Introduction

On March 27, 1996, two water samples were received by the Quanterra Environmental Services Richland Laboratory (QTESRL) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Bechtel Hanford, Inc. (BHI) specific IDs:

<u>QTESRL ID#</u>	<u>BHI ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
60403301	B0HCQ0	WATER	03/27/96
60403302	B0HCP9	WATER	03/27/96

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: **Total Uranium**
Total Uranium by method RICHRC-5058

000002

Bechtel Hanford, Inc.
April 16, 1996
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III. Quality Control

The analytical results for each analysis performed under SDG W0965 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

As per instructions on Sample Disposition Record Control Number 96-0063, Rev. 0, Dated 04/02/96, the samples are analyzed and reported on a priority basis. In addition, HEIS number B0H850 was changed to HEIS number B0HCQ0 and HEIS number B0H851 was changed to HEIS number B0HCP9.

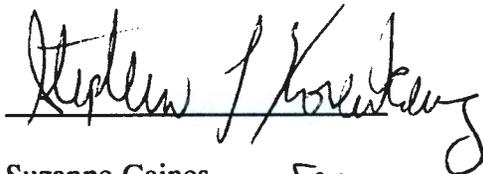
Total Uranium

Total Uranium by method RICHRC-5058

Sample volumes analyzed were reduced due to high screening results; QC volumes were reduced to match those of the samples. The matrix spike, LCS, batch blank, sample and sample duplicate (B0HCQ0) 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

for
S.G.
4-16-96

9613453.1984



SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND SDG: W0965
LAB SAMPLE ID: 60403301 MATRIX: WATER
CLIENT ID: B0HCQ0 DATE RECEIVED: 4/1/96 12:00:00 PM

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	5.30E+00	N/A	7.4E-01	1.24E-02	ug/L	N/A	RICHRC5058

Number of Results:

000003

9613453.1985



SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND SDG: W0965
LAB SAMPLE ID: 60403302 MATRIX: WATER
CLIENT ID: B0HCP9 DATE RECEIVED: 4/1/96 12:00:00 PM

ISOTOPE	RESULT	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	4.79E+00	N/A	6.6E-01	1.24E-02	ug/L	N/A	RICHRC5058

Number of Results:

000004

9613453.1986

Quanterra Data Review Checklist
RADIOCHEMISTRY

Work Order number (s): 604033

Client ID: BHI

Due Date: 4-16-96

Lab Sample Number or SDG: W10965 04-033

Method Test Parameters: uranium

Matrix: water

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
A. Calibration				
1. Is the calibration documentation included where applicable?	✓		<u>APR 4-10-96</u>	✓
B. Sample Analysis				
1. Are the sample yields within acceptance criteria?			✓	✓
2. Were all sample holding times met?	✓			✓
3. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓			✓
C. QC Samples				
1. Is the blank yield within acceptance criteria			✓	✓
2. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓			✓
3. Is the blank result < 1/2 the Contract Detection Limit?	✓			✓
4. Is the blank > 1/2 the Contract Detection Limit but < Contract Detection Limit?			✓	✓
5. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓	✓
6. Is the LCS result within acceptance criteria?	✓			✓
7. Is the LCS yield within acceptance criteria	✓		✓	✓
8. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓			✓
9. MS/MSD results and yield meet acceptance criteria?	✓			✓
10. Duplicate sample results and yield meet acceptance criteria?	✓			✓
D. Other				
1. Are all Nonconformances included and noted?			✓	✓
2. Are all required forms filed out?	✓			✓
3. Correct methodology used?	✓			✓
4. Transcription checked?	✓			✓
5. Were all calculations checked at a minimum frequency?	✓			✓
6. Units checked?	✓			✓

Comments on any "No" response: _____

First Level Review: [Signature]

Date: 4-10-96

Second Level Review: [Signature]

Date: 4-16-96

Form #: LS-038,2 /96, Rev.4

000009

9613493.1987

**CHAIN OF
CUSTODY FORMS**

000010

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 2 of 2

Data Turnaround

- Priority
- Normal

Collector D. St. John	Company Contact L. C. Hulstrom	Telephone (509) 372-9885
Project Designation 300-FF-2 Groundwater Sampling	Sampling Location 318-4 Crib, 618-10 and 618-11 Burial Ground	SAF No. 898-083
Ice Chest No. EA-1B, EA-210	Field Logbook No. EL-1301	Method of Shipment Hand Delivered
Shipped To Quanterra	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	Cool 4°C	H2SO4	NaOH	HNO3	HNO3	HCl	None	HNO3	HNO3	HCl
	Type of Container	P/G	P/G	P	P/G	P/G	P/G	P/G	P/G	P/G	Gs
	No. of Container(s)	1	1	2	7	1	3	1	1	1	3
Special Handling and/or Storage Maintain samples between 2°C and 6°C	Volume	500mL	1L	1L	1L	500mL	1L	20mL	500mL	500mL	40mL

Uranium only 604033 SAMPLE ANALYSIS 609357 W0965 W09449	IC Anions - Cl, F, NO2, NO3, PO4, SO4	Phos- phorus (Total)	Total Cyanide	*2 <i>609358 W04033</i>	Total Uranium (Unfilt- ered) 01	To-99	Activity Scan	ICP Metals - TAL (Filtered)	Total Uranium (Filtered) 02	VOA (App IX)
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JKH
H-2-96

Sample No.	Matrix*	Date Sampled	Time Sampled										
BOH850 BOHCRO 01	W	03-26-96	07:35	X	X	X	4	X	X	X			X
BOH851 BOHCPO 02	W	03-26-96	07:35								X	X	
BOH852 03	W	03-25-96	06:15										X
BOH850	W	03-25-96	08:25				3						

000011

CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS						Matrix*	
Relinquished By <i>D. St. John</i>	Date/Time 03-26-96 1005	Received By <i>K. Trapp</i>	Date/Time 3/26/96			*2 Gross Alpha, Gross Beta, Am-241, Isotope Pu, Sr-89/90 - Sr-90, Gamma Spec.						S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WM - Wipe L - Liquid V - Vegetation X - Other	
Relinquished By <i>K. Trapp</i>	Date/Time 1037	Received By <i>K. Trapp</i>	Date/Time 3/27/96			The Activity Scan is for all samples listed on this two page chain of custody.							
Relinquished By	Date/Time	Received By	Date/Time 3-27-96			Analysis for NO2, NO3, and PO4 by method EPA 300.0 are for information only. The ERC Contractor acknowledges that the 48-hour holding time will not be met.							
Relinquished By	Date/Time	Received By	Date/Time										
LABORATORY SECTION	Received By	Title				Date/Time							
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time							

9613453.1988

*Jul
4-16-96*

9613453.1989

CUSTOMER: BHI

SAMPLE DELIVERY GROUP

W0965

MATRIX : WATER

BATCH NUMBER

04-033

ITAS ID	DUP	ACCOUNT	CUSTOMER ID	COMMENTS
P0403318				
P0403318		EQIP 363		
1) 60403301		BHI	BOHCGO	REDUCED ALIQUOT: HIGH ALPHA
60403301	DVP			Screening RESULTS
60403301	MS	EQIP 364		
2) 60403302		BHI	BOHCP9	

pH 2.2, ADJUSTED w/
LOW HCl →

ACTIONS (Initial & Date)

- 1) INITIATED RD 2800 4/2/96
- 2) PREP LAB RECEIVED RICHEL 5016 4-3-96 S
- 3) SAMPLE REMAINDER STORED 4-5-96 S
- 4) SEPARATION LAB RECEIVED N/A

- 5) COUNTING/MEASUREMENT LAB RICHRCS058 DM 4/9/96
- 6) DATA REVIEWED AND ANALYTICAL PREP STORED 4-10-96

RICHR00002
REV D

PRIORITY

PRIORITY