START 9613444.0400

0044199

W0820 6 2

Quanterra Environmental Services

Quanterra Incorporated
2800 George Washington Way
Richland, Washington 99352

509 375-3131 Telephone
509 375-5590 Fax

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
345 Hills
Richland, WA 99352

December 11, 1995

Attention: Joan Kessner

JUN 1996 RECEIVED EDMC

DEC 1995 RECEIVED Data Log In

SAF Number	:	B96-010
SDG Closed	:	November 20, 1995
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W0820
Data Deliverable	:	Summary

I. Introduction

On November 20, 1995, one water sample was received by Quanterra Environmental Services Richland Laboratory (QTESRL) for chemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Bechtel Hanford (BHI) specific ID:

QTESRL ID	BHI ID	Matrix	Date of Receipt
51127701	B0GTM3	Water	11/20/95

Quanterra
Environmental Services

II. Analytical Results/Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, the analytical result(s) and the appropriate associated errors.

The analyses requested were: Chromium VI by method RICHWC5003

III. Quality Control

A Laboratory Control Sample, Method Blank and Duplicate were analyzed with each sample.

IV. Comments

There are no comments associated with this Sample Delivery Group.

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

Reviewed and approved:

Suzanne Gaines

Suzanne Gaines
Project Manager

9613444.0402

HEXAVALENT CHROMIUM DATA SUMMARY

SDG: W0820

ANALYSIS DATE: 11/20/95

MATRIX: WATER

MDL: 0.0012 mg/L

(R3) 11/21/95
✓ PK 11/22/95

SAMPLE LAB. ID	CLIENT ID	SAMPLE RESULT	UNITS	SPIKE ADDED	UNITS	SPIKE RECOVERED	UNITS	PERCENT RECOVERY
Preparation Blank		-0.00	mg/L					
LCS		0.249	mg/L	0.250	mg/L	0.249	mg/L	99.6
51127701	B0GTM3	0.076	mg/L					
51127701 DUP	B0GTM3	0.076	mg/L					
51127701 MS	B0GTM3	0.233	mg/L	0.158	mg/L	0.157	mg/L	99.4
51127701 MSD	B0GTM3	0.234	mg/L	0.158	mg/L	0.158	mg/L	100.0

COMMENTS:

C000005

Form No.:CG-196, 8/95, Rev. 0

9613444.0403

Bechtel Hanford, Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	Page 1 of 1
		Data Turnaround: X Priority / Normal

Collector: Steve Hope / M. Mehlhorn	Company Contact: Steve Hope	Telephone: 372-9578
Project Designation: HR3 River Chrom	Sampling Location: Columbia River "K" Reactor	SAF No.: B96-010
Ice Chest No.	Field Logbook No.: EL 1236	Method of Shipment: Hand Deliver
Shipped To: Quanterra	Offsite Property No.	Bill of Lading/Air Bill No.

Possible Sample Hazards/Remarks												
none	Preservation	HNO3	none	none	none							
	Type of Container	P/G	P/G	P/G	Syringe							
	No. of Container(s)	1	1	1	3							
Special Handling and/or Storage: cool to 4C	Volume	500 mL	~~500 mL~~ 950 mm 11/20/95	20 mL	~140 mL							

5112770 1

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled	Total Chrom	Chrom Hex	Activity Scan	Chrom Hex						
BOGTM3	W	11-20-95	1245		X	X							

CHAIN OF POSSESSION	Sign/Print Names: Quanterra		
Relinquished By: Monty Mehlhorn / Monty Mehlhorn	Date/Time: 11-20-95 1503	Received By: Karen Achtenberg	Date/Time: Karen Achtenberg 11-20-95
Relinquished By	Date/Time	Received By	Date/Time: 15:03
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS

Sample analysis for Hexachrome by SW-846 Method 7195 from the Quanterra Laboratories is being requested for information only. The ERC Contractor acknowledges the 24-hour holding time will not be met.

W0820

Matrix*
- 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

LABORATORY SECTION	Received By	Title	Date/Time

C000006

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 11/20/95 Client Name _____

Project/Client # B96-010 Batch or Case # _____

Cooler ID (if noted on outside of cooler) SML 272

1. Condition of shipping container? O.K.
2. Custody Seals on cooler intact? Yes [X] No [ ]
3. Custody Seals dated and signed? Yes [X] No [ ]
4. Chain of Custody record is taped on inside of cooler lid? Yes [ ] No [X]
5. Vermiculite/packing material is: Wet [ ] Dry [X] _____
6. Each sample is in a plastic bag? Yes [X] No [ ] _____
7. Number of sample containers in cooler: 2
8. Samples have:
   - X tape
   - X custody seals
   - ____ hazard labels
   - ____ appropriate sample labels
9. Samples are:
   - X in good condition
   - ____ broken
   - ____ other
   - ____ leaking
   - ____ have air bubbles
10. Coolant Present? Yes [X] No [ ] Sample Temperature 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 N/A
12. Have any anomalies been identified above? Yes [ ] No [X]
13. Memos have been initiated for all anomalies identified above? Yes [ ]

Printed Name/Signature Karen Rittenberg Date/Time 11-20-95 15:25

511277-CR+6

R3 11/21/95

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0GTM3		11/20/95 12:45:00 PM	QUAD21B	11/21/95 12:06:42 PM	B0GTM3	30	5	0.11866667	37	0.2733333
01	LIQUID		Bkg:	11/21/95 1:56:39 AM	BKG	500	24	0.048	480	0.96
Anl Date: 11/21/95	Tot Sa, Alq: 2.00E+00	, 1.00E+01	Alp; (Dpm/ 3.61E-01	(uCi/ 3.26E-05	(pCi/ 1.63E+01	± 2.1E+01	CAT I	1.5E+00	Lab Alq Lig	
Ppt mg: 0	Units: L	, ml	Bet; Alq): 4.55E-01	Sa): 4.10E-05	Lig): 2.05E+01	± 1.8E+01		2.4E+00		
WHC B0GY01		11/21/95 11:00:00 AM	QUAD22D	11/21/95 3:13:47 PM	B0GY01	30	8	0.21866667	32	0.0386667
	LIQUID		Bkg:	11/21/95 1:56:47 AM	BKG	500	24	0.048	514	1.028
Anl Date: 11/21/95	Tot Sa, Alq: 5.40E-01	, 1.00E+01	Alp; (Dpm/ 6.61E-01	(uCi/ 1.61E-05	(pCi/ 2.98E+01	± 2.3E+01	CAT I	8.4E-01	Lab Alq Lig	
Ppt mg: 1.2	Units: L	, ml	Bet; Alq): -5.60E-02	Sa): -1.36E-06	Lig): -2.52E+00	± 1.6E+01		5.4E-01		
WHC B0GY02		11/21/95 11:00:00 AM	QUAD23B	11/21/95 3:13:51 PM	B0GY02	30	5	0.07666667	21	-0.3
	LIQUID		Bkg:	11/21/95 1:56:55 AM	BKG	500	45	0.09	500	1
Anl Date: 11/21/95	Tot Sa, Alq: 5.40E-01	, 1.00E+01	Alp; (Dpm/ 2.42E-01	(uCi/ 5.88E-06	(pCi/ 1.09E+01	± 2.1E+01	CAT I	2.3E+00	Lab Alq Lig	
Ppt mg: 1.5	Units: L	, ml	Bet; Alq): -6.20E-01	Sa): -1.51E-05	Lig): -2.79E+01	± 1.9E+01		5.4E-01		
WHC B0GY03		11/21/95 11:00:00 AM	QUAD23C	11/21/95 3:13:51 PM	B0GY03	30	6	0.138	26	-0.173333
	LIQUID		Bkg:	11/21/95 1:56:55 AM	BKG	500	31	0.062	520	1.04
Anl Date: 11/21/95	Tot Sa, Alq: 5.40E-01	, 1.00E-01	Alp; (Dpm/ 4.07E-01	(uCi/ 9.89E-04	(pCi/ 1.83E+03	± 2.1E+03	CAT I	1.4E-02	Lab Alq Lig	
Ppt mg: 1.3	Units: L	, ml	Bet; Alq): -4.21E-01	Sa): -1.02E-03	Lig): -1.90E+03	± 1.9E+03		5.4E-01		
WHC B0H190		11/21/95 11:00:00 AM	QUAD22D	11/21/95 4:24:06 PM	B0H190	30	8	0.21866667	45	0.472
	LIQUID		Bkg:	11/21/95 1:56:47 AM	BKG	500	24	0.048	514	1.028
Anl Date: 11/21/95	Tot Sa, Alq: 1.00E+00	, 1.00E-01	Alp; (Dpm/ 7.51E-01	(uCi/ 3.38E-03	(pCi/ 3.38E+03	± 2.7E+03	CAT I	7.4E-03	Lab Alq Lig	
Ppt mg: 12.8	Units: L	, ml	Bet; Alq): 7.90E-01	Sa): 3.56E-03	Lig): 3.56E+03	± 2.0E+03		1.4E-02		
WHC B0H191		11/21/95 11:00:00 AM	QUAD22C	11/21/95 4:24:06 PM	B0H191	30	4	0.06333333	46	0.6593333
	LIQUID		Bkg:	11/21/95 1:56:47 AM	BKG	500	35	0.07	437	0.874
Anl Date: 11/21/95	Tot Sa, Alq: 1.00E+00	, 1.00E-01	Alp; (Dpm/ 2.10E-01	(uCi/ 9.45E-04	(pCi/ 9.45E+02	± 2.5E+03	CAT I	2.6E-02	Lab Alq Lig	
Ppt mg: 19.5	Units: L	, ml	Bet; Alq): 1.25E+00	Sa): 5.65E-03	Lig): 5.65E+03	± 2.0E+03		8.8E-03		

000008

9613944.0405