START

9613447.0466

0044401 W0697 352

Quanterra
Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CERTIFICATE OF ANALYSIS

Bechtel Hanford Incorporated
P.O. Box 1970
Richland, Washington 99352

October 23, 1995

Attention: Joan Kessner

JUN 1996 RECEIVED EDMC

OCT 1995 RECEIVED Data Log In

Project number	:	550.76
Date Received by Lab	:	September 5,11 and 18, 1995
Number of Samples	:	Seven (7)
Sample Type	:	Water
SDG Number	:	W0697
Data Deliverable	:	Summary

I. Introduction

On September 5 and 18, 1995, seven (7) 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 number to correspond with the specific client ID's:

St Louis ID	WHC ID	Richland ID	Matrix	Date of Receipt
9260-001	B0G950	50903701	Water	09/05/95
9260-002	B0G951	50903702	Water	09/05/95
9260-003	B0G952	50903703	Water	09/05/95
9313-001	B0G954	50913801	Water	09/11/95
9313-002	B0G955	50913802	Water	09/11/95
9378-001	B0G956	50925601	Water	09/18/95
9378-002	B0GKW4	50925602	Water	09/18/95

0000002

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, analytical results and the appropriate detection limits.

Analyses requested: Chromium by EPA method 218.2. Hexavalent Chromium by EPA method 7196 was performed by QTESRL. The data is included in this package.

III. Quality Control

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch. Matrix Spike and Matrix Spike Duplicate were performed per the protocol for the chromium analysis in this SDG.

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

The Matrix Spike and Matrix Spike Duplicate recoveries were outside the acceptable limits. However, the level of chromium in the sample was greater than four times the spike concentration and therefore, the recovery limits were invalid.

Quanterra
Environmental Services

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

Reviewed and approved:

Wade H. Price
Project Manager
e:\\price$\abbydave\hanw0697.nar

Quanterra September 06, 1995 10:40 am
Account: 10722 Project: 550.76 Quanterra-Richland QAS No. 933 Rev. 0
Master Sample Login: 9260

Project Manager: W. Price

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

Sample Header Template:

Sample No. / # / Data:	Client ID / Comments / Container Type	C-Matrix / Analysis	Date: Collected / Class	Received / Preservative	Due / Anal. Due Date	Shipper / Hold Date	Site	Rad Category / (Container Numbers:% Filled)	Rad Sample No.
9260-001	BOG950	Water	01-SEP-95 09:50	05-SEP-95 11:20	10-OCT-95	FED-EX		1 Screening not Required	
NOTE: RICHLAND ID 50903701									
1	PN - Plastic-500ml	CR/218.2/Q4	S	HNO3	03-OCT-95	28-FEB-96	T14A	(176571:100)	
9260-001MS	BOG950	Water	01-SEP-95 09:50	05-SEP-95 11:20	10-OCT-95	FED-EX		1 Screening not Required	
NOTE: RICHLAND ID 50903701									
1	PN - Plastic-500ml	CR/218.2/Q4	S	HNO3	03-OCT-95	28-FEB-96	T14A	(176571:100)	
9260-001MSD	BOG950	Water	01-SEP-95 09:50	05-SEP-95 11:20	10-OCT-95	FED-EX		1 Screening not Required	
NOTE: RICHLAND ID 50903701									
1	PN - Plastic-500ml	CR/218.2/Q4	S	HNO3	03-OCT-95	28-FEB-96	T14A	(176571:100)	
9260-002	BOG951	Water	01-SEP-95 09:55	05-SEP-95 11:20	10-OCT-95	FED-EX		1 Screening not Required	
NOTE: RICHLAND ID 50903702									
1	PN - Plastic-500ml	CR/218.2/Q4	S	HNO3	03-OCT-95	28-FEB-96	T14A	(176572:100)	
9260-003	BOG952	Water	01-SEP-95 09:55	05-SEP-95 11:20	10-OCT-95	FED-EX		1 Screening not Required	
NOTE: RICHLAND ID 50903703									
1	PN - Plastic-500ml	CR/218.2/Q4	S	HNO3	03-OCT-95	28-FEB-96	T14A	(176573:100)	

3*=Sample has not been rad screened.

000004

Temp 4°C CUR# 5285

Chain of Custody Record

To: St Louis

Quanterra Environmental Services

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
Bechtel Hanford	Van Petteys	9-5-95	04953
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1

City	State	Zip Code	Site Contact

Project Name: SAF B95-053

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Analysis: SEE COC

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
50903701 B06950		SEE	COC					
! ↓ 02 ↓ 951								
03 952								

Special Instructions

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

Sample Disposal: ☒ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Turn Around Time Required: ☒ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify): SDG W0697

	Date	Time		Date	Time
1. Relinquished By: Heidelberg Quanterra	9-5-95	16:00	1. Received By: Fred Mitchell	9-6-95	08:50
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

9513447.0470

0000035

Westinghouse Hanford Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Data Turnaround: [ ] Priorty [X] Normal

Collector: Steven Guzek	Company Contact: Dave Blumenkranz	Telephone No.: 372-9658
Project Designation: 100-HR-3 Treatability Study	Sampling Location: 100-D	SAF No.: B95-053
Ice Chest No.: ~~N/A~~ GWS-025 KT 9/5/95	Field Logbook No.: NA	Method of Shipment: Hand Deliver
Shipped To: Quaterra	Offsite Property No.: PH 1 NA	Bill of Lading/Air Bill No.: NA
Possible Sample Hazards/Remarks: Unknown		
Special Handling and/or Storage: Cool to 4c		

Preservative	HNO3	none	none
Type of Container	G/P	G/P	G/P
No. of Container(s)	1	1	1
Volume	500 ml	500 ml	20 ml
SAMPLE ANALYSIS	Chromium Total	Chromium VI	Activity Scan

509037 SDL W0697 509038

Sample No.	Matrix*	Date Sampled	Time Sampled	Chromium Total	Chromium VI	Activity Scan
B06950 01	H2O	9/1/95	0950	X	X	X
B06951 02	H2O	9/1/95	0955	X	X	X
B06952 03	H2O	9/1/95	0955	X	X	X
	H2O					
	H2O			100		
	H2O					

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Steven Guzek / STEVEN GUZEK	9/1/95 1345	K. Trapp / K. Trapp	9/1/95 1345
K. Trapp / K. Trapp	9/5/95 1120	[signature]	9/5/95 1120

SPECIAL INSTRUCTIONS

Analysis for Chromium (VI) by SW-846 7196 is being requested for information only. The ERC contractor acknowledges the 24-hour holding time will not be met.

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
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

DISTRIBUTION: Original- Sample Yellow - Sampler

BC-6000-828 (12/92)

9613447.0471

0000006

9613447.0472

MAY 01 '95 07:03AM BHI 51 372 9655

0147

Environmental Restoration Contractor **ERC Team**

Interoffice Memorandum

Job No. 22192
Written Response Required: NO
CCN: N/A
OU: 100-HR-3
TSD: N/A
ERA: N/A
Subject Code: 5400

TO: Dave Blumenkranz H4-90

DATE: April 26, 1995

COPIES: Doug Bowers N3-05

FROM: Mike Wesselman
Radiological Controls
N3-06/376-2084

Post-it® Fax Note 7671	Date 5/1	# of pages ▸ 1
To D. Bowers	From D. Blumenkranz	
Co./Dept. ITH/Samp.	Co. CHI/E&S	
Phone # 376-1007	Phone # 372-9658	
Fax # 376-5991	Fax #	

SUBJECT: **EXEMPTION OF SAMPLES FROM 100-HR-3 PUMP AND TREAT FROM TOTAL ACTIVITY ANALYSIS.**

After reviewing sampling data recorded on GeoDat as well as data from the latest resin change at the unit, it has been concluded that there is no need to perform total activity analysis of water sample from 100-HR-3 prior to offsite shipment. Water from all wells in the area is well below levels which would deliver 100 millirem per year CEDE to any one drinking two liters a day, no water exceeds the 2000 picocurie per gram limit for shipment as non radioactive by Department of Transportation. Activity trends in all wells have been downward for the last twenty years. Sample from the pump and treat system itself indicate less than six picocuries per gram of tritium and less than ten picocuries per liter of both alpha and beta contamination. All discharges of radioactive material to the ground in the 100-D Area have ceased, the actions of the pump and treat system do not appear to be mobilizing previously deposited materials. Based on the above information and the results of total activities performed to date, there is sufficient process knowledge to conclude that preshipment screening of water samples is no longer required.

Mike Wesselman

Mike Wesselman

maw

Distribution

0000007

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 9/5/95 1120 Client Name BHI

Project/Client # B95-053 Batch or Case # _____

Cooler ID (if noted on outside of cooler) FWS025

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 [ ] No [X] _____
7. Number of sample containers in cooler: 17
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 _____
12. Have any anomalies been identified above? Yes [ ] No [✓]
13. Memos have been initiated for all anomalies identified above? Yes [ ]

Printed Name/Signature Tom Gilmore [signature] Date/Time 9/5/95 1120

9613447.0474

Quanterra
Environmental Services

C.U.R. and T.O.C.
COPIED TO: BW&WP
DATE: 9-6-95
TIME: 10:20
JM

Work Order No.: 9260

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland
Date: 9-6-95 08:50
Project No: 550.76
Initiated by: 2nd Mitchell
Analysis Requested: Refer to RFA/COC
RFA/COC Numbers: 04953
Client Sample Numbers Affected: Entire Login

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

1. NA Not enough sample received for proper analysis. Received approximately: _____
2. ☐ Sample received broken/leaking.
3. ☐ Sample received without proper preservative.
   - ☐ Cooler temperature not within 4°C ± 2°C
     Record temperature: 6°C bad 4°C
   - ☐ pH _____
   - ☐ other: _____
4. ☐ Sample received in improper container.
5. ☐ Sample received without proper paperwork. Explain: _____
6. ☐ Paperwork received without sample.
7. ☐ No sample ID on sample container.
8. ☐ Custody tape disturbed/broken/missing.
9. NA Sample splits performed by lab.
10. NA Volatile sample received with approximately _____ mm headspace.
11. ☐ Sample ID on container does not match sample ID on paperwork. Explain: _____
12. ☐ All coolers on airbill not received with shipment.
13. ☐ Other (explain below): Shipping containers not rad surveyed. 265 4344 637

Notes:

Corrective Action:

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

☐ Sample(s) processed "as is". Comments: _____
☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor Review: (or designate) 2nd Mitchell Date: 9-6-95
Project Management Review: Abby Wolder Date: 9/7/95

0000009

5285

Quanterra September 12, 1995 02:03 pm
Account: 10722 Project: 550.76 Quanterra-Richland QAS No. 933 Rev. 0
Master Sample Login: 9313

Project Manager: W. Price

Draft: Final: Entered and Reviewed by: [signature] PM Review: [signature]

Sample Header Template:

Sample No. / Comments / # Container Type / Data:	Client ID	Analysis	C-Matrix	Date: Collected / Class	Preservative	Received / Anal. Due Date	Due / Hold Date	Shipper / Site	Rad Category	Rad Sample No. / (Container Numbers:% Filled)
9313-001	B0G954		Water	08-SEP-95 10:00		11-SEP-95 11:19	16-OCT-95	FED-EX	3*	Sample not Screened
NOTE: RICHLAND ID 50913801										
1 PN - Plastic-500ml		CR/218.2/Q4		S	HNO3	09-OCT-95	06-MAR-96	R5C		(177605:100)
9313-002	B0G955		Water	08-SEP-95 10:02		11-SEP-95 11:19	16-OCT-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 50913802										
1 PN - Plastic-500ml		CR/218.2/Q4		S	HNO3	09-OCT-95	06-MAR-96	R5C		(177606:100)

3*=Sample has not been rad screened.

9613447.0475

0000010

Temp 5'c CUR# 5100

[redacted]

Chain of Custody Record

To: ST Louis

Quanterra Environmental Services

QUA-4124

Client: Bechtel Hanford	Project Manager: Van Pettey	Date: 9-11-95	Chain Of Custody Number: 04964
Address:	Telephone Number (Area Code)/Fax Number:	Lab Number:	Page 1 of 1
City: / State: / Zip Code:	Site Contact:		
Project Name: SAF B95-053	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Analysis: SEE COC

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
50913801 B06-954	SEE		COC					
↓ 02 ↓ 955								

Special Instructions

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

Sample Disposal: ☒ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☒ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify): SDG-W0697

	Date	Time		Date	Time
1. Relinquished By: Heidelberg Quanterra	9-11-95	16:00	1. Received By: George W Byrd	9-12-95	0745
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments

SISTRIBUTION: WHITE - Stay with Sample; CANARY - Retained by Client with Report; PINK - Field Copy

9613447.0476

000011

Westinghouse Hanford Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Data Turnaround: [ ] Priorty [X] Normal

Collector: Steven Guzek / K. Trapp	Company Contact: Dave Blumenkranz	Telephone No.: 372-9658
Project Designation: 100-HR-3 Treatability Study	Sampling Location: 100-D	SAF No.: B95-053
Ice Chest No.: N/A	Field Logbook No.:	Method of Shipment: Hand Deliver
Shipped To: Quaterra	Offsite Property No.: PH 1	Bill of Lading/Air Bill No.:
Possible Sample Hazards/Remarks: Unknown		
Special Handling and/or Storage: Cool to 4c		

Preservative	HNO3	none	none
Type of Container	[illegible]/P	G/P	G/P
No. of Container(s)	1	1	1
Volume	500 ml	500 ml	20 ml
SAMPLE ANALYSIS	Chromium Total	Chromium VI	Activity Scan

SDL W0697

509138 509139

Sample No.	Matrix*	Date Sampled	Time Sampled	Chromium Total	Chromium VI	Activity Scan
BOG954 C1	H2O	9/8/95	1000	X	X	X
BOG955 C2	H2O	9/8/95	1002	X	X	X
	H2O					
	H2O			100		
	H2O					
	H2O					

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
K. Trapp / K. Trapp	1055 9/8/95	ERC Bechtten	1055 9-8-95
ERC Bechtten	1119 9-11-95	[illegible]	9/11/95 1119

SPECIAL INSTRUCTIONS

Analysis for Chromium (VI) by SW-846 7196 is being requested for information only. The ERC contractor acknowledges the 24-hour holding time will not be met.

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
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

DISTRIBUTION: Original- Sample Yellow - Sampler

BC-6000-828 (12/92)

9613447.0477

0000012

Client Sample Screening Results

11-Sep-95

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0FK19		9/11/95 2:30:00 PM	QUAD24C	9/11/95 3:36:40 PM	B0FK19	30	4	0.05958333	47	0.5554167
	LIQUID		Bkg:	9/11/95 1:34:12 AM	BKG	800	59	0.07375	809	1.01125
Anl Date: 9/11/95	Tot Sa, Alq: 5.00E-01	, 1.00E+01	Alp; (Dpm/ 1.61E-01	(uCi/ 3.62E-06	(pCi/ 7.23E+00	± 2.0E+01	CAT I	3.5E+00	Lab Alq	
Ppt mg: 1.1	Units: L	, ml	Bet; Alq): 1.01E+00	Sa): 2.28E-05	Lig): 4.56E+01	± 2.0E+01		1.1E+00	Lig	
WHC B0G954		9/11/95 12:45:00 PM	QUAD21A	9/11/95 2:20:53 PM	B0G954	30	29	0.92541667	119	2.8541667
	LIQUID		Bkg:	9/11/95 1:34:16 AM	BKG	800	33	0.04125	890	1.1125
Anl Date: 9/11/95	Tot Sa, Alq: 5.00E-01	, 1.00E+01	Alp; (Dpm/ 2.78E+00	(uCi/ 6.27E-05	(pCi/ 1.25E+02	± 3.1E+01	CAT I	2.0E-01	Lab Alq	
Ppt mg: 4	Units: L	, ml	Bet; Alq): 5.27E+00	Sa): 1.19E-04	Lig): 2.37E+02	± 3.2E+01		2.1E-01	Lig	
WHC B0G955		9/11/95 12:45:00 PM	QUAD21B	9/11/95 2:20:53 PM	B0G955	30	19	0.58083333	116	2.9566667
	LIQUID		Bkg:	9/11/95 1:34:16 AM	BKG	800	42	0.0525	728	0.91
Anl Date: 9/11/95	Tot Sa, Alq: 5.00E-01	, 1.00E+01	Alp; (Dpm/ 1.82E+00	(uCi/ 4.10E-05	(pCi/ 8.19E+01	± 2.7E+01	CAT I	3.1E-01	Lab Alq	
Ppt mg: 4.4	Units: L	, ml	Bet; Alq): 5.42E+00	Sa): 1.22E-04	Lig): 2.44E+02	± 3.1E+01		2.0E-01	Lig	
WHC B0GFS7		9/11/95 12:45:00 PM	QUAD21C	9/11/95 2:20:53 PM	B0GFS7	30	19	0.58083333	205	5.7083333
	LIQUID		Bkg:	9/11/95 1:34:16 AM	BKG	800	42	0.0525	900	1.125
Anl Date: 9/11/95	Tot Sa, Alq: 1.00E+00	, 1.00E+01	Alp; (Dpm/ 1.56E+00	(uCi/ 7.05E-05	(pCi/ 7.05E+01	± 2.6E+01	CAT I	3.5E-01	Lab Alq	
Ppt mg: 2	Units: L	, ml	Bet; Alq): 1.09E+01	Sa): 4.91E-04	Lig): 4.91E+02	± 4.2E+01		1.0E-01	Lig	
WHC TEDF091195001		9/11/95 12:45:00 PM	QUAD21D	9/11/95 2:20:53 PM	TEDF091195001	30	7	0.16958333	33	0.10875
	LIQUID		Bkg:	9/11/95 1:34:16 AM	BKG	800	51	0.06375	793	0.99125
Anl Date: 9/11/95	Tot Sa, Alq: 5.00E-01	, 1.00E+01	Alp; (Dpm/ 5.52E-01	(uCi/ 1.24E-05	(pCi/ 2.49E+01	± 2.4E+01	CAT I	1.0E+00	Lab Alq	
Ppt mg: 5.2	Units: L	, ml	Bet; Alq): 1.22E-01	Sa): 2.74E-06	Lig): 5.48E+00	± 1.7E+01		9.1E+00	Lig	

9613447.0478

0000013

9613447.0479

MAY 01 '95 07:03AM BHI 51 372 9655

Environmental Restoration Contractor **ERC Team**

Interoffice Memorandum

Job No. 22192
Written Response Reqd:
OCN: N/A
OU: 100-HR-3
TSD: N/A
ERA: N/A
Subject Code: 5400

TO: Dave Blumenkranz H4-90

DATE: April 26, 1995

COPIES: Doug Bowers N3-05

FROM: Mike Wesselman
Radiological Controls
N3-06/376-2084

Post-it® Fax Note 7671	Date 5/1	# of pages ▸ 1
To D. Bowers	From D. Blumenkranz	
Co./Dept. ITH/Samp.	Co. CHI/E&S	
Phone # 376-1007	Phone # 372-9658	
Fax # 376-5991	Fax #	

SUBJECT: **EXEMPTION OF SAMPLES FROM 100-HR-3 PUMP AND TREAT FROM TOTA ACTIVITY ANALYSIS.**

After reviewing sampling data recorded on GeoDat as well as data from the latest resin change at unit, it has been concluded that there is no need to perform total activity analysis of water sample fr 100-HR-3 prior to offsite shipment. Water from all wells in the area is well below levels which wo deliver 100 millirem per year CEDE to any one drinking two liters a day, no water exceeds the 2(picocurie per gram limit for shipment as non radioactive by Department of Transportation. Acti trends in all wells have been downward for the last twenty years. Sample from the pump and tr system itself indicate less than six picocuries per gram of tritium and less than ten picocuries per l of both alpha and beta contamination. All discharges of radioactive material to the ground in the 10(Area have ceased, the actions of the pump and treat system do not appear to be mobilizing previo deposited materials. Based on the above information and the results of total activities performed to d there is sufficient process knowledge to conclude that preshipment screening of water samples is longer required.

Mike Wesselman

maw

Distribution

0000014

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 9/11/95 1119 Client Name BHI

Project/Client # B95-053 Batch or Case # _____

Cooler ID (if noted on outside of cooler) ER-15

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 [ ] No [X] _____
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 5°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 Tom Gilmore [signature] Date/Time 9/11/95 1119

9613447.0481

Quanterra Environmental Services

C.U.R. and
COPIED TO: BW/WP
DATE: 9-12-95
TIME: 10:00
GWB

Work Order No.: 9313

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland

Date: 9-12-95 0745

Project No: 550.76

Initiated by: George W Byrd

Analysis Requested: Refer to RFA/COC

RFA/COC Numbers: # 04964

Client Sample Numbers Affected: Entire Login

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

1. NA Not enough sample received for proper analysis.
   Received approximately: _____
2. ☐ Sample received broken/leaking.
3. ☐ Sample received without proper preservative.
   - ☐ Cooler temperature not within 4°C ± 2°C
     Record temperature: 5°C
   - ☐ pH _____
   - ☐ other: _____
4. ☐ Sample received in improper container.
5. ☐ Sample received without proper paperwork. Explain: _____
6. ☐ Paperwork received without sample.
7. ☐ No sample ID on sample container.
8. ☐ Custody tape disturbed/broken/missing.
9. NA Sample splits performed by lab.
10. NA Volatile sample received with approximately _____ mm headspace.
11. ☐ Sample ID on container does not match sample ID on paperwork. Explain: _____
12. ☐ All coolers on airbill not received with shipment.
13. ☐ Other (explain below):
    Shipping containers not rad surveyed.
    238 2343 564

Notes:

Corrective Action:

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

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

☐ Sample(s) processed "as is". Comments: _____

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

Sample Control Supervisor Review: (or designate) George W Byrd Date: 9-12-95

Project Management Review: [illegible] Date: 9/12/95

5100

0000016

Quanterra September 19, 1995 02:28 pm
Account: 10722 Project: 550.76 Quanterra-Richland QAS No. 933 Rev. 0
Master Sample Login: 9378

Project Manager: W. Price

Draft: Final: Entered and Reviewed by: [signature] PM Review: [signature]

Sample Header Template:

Sample No. / Comments / # Container Type / Data:	Client ID	C-Matrix / Analysis	Date: Collected / Class	Received / Preservative	Due / Anal. Due Date	Shipper / Hold Date Site	Rad Category	Rad Sample No. / (Container Numbers:% Filled)
9378-001	B0G956	Water	15-SEP-95 10:36	18-SEP-95 11:20	23-OCT-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 50925601								
1 PN - Plastic-500ml		CR/218.2/Q4	S	HNO3	19-OCT-95	13-MAR-96 R13B		(179695:100)
9378-002	B0GKW4	Water	15-SEP-95 10:39	18-SEP-95 11:20	23-OCT-95	FED-EX	1	Screening not Required
NOTE: RICHLAND ID 50925602								
1 PN - Plastic-500ml		CR/218.2/Q4	S	HNO3	19-OCT-95	13-MAR-96 R13B		(179696:100)

3*=Sample has not been rad screened.

9613447.0482

0000017

Chain of Custody Record

To: ST Louis

Quanterra Environmental Services

QUA-4124

Client: Bechtel Hanford	Project Manager: Van Pettey	Date: 9-18-95	Chain Of Custody Number: 04987
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City / State / Zip Code	Site Contact		
Project Name: SAF B95-053	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Analysis: SEE COC

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
509256C1 B06-956		SEE COC						
↓ C2 B06-KW4								

Special Instructions

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

Sample Disposal: ☒ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Turn Around Time Required: ☒ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify): SDG W06097

	Date	Time		Date	Time
1. Relinquished By: Heidelberg Quanterra	9-18-95	16:00	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

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

9513447.0483

0000018

Westinghouse Hanford Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Data Turnaround: [ ] Priorty [X] Normal

Collector: ~~Steven Gulek~~ DJB 9-15-95 Doug Bowers	Company Contact: Dave Blumenkranz	Telephone No.: 372-9658
Project Designation: 100-HR-3 Treatability Study	Sampling Location: 100-D	SAF No.: B95-053
Ice Chest No.: N/A TBW 9-18-95 I-24	Field Logbook No.: EFL 1144-2	Method of Shipment: Hand Deliver
Shipped To: Quaterra	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: N/A
Possible Sample Hazards/Remarks: Unknown		
Special Handling and/or Storage: Cool to 4c		

Preservative	HNO3	none	none
Type of Container	G/P	G/P	G/P
No. of Container(s)	1	1	1
Volume	500 ml	500 ml	20 ml
SAMPLE ANALYSIS	Chromium Total	Chromium VI	Activity Scan
		509256	

SDL 40697

Sample No.	Matrix*	Date Sampled	Time Sampled	Chromium Total	Chromium VI	Activity Scan
B0G956 01	H2O	9-15-95	1036	X	X	X
B0GHW4 02	H2O	9-15-95	1039	X	X	X
	H2O					
	H2O					
	H2O					
	H2O					

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By: Doug Bowers		9-15-95 1130
Received By: EC Kim Whitten Bohtten		9-15-95 1130
Relinquished By: EC Kim Whitten Bohtten		9-18-95 11:20
Received By: Quaterra Karen Heilige		9-18-95 11:20
Relinquished By:		
Received By:		
Relinquished By:		
Received By:		

SPECIAL INSTRUCTIONS

Analysis for Chromium (VI) by SW-846 7196 is being requested for information only. The ERC contractor acknowledges the 24-hour holding time will not be met.

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
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

DISTRIBUTION: Original- Sample Yellow - Sampler

BC-6000-828 (12/92)

9413447.0981

9413319

(R3) 9/18/95

Client Sample Screening Results

18-Sep-95

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
WHC B0G956		9/18/95 11:20:00 AM	QUAD24B	9/18/95 2:34:02 PM	B0G956	30	12	0.33625	54	0.78875
	LIQUID		Bkg:	9/16/95 5:10:18 AM	BKG	800	51	0.06375	809	1.01125
Anl Date: 9/18/95	Tot Sa, Alq: 5.00E-01		1.00E+01	Alp; (Dpm/ 1.03E+00	(uCi/ 2.32E-05	(pCi/ 4.65E+01	± 2.5E+01	CAT I	5.4E-01	Lab Alq
Ppt mg: 3.7	Units: L		, ml	Bet; Alq): 1.34E+00	Sa): 3.03E-05	L/g): 6.05E+01	± 2.1E+01		8.3E-01	L/g
WHC B0GFS8		9/18/95 11:20:00 AM	QUAD22A	9/18/95 2:34:06 PM	B0GFS8	30	21	0.645	672	21.32875
	LIQUID		Bkg:	9/16/95 5:10:23 AM	BKG	800	44	0.055	857	1.07125
Anl Date: 9/18/95	Tot Sa, Alq: 1.00E+00		, 1.00E+01	Alp; (Dpm/ 1.40E+00	(uCi/ 6.29E-05	(pCi/ 6.29E+01	± 2.6E+01	CAT I	4.0E-01	Lab Alq
Ppt mg: 7.6	Units: L		, ml	Bet; Alq): 3.99E+01	Sa): 1.80E-03	L/g): 1.80E+03	± 7.3E+01		2.8E-02	L/g
WHC B0GFT2		9/18/95 11:20:00 AM	QUAD22B	9/18/95 2:34:06 PM	B0GFT2	30	93	3.05	5908	195.95583
	LIQUID		Bkg:	9/16/95 5:10:23 AM	BKG	800	40	0.05	782	0.9775
Anl Date: 9/18/95	Tot Sa, Alq: 1.00E+00		, 1.00E+01	Alp; (Dpm/ 3.89E+00	(uCi/ 1.75E-04	(pCi/ 1.75E+02	± 3.2E+01	CAT I	1.4E-01	Lab Alq
Ppt mg: 3.2	Units: L		, ml	Bet; Alq): 3.73E+02	Sa): 1.68E-02	L/g): 1.68E+04	± 2.2E+02		3.0E-03	L/g
WHC B0GFV1		9/18/95 11:20:00 AM	QUAD22C	9/18/95 2:34:06 PM	B0GFV1	30	6	0.15375	41	0.2616667
	LIQUID		Bkg:	9/16/95 5:10:23 AM	BKG	800	37	0.04625	884	1.105
Anl Date: 9/18/95	Tot Sa, Alq: 1.00E+00		, 1.00E+01	Alp; (Dpm/ 4.42E-01	(uCi/ 1.99E-05	(pCi/ 1.99E+01	± 2.1E+01	CAT I	1.3E+00	Lab Alq
Ppt mg: 0	Units: L		, ml	Bet; Alq): 3.88E-01	Sa): 1.75E-05	L/g): 1.75E+01	± 1.8E+01		2.9E+00	L/g
WHC B0GHX7		9/18/95 11:20:00 AM	QUAD22D	9/18/95 2:34:06 PM	B0GHX7	30	23	0.72291667	667	21.190833
	LIQUID		Bkg:	9/16/95 5:10:23 AM	BKG	800	35	0.04375	834	1.0425
Anl Date: 9/18/95	Tot Sa, Alq: 1.00E+00		1.00E+01	Alp; (Dpm/ 1.57E+00	(uCi/ 7.05E-05	(pCi/ 7.05E+01	± 2.7E+01	CAT I	3.5E-01	Lab Alq
Ppt mg: 7.1	Units: L		, ml	Bet; Alq): 4.00E+01	Sa): 1.80E-03	L/g): 1.80E+03	± 7.3E+01		2.8E-02	L/g

9613447.0485

0003020

Rs 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	(uCi/ 4.40E-05	(pCi/ 4.40E+01	± 2.5E+01	CAT I	5.7E-01	Lab
Ppt mg: 6.6	Units: L	, ml	Bet; Alq): 1.96E+00	Sa): 8.82E-05	Lig): 8.82E+01	± 2.3E+01		5.7E-01	Alq Lig

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
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	(uCi/ -5.72E-06	(pCi/ -5.72E+00	± 2.0E+01	CAT I	1.0E+00	Lab
Ppt mg: 0	Units: L	, ml	Bet; Alq): -7.99E-02	Sa): -3.60E-06	Lig): -3.60E+00	± 1.7E+01		1.0E+00	Alq Lig

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
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	(uCi/ 2.77E-06	(pCi/ 2.77E+00	± 1.9E+01	CAT I	9.0E+00	Lab
Ppt mg: 0	Units: L	, ml	Bet; Alq): 5.42E-01	Sa): 2.44E-05	Lig): 2.44E+01	± 1.8E+01		2.0E+00	Alq Lig

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
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	(uCi/ 3.61E-05	(pCi/ 3.61E+01	± 2.2E+01	CAT I	6.9E-01	Lab
Ppt mg: 1.7	Units: L	, ml	Bet; Alq): 4.39E+00	Sa): 1.98E-04	Lig): 1.98E+02	± 2.8E+01		2.5E-01	Alq Lig

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
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	(uCi/ 3.55E-05	(pCi/ 3.55E+01	± 2.5E+01	CAT I	7.0E-01	Lab
Ppt mg: 2.9	Units: L	, ml	Bet; Alq): 1.45E+00	Sa): 6.52E-05	Lig): 6.52E+01	± 2.2E+01		7.7E-01	Alq Lig

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
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	(uCi/ 1.02E-05	(pCi/ 2.04E+01	± 2.5E+01	CAT I	1.2E+00	Lab
Ppt mg: 9.2	Units: L	, ml	Bet; Alq): 4.44E-01	Sa): 9.99E-06	Lig): 2.00E+01	± 1.8E+01		2.5E+00	Alq Lig

9613947.0986

000031

9613447.0487

MAY 01 '95 07:03AM BHI 5 372 9655

Environmental Restoration Contractor **ERC Team**

Interoffice Memorandum

Job No. 22192
Written Response Rev
CCN: N/A
OCR: [illegible]
TID: N/A
ERA: N/A
Subject Code: [illegible]

TO: Dave Blumenkranz H4-90

DATE: April 26, 1995

COPIES: Doug Bowers N3-05

FROM: Mike Wesselman
Radiological Controls
N3-06/376-2084

Post-it® Fax Note 7671	Date 5/1	# of pages ▸ 1
To D. Bowers	From D. Blumenkranz	
Co./Dept. ITH/Samp.	Co. CHI/E&S	
Phone # 376-1007	Phone # 372-9658	
Fax # 376-5991	Fax #	

SUBJECT: **EXEMPTION OF SAMPLES FROM 100-HR-3 PUMP AND TREAT FROM TOT ACTIVITY ANALYSIS.**

After reviewing sampling data recorded on GeoDat as well as data from the latest resin change a unit, it has been concluded that there is no need to perform total activity analysis of water sample 100-HR-3 prior to offsite shipment. Water from all wells in the area is well below levels which w deliver 100 millirem per year CEDE to any one drinking two liters a day, no water exceeds the picocurie per gram limit for shipment as non radioactive by Department of Transportation. Acr trends in all wells have been downward for the last twenty years. Sample from the pump and system itself indicate less than six picocuries per gram of tritium and less than ten picocuries per of both alpha and beta contamination. All discharges of radioactive material to the ground in the 1 Area have ceased, the actions of the pump and treat system do not appear to be mobilizing previ deposited materials. Based on the above information and the results of total activities performed to there is sufficient process knowledge to conclude that preshipment screening of water samples longer required.

Mike Wesselman

maw

Distribution

0000022

Figure 1

SAMPLE CHECK-IN LIST

(1 Per Shipping Container)

Date/Time Received 9/19/95 11:20 Client Name BHI

Project/Client # B95-053 Batch or Case # _____

Cooler ID (if noted on outside of cooler) I24

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: 32
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 _____
12. Have any anomalies been identified above? Yes [ ] No [X]
13. Memos have been initiated for all anomalies identified above? Yes [X]

Printed Name/Signature Karen Gottenberg Date/Time 9/19/95 1120

Quanterra Environmental Services 9613447.0489

C.O.R. and COPIED TO: BB/WP
DATE: 9-19-95
TIME: 1105
DWB

Work Order No.: 9378

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland

Date: 9-19-95 0850

Project No: 550.76

Initiated by: [illegible]

Analysis Requested: Refer to RFA/COC

RFA/COC Numbers: 64987

Client Sample Numbers Affected: Entire Login

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

1. NA Not enough sample received for proper analysis.
   Received approximately: _____
2. ☐ Sample received broken/leaking.
3. ☐ Sample received without proper preservative.
   - ☐ Cooler temperature not within 4°C ± 2°C
     Record temperature: 5°/4°
   - ☐ pH _____
   - ☐ other: _____
4. ☐ Sample received in improper container.
5. ☐ Sample received without proper paperwork. Explain: _____
6. ☐ Paperwork received without sample.
7. ☐ No sample ID on sample container.
8. ☐ Custody tape disturbed/broken/missing.
9. NA Sample splits performed by lab.
10. NA Volatile sample received with approximately _____ mm headspace.
11. ☐ Sample ID on container does not match sample ID on paperwork. Explain: _____
12. ☐ All coolers on airbill not received with shipment.
13. ☐ Other (explain below):
    Shipping containers not rad surveyed.
    292-1941-775

Notes: _____

Corrective Action:

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

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

☐ Sample(s) processed "as is". Comments: _____

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

Sample Control Supervisor Review: (or designate) [illegible] Date: 9-19-95

Project Management Review: [illegible] Date: 9/20/95

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

5431

0000024

9613447.0490

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

Project: 550.76

Category: Chromium-GFAA
Method: EPA 218.2
Matrix: LIQUID

Sample Date : 09/01/95
Receipt Date : 09/05/95
Report Date : 10/19/95

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0G950	9260-001	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/03/95	957	UG/L		100	100
B0G950	9260-001MS	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/04/95	6750	%REC			200
B0G950	9260-001MSD	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/04/95	6850	%REC			200
B0G951	9260-002	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/03/95	351	UG/L		100	100
B0G952	9260-003	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/03/95	311	UG/L		100	100
B0G954	9313-001	Chromium	7440-47-3	QCBLK79707-1	10/05/95	10/06/95	939	UG/L		100	100
B0G955	9313-002	Chromium	7440-47-3	QCBLK79707-1	10/05/95	10/06/95	488	UG/L		100	100
B0G956	9378-001	Chromium	7440-47-3	QCBLK79707-1	10/05/95	10/06/95	915	UG/L		100	100
B0GKW4	9378-002	Chromium	7440-47-3	QCBLK79707-1	10/05/95	10/06/95	524	UG/L		100	100
NA	QCBLK79081-1	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/03/95	1.0	UG/L	U	1.0	1
NA	QCBLK79707-1	Chromium	7440-47-3	QCBLK79707-1	10/05/95	10/06/95	1.0	UG/L	U	1.0	1
NA	QCLCS79081-1	Chromium	7440-47-3	QCBLK79081-1	09/27/95	10/03/95	82	%REC			1
NA	QCLCS79707-1	Chromium	7440-47-3	QCBLK79707-1	10/05/95	10/06/95	91	%REC			1

0000026

9613447.0491

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0GKW4

Lab Name: QUANTERRA MO Contract: 550.76
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0697
Matrix (soil/water): WATER Lab Sample ID: 9378-002
Level (low/med): LOW Date Received: 09/18/95
% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	524			F

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

Comments:

FORM I - IN

SW-846

0000027

9613447.0492

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0G950

Lab Name: QUANTERRA_MO Contract: 550.76
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0697
Matrix (soil/water): WATER Lab Sample ID: 9260-001
Level (low/med): LOW Date Received: 09/05/95
% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	957			F

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

Comments:

FORM I - IN

SW-846

0000028

9613447.0493

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0G951

Lab Name: QUANTERRA_MO Contract: 550.76
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0697
Matrix (soil/water): WATER Lab Sample ID: 9260-002
Level (low/med): LOW Date Received: 09/05/95
% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	351			F

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

Comments:

FORM I - IN

SW-846

0000029

9613447.0494

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0G952

Lab Name: QUANTERRA MO Contract: 550.76

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0697

Matrix (soil/water): WATER Lab Sample ID: 9260-003

Level (low/med): LOW Date Received: 09/05/95

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	311			F

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

0000030

9613447.0495

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0G954

Lab Name: QUANTERRA_MO_____ Contract: 550.76____

Lab Code: ITMO__ Case No.:_____ SAS No.:_____ SDG No.: W0697_____

Matrix (soil/water): WATER Lab Sample ID: 9313-001

Level (low/med): LOW__ Date Received: 09/11/95

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium_	939			F_

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

SW-846

0000031

9613447.0496

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0G955

Lab Name: QUANTERRA_MO Contract: 550.76

Lab Code: ITMO Case No.: SAS No.: SDG No.: W0697

Matrix (soil/water): WATER Lab Sample ID: 9313-002

Level (low/med): LOW Date Received: 09/11/95

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	488			F

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

0000032

9615447.0497

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0G956

Lab Name: QUANTERRA_MO Contract: 550.76
Lab Code: ITMO Case No.: SAS No.: SDG No.: W0697
Matrix (soil/water): WATER Lab Sample ID: 9378-001
Level (low/med): LOW Date Received: 09/18/95
% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	915			F

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

Comments:

FORM I - IN

SW-846

0000033

9613447.0498

HEXAVALENT CHROMIUM DATA SUMMARY

SDG: W0697

ANALYSIS DATE: 9/5/95

MATRIX: WATER

MDL: 0.008 mg/L

SAMPLE LAB. ID	CLIENT ID	SAMPLE RESULT	UNITS	SPIKE ADDED	UNITS	SPIKE RECOVERED	UNITS	PERCENT RECOVERY
Preparation Blank	none	-0.003	mg/L					
LCS	none	0.505	mg/L	0.500	mg/L	0.505	mg/L	101.0
50903801	B0G950	0.927	mg/L					
50903801 DUP	B0G950	0.919	mg/L					
50903801 MS	B0G950	1.18	mg/L	0.263	mg/L	0.253	mg/L	96.20
50903801 MSD	B0G950	1.18	mg/L	0.263	mg/L	0.253	mg/L	96.20
50903802	B0G951	0.239	mg/L					
50903803	B0G952	0.240	mg/L					

COMMENTS:

R3 9/7/95

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

0000044

9613447.0499

HEXAVALENT CHROMIUM DATA SUMMARY

SDG: W0697

ANALYSIS DATE: 9/12/95

MATRIX: WATER

MDL: 0.008 mg/L

SAMPLE LAB. ID	CLIENT ID	SAMPLE RESULT	UNITS	SPIKE ADDED	UNITS	SPIKE RECOVERED	UNITS	PERCENT RECOVERY
Preparation blank	none	0.000	mg/L					
LCS	none	0.502	mg/L	0.500	mg/L	0.502	mg/L	100.4
50913901	B0G954	0.907	mg/L					
50913901 DUP	B0G954	0.904	mg/L					
50913901 MS	B0G954	1.17	mg/L	0.263	mg/L	0.263	mg/L	100.0
50913901 MSD	B0G954	1.17	mg/L	0.263	mg/L	0.263	mg/L	100.0
50913902	B0G955	0.398	mg/L					

COMMENTS:

RG 9/15/95

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

0000046

9613447.0500

HEXAVALENT CHROMIUM DATA SUMMARY

SDG: W0697

ANALYSIS DATE: 9/19/95

MATRIX: WATER

MDL: 0.008 mg/L

SAMPLE LAB. ID	CLIENT ID	SAMPLE RESULT	UNITS	SPIKE ADDED	UNITS	SPIKE RECOVERED	UNITS	PERCENT RECOVERY
Preparation Blank	none	0.000	mg/L					
LCS	none	0.497	mg/L	0.500	mg/L	0.497	mg/L	99.4
50925701	B0G956	0.860	mg\L					
50925701 DUP	B0G956	0.864	mg\L					
50925701 MS	B0G956	1.120	mg\L	0.263	mg/L	0.260	mg/L	98.86
50925701 MSD	B0G956	1.110	mg\L	0.263	mg/L	0.250	mg/L	95.06
50925702	B0GKW4	rB 0.436	mg\L					

COMMENTS:

9/25/95

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

00000048