WO 2999-RSS

Quanterra

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CERTIFICATE OF ANALYSIS

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

RECEIVED
MAR 28 2000
EDMC

February 25, 2000

Attention: Joan Kessner

FEB 2000
RECEIVED
Data
Log In

SAF Number	:	B00-014
Date SDG Closed	:	January 17, 2000
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W02999
Data Deliverable	:	21-Day / Summary

I. Introduction

Between January 3, 2000 and January 6, 2000, two water samples were received at the Quanterra Richland Laboratory (QRL) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Bechtel Hanford, Inc. (BHI) specific IDs:

QRL ID#	BHI ID#	MATRIX	DATE OF RECEIPT
9D71PE10	B0XBJ1	WATER	1/3/00
9D75KQ10	B0XBJ2	WATER	1/6/00

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 analyses were:

Gamma Spectroscopy
Gamma Scan by method RICH-RC-5017
Gas Proportional Counting
Total Strontium by method RICH-RC-5006
Alpha Spectroscopy
Plutonium-238, -239/40 by method RICH-RC-5010
Americium-241 by method RICH-RC-5080

Uranium-234, -235, -238 by method RICH-RC-5079
Liquid Scintillation Counting
Technetium-99 by method RICH-RC-5078
Nickel-63 by method RICH-RC-5069
Carbon-14 by method RICH-RC-5022
Chemical Analyses
Hexavalent Chromium by EPA method 7196

III. Quality Control

The analytical results for each analysis performed under SDG W02999 include a minimum of one Laboratory Control Sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

IV. Comments

Gamma Spectroscopy
Gamma Scan by method RICH-RC-5017:
The achieved MDAs are based on the best available counting geometry and detector efficiency for the matrix analyzed. The data are accepted for reporting with the MDAs achieved. Except as noted, the LCS, batch blank, samples and sample duplicate (B0XBJ1) results are within contractual requirements.

Gas Proportional Counting
Total Strontium by method RICH-RC-5006:
The achieved MDAs do not meet the CRDL for samples B0XBJ2 and B0XBJ2 duplicate analysis due to insufficient sample volume. The data are accepted for reporting with the MDAs achieved. Except as noted, the LCS, batch blank, samples and sample duplicate (B0XBJ2) results are within contractual requirements.

Alpha Spectroscopy
Plutonium-238, -239/40 by method RICH-RC-5010:
The LCS, batch blank, samples and sample duplicate (B0XBJ1) results are within contractual requirements.

Americium-241 by method RICH-RC-5080:
The LCS, batch blank, samples and sample duplicate (B0XBJ1) results are within contractual requirements.

Uranium-234, -235, -238 by method RICH-RC-5079:
The LCS, batch blank, samples and sample duplicate (B0XBJ1) results are within contractual requirements.

Liquid Scintillation Counting
Technetium-99 by method RICH-RC-5078:
The LCS, batch blank, samples, sample duplicate (B0XBJ1) and sample matrix spike (B0XBJ1) results are within contractual requirements.

Nickel-63 by method RICH-RC-5069:
The LCS, batch blank, samples, sample duplicate (B0XBJ1) and sample matrix spike (B0XBJ1) results are within contractual requirements.

Carbon-14 by method RICH-RC-5022:
The achieved MDAs do not meet the CRDL for samples B0XBJ2 and B0XBJ2 duplicate analysis due to insufficient sample volume. The data are accepted for reporting with the MDAs achieved. The LCS, batch blank, samples and sample duplicate (B0XBJ2) results are within contractual requirements.

Chemical Analyses
Hexavalent Chromium by EPA method 7196:
The LCS, batch blank, samples, sample duplicate (B0XBJ1) and sample matrix spike (B0XBJ1) 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:

Jackie Waddell

Jackie Waddell
Project Manager

Quanterra

SAMPLE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	9D71PE10	MATRIX:	WATER
CLIENT ID:	B0XBJ1	DATE RECEIVED:	1/3/2000 11:40:00 AM

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
HEXCHROME	5.00E-03		N/A	N/A	2.00E-03	mg/L	N/A	EPA7196
PU-238	6.48E-02	U	1.3E-01	1.3E-01	1.76E-01	pCi/L	97.28%	RICHRC5010
PU239/40	0.00E+00	U	0.0E+00	1.6E-01	1.76E-01	pCi/L	97.28%	RICHRC5010
AM-241	5.36E-02	U	1.8E-01	1.8E-01	5.05E-01	pCi/L	95.11%	RICHRC5072
U-234	-6.02E-02	U	3.1E-02	3.3E-02	3.92E-01	pCi/L	91.90%	RICHRC5067
U-235	-2.41E-02	U	2.0E-02	2.0E-02	2.98E-01	pCi/L	91.90%	RICHRC5067
U-238	-4.42E-02	U	2.7E-02	2.8E-02	3.55E-01	pCi/L	91.90%	RICHRC5067
BA-133	2.45E+00	U	5.8E+00	5.8E+00	9.85E+00	pCi/L		RICHRC5017
CO-60	7.05E-01	U	3.9E+00	3.9E+00	8.37E+00	pCi/L		RICHRC5017
CS-137	4.22E+00	U	4.4E+00	4.4E+00	9.12E+00	pCi/L		RICHRC5017
EU-152	-9.36E+00	U	1.3E+01	1.3E+01	2.19E+01	pCi/L		RICHRC5017
EU-154	-1.42E+01	U	1.2E+01	1.2E+01	1.61E+01	pCi/L		RICHRC5017
EU-155	-3.03E+00	U	8.9E+00	8.9E+00	1.54E+01	pCi/L		RICHRC5017
STRONTIUM	1.79E-01	U	7.3E-01	7.3E-01	1.69E+00	pCi/L	99.20%	RICHRC5006
C-14	4.56E+00	U	3.2E-01	1.1E+01	1.64E+01	pCi/L	100.00%	RICHRC5022
NI-63	8.51E+00	U	4.8E-01	1.0E+01	1.57E+01	pCi/L	80.02%	RICHRC5069
TC-99	5.03E+00	U	2.5E-01	1.3E+01	1.22E+01	pCi/L	100.00%	RICHRC5078

Number of Results: 17

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result <

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SAMPLE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	9D75KQ10	MATRIX:	WATER
CLIENT ID:	B0XBJ2	DATE RECEIVED:	1/6/2000 12:00:00 PM

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
HEXCHROME	2.00E-03	U	N/A	N/A	2.00E-03	mg/L	N/A	EPA7196
PU-238	0.00E+00	U	0.0E+00	1.8E-01	2.04E-01	pCi/L	102.57%	RICHRC5010
PU239/40	0.00E+00	U	0.0E+00	1.8E-01	2.04E-01	pCi/L	102.57%	RICHRC5010
AM-241	-7.21E-03	U	1.4E-02	1.4E-02	3.62E-01	pCi/L	104.80%	RICHRC5072
BA-133	-3.32E-01	U	4.9E+00	4.9E+00	8.59E+00	pCi/L		RICHRC5017
CO-60	-2.05E+00	U	5.1E+00	5.1E+00	9.14E+00	pCi/L		RICHRC5017
CS-137	3.47E+00	U	4.4E+00	4.4E+00	9.01E+00	pCi/L		RICHRC5017
EU-152	-5.80E+00	U	1.0E+01	1.0E+01	1.67E+01	pCi/L		RICHRC5017
EU-154	5.58E+00	U	1.4E+01	1.4E+01	2.93E+01	pCi/L		RICHRC5017
EU-155	-1.85E+00	U	9.1E+00	9.1E+00	1.61E+01	pCi/L		RICHRC5017
STRONTIUM	1.16E+00	U	2.1E+00	2.1E+00	4.70E+00	pCi/L	90.00%	RICHRC5006
C-14	-1.71E+01	U	1.4E+00	9.9E+01	1.49E+02	pCi/L	100.00%	RICHRC5022
NI-63	2.60E+01		1.5E+00	9.5E+00	1.45E+01	pCi/L	95.88%	RICHRC5069
TC-99	-5.62E+00	U	3.0E-01	1.2E+01	1.22E+01	pCi/L	100.00%	RICHRC5078

Number of Results: 14

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result <

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1DR	MATRIX:	WATER
CLIENT ID:	B0XBJ1	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
HEXCHROME	5.00E-03		N/A	N/A	2.00E-03	mg/L	N/A	EPA7196	5.00E-03	0.00%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1ER	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
C-14	-9.16E-01	U	6.6E-02	1.1E+01	1.64E+01	pCi/L	100.00%	RICHRC5022	4.56E+00	300.51%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1FR	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
PU-238	0.00E+00	U	0.0E+00	1.5E-01	1.69E-01	pCi/L	101.62%	RICHRC5010	6.48E-02	200.00%
PU239/40	0.00E+00	U	0.0E+00	1.5E-01	1.69E-01	pCi/L	101.62%	RICHRC5010	0.00E+00	0.00%

Number of Results: 2

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1GR	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
BA-133	-2.38E+00	U	5.1E+00	5.1E+00	8.56E+00	pCi/L		RICHRC5017	2.45E+00	4915.43%
CO-60	-1.10E+00	U	3.3E+00	3.3E+00	6.50E+00	pCi/L		RICHRC5017	7.05E-01	914.26%
CS-137	4.99E-04	U	4.6E+00	4.6E+00	8.61E+00	pCi/L		RICHRC5017	4.22E+00	199.95%
EU-152	-2.16E+00	U	1.1E+01	1.1E+01	1.94E+01	pCi/L		RICHRC5017	-9.36E+00	124.93%
EU-154	1.65E+00	U	1.4E+01	1.4E+01	2.76E+01	pCi/L		RICHRC5017	-1.42E+01	252.54%
EU-155	4.17E+00	U	8.1E+00	8.1E+00	1.51E+01	pCi/L		RICHRC5017	-3.03E+00	1265.38%

Number of Results: 6

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1JR	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
TC-99	8.88E+00	U	4.4E-01	1.3E+01	1.22E+01	pCi/L	100.00%	RICHRC5078	5.03E+00	55.31%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1KR	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
U-234	-3.22E-02	U	2.1E-02	2.2E-02	2.98E-01	pCi/L	97.80%	RICHRC5067	-6.02E-02	60.56%
U-235	3.40E-02	U	9.0E-02	9.1E-02	2.23E-01	pCi/L	97.80%	RICHRC5067	-2.41E-02	1171.39%
U-238	1.97E-02	U	9.1E-02	9.2E-02	2.77E-01	pCi/L	97.80%	RICHRC5067	-4.42E-02	521.65%

Number of Results: 3

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1MR	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
NI-63	-1.81E+00	U	1.1E-01	9.4E+00	1.50E+01	pCi/L	83.86%	RICHRC5069	8.51E+00	308.19%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1NR	MATRIX:	WATER
CLIENT ID:	B0XBJ1 DUP	DATE RECEIVED:	1/3/2000 11:40:00 A
ORIG LAB SAMPLE ID:	9D71PE10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
AM-241	-6.84E-03	U	1.4E-02	1.4E-02	3.44E-01	pCi/L	97.87%	RICHRC5072	5.36E-02	258.52%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75JQ1CR	MATRIX:	WATER
CLIENT ID:	B0XBJ2	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75JQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
HEXCHROME	0.00E+00	U	N/A	N/A	2.00E-03	mg/L	N/A	EPA7196	0.00E+00	0.00%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1DR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
C-14	5.20E+01	U	4.0E+00	1.0E+02	1.49E+02	pCi/L	100.00%	RICHRC5022	-1.71E+01	396.13%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1FR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
Ni-63	1.79E+01		1.0E+00	8.9E+00	1.44E+01	pCi/L	97.12%	RICHRC5069	2.60E+01	36.74%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1HR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
TC-99	-2.80E+00	U	1.5E-01	1.2E+01	1.22E+01	pCi/L	100.00%	RICHRC5078	-5.62E+00	67.00%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1JR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
PU-238	-7.19E-03	U	1.4E-02	1.4E-02	3.62E-01	pCi/L	101.69%	RICHRC5010	0.00E+00	200.00%
PU239/40	-1.44E-02	U	2.0E-02	2.0E-02	4.10E-01	pCi/L	101.69%	RICHRC5010	0.00E+00	200.00%

Number of Results: 2

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1KR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
AM-241	0.00E+00	U	0.0E+00	2.6E-01	2.84E-01	pCi/L	88.72%	RICHRC5072	-7.21E-03	200.00%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1LR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
BA-133	-3.55E+00	U	4.9E+00	4.9E+00	8.29E+00	pCi/L		RICHRC5017	-3.32E-01	165.75%
CO-60	-8.92E-01	U	4.9E+00	4.9E+00	9.26E+00	pCi/L		RICHRC5017	-2.05E+00	78.76%
CS-137	-3.44E+00	U	5.0E+00	5.0E+00	8.48E+00	pCi/L		RICHRC5017	3.47E+00	6171.13%
EU-152	2.01E+00	U	1.1E+01	1.1E+01	2.12E+01	pCi/L		RICHRC5017	-5.80E+00	412.49%
EU-154	9.78E+00	U	1.4E+01	1.4E+01	3.04E+01	pCi/L		RICHRC5017	5.58E+00	54.77%
EU-155	1.55E-01	U	1.1E+01	1.1E+01	2.03E+01	pCi/L		RICHRC5017	-1.85E+00	236.56%

Number of Results: 6

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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Quanterra

DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1MR	MATRIX:	WATER
CLIENT ID:	B0XBJ2 DUP	DATE RECEIVED:	1/6/2000 12:00:00 P
ORIG LAB SAMPLE ID:	9D75KQ10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
STRONTIUM	1.13E+00	U	2.2E+00	2.2E+00	4.90E+00	pCi/L	95.60%	RICHRC5006	1.16E+00	2.90%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc
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Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	SDG /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D720111B	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
HEXCHROME	1.00E-03	U	N/A	N/A	2.00E-03	mg/L	N/A	EPA7196

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

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Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	SDG /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D779511B	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
HEXCHROME	0.00E+00	U	N/A	N/A	2.00E-03	mg/L	N/A	EPA7196

Number of Results: 1

Quanterra

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781G11X MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
C-14	2.96E+00	U	2.3E-01	5.2E+00	7.45E+00	pCi/L	100.00%	RICHRC5022

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781H11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
NI-63	6.75E+00		3.8E-01	2.3E+00	3.55E+00	pCi/L	88.26%	RICHRC5069

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781K11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TC-99	3.71E-01	U	1.9E-02	1.2E+01	1.22E+01	pCi/L	100.00%	RICHRC5078

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781N11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
PU-238	-3.84E-03	U	7.7E-03	7.7E-03	1.93E-01	pCi/L	87.04%	RICHRC5010
PU239/40	4.80E-02	U	9.6E-02	9.6E-02	1.30E-01	pCi/L	87.04%	RICHRC5010

Number of Results: 2

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781P11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	4.33E-02	U	8.7E-02	8.7E-02	1.17E-01	pCi/L	94.88%	RICHRC5072

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781Q11B MATRIX: Water

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
BA-133	-5.31E+00	U	5.3E+00	5.3E+00	8.57E+00	pCi/L		RICHRC5017
CO-60	-3.24E+00	U	4.7E+00	4.7E+00	7.63E+00	pCi/L		RICHRC5017
CS-137	-2.10E+00	U	4.8E+00	4.8E+00	8.45E+00	pCi/L		RICHRC5017
EU-152	8.45E+00	U	1.1E+01	1.1E+01	2.21E+01	pCi/L		RICHRC5017
EU-154	-1.17E-01	U	1.1E+01	1.1E+01	2.26E+01	pCi/L		RICHRC5017
EU-155	4.44E+00	U	9.5E+00	9.5E+00	1.85E+01	pCi/L		RICHRC5017

Number of Results: 6

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781T11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
STRONTIUM	3.90E-01	U	1.4E+00	1.4E+00	3.32E+00	pCi/L	95.10%	RICHRC5006

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86AV13X MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
C-14	1.40E-01	U	1.0E-02	5.6E+00	8.18E+00	pCi/L	100.00%	RICHRC5022

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86C511B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
PU-238	0.00E+00	U	0.0E+00	7.7E-02	8.52E-02	pCi/L	100.13%	RICHRC5010
PU239/40	0.00E+00	U	0.0E+00	7.7E-02	8.52E-02	pCi/L	100.13%	RICHRC5010

Number of Results: 2

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86C711B MATRIX: Water

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
BA-133	-3.30E+00	U	4.8E+00	4.8E+00	8.08E+00	pCi/L		RICHRC5017
CO-60	1.13E-01	U	4.5E+00	4.5E+00	8.93E+00	pCi/L		RICHRC5017
CS-137	2.84E+00	U	4.3E+00	4.3E+00	8.59E+00	pCi/L		RICHRC5017
EU-152	-1.57E+01	U	1.2E+01	1.2E+01	1.73E+01	pCi/L		RICHRC5017
EU-154	3.51E+00	U	1.4E+01	1.4E+01	2.81E+01	pCi/L		RICHRC5017
EU-155	7.83E+00	U	8.2E+00	8.2E+00	1.58E+01	pCi/L		RICHRC5017

Number of Results: 6

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86C911B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TC-99	4.95E+00	U	2.5E-01	1.2E+01	1.22E+01	pCi/L	100.00%	RICHRC5078

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86CD11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
STRONTIUM	1.42E-01	U	3.0E-01	3.0E-01	6.79E-01	pCi/L	96.90%	RICHRC5006

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86CG11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
U-234	-2.86E-02	U	2.0E-02	2.1E-02	2.88E-01	pCi/L	91.30%	RICHRC5067
U-235	7.70E-02	U	1.3E-01	1.3E-01	2.31E-01	pCi/L	91.30%	RICHRC5067
U-238	-1.77E-05	U	9.3E-02	9.3E-02	3.29E-01	pCi/L	91.30%	RICHRC5067

Number of Results: 3

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86CK11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
NI-63	1.14E+00	U	6.6E-02	8.8E+00	1.37E+01	pCi/L	90.35%	RICHRC5069

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

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BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86CM11B MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	8.91E-02	U	1.3E-01	1.3E-01	1.21E-01	pCi/L	92.18%	RICHRC5072

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

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LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D720112S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
HEXCHROME	4.94E-01		N/A	N/A	2.00E-03	mg/L	N/A	5.00E-01	98.80%

Number of Results: 1

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D779512S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
HEXCHROME	4.96E-01		N/A	N/A	2.00E-03	mg/L	N/A	5.00E-01	99.20%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D781G12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
C-14	4.79E+01	J	2.5E+00	7.5E+00	7.45E+00	pCi/L	100.00%	4.60E+01	104.14%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

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Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D781H12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
NI-63	2.81E+02		4.5E+00	2.1E+01	3.22E+00	pCi/L	97.33%	3.81E+02	73.92%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D781K12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
TC-99	4.75E+02		1.0E+01	5.1E+01	1.22E+01	pCi/L	100.00%	5.42E+02	87.72%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

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LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781N12S MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
PU239/40	4.60E+00		8.8E-01	1.2E+00	1.70E-01	pCi/L	99.46%	4.51E+00	101.88%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

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Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D781P12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
AM-241	2.13E+01		1.9E+00	4.2E+00	1.77E-01	pCi/L	95.36%	2.28E+01	93.47%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D781Q12S MATRIX: Water

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
CO-60	7.85E+01		1.6E+01	1.6E+01	1.05E+01	pCi/L		7.70E+01	101.86%
CS-137	5.75E+01		1.3E+01	1.3E+01	1.12E+01	pCi/L		5.00E+01	114.85%
EU-152	1.44E+02	U	4.1E+01	4.1E+01	5.32E+01	pCi/L		1.53E+02	94.16%

Number of Results: 3

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D781T12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
STRONTIUM	5.62E+01		4.7E+00	1.7E+01	3.21E+00	pCi/L	100.00%	6.92E+01	81.32%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86AV12S MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
C-14	4.19E+01	J	2.2E+00	7.6E+00	8.18E+00	pCi/L	100.00%	4.56E+01	91.90%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

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Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D86C512S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
PU239/40	4.28E+00		7.4E-01	1.0E+00	1.45E-01	pCi/L	100.64%	4.51E+00	94.88%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D86C712S	MATRIX:	Water

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
CO-60	8.87E+01		1.8E+01	1.8E+01	1.08E+01	pCi/L		7.73E+01	114.75%
CS-137	5.90E+01		1.3E+01	1.3E+01	9.90E+00	pCi/L		5.00E+01	117.93%
EU-152	1.41E+02	U	3.2E+01	3.2E+01	5.27E+01	pCi/L		1.54E+02	91.37%

Number of Results: 3

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D86C912S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
TC-99	5.35E+02		1.1E+01	5.6E+01	1.22E+01	pCi/L	100.00%	5.42E+02	98.69%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D86CD12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
STRONTIUM	1.15E+01		9.7E-01	3.4E+00	6.60E-01	pCi/L	99.80%	1.37E+01	83.85%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D86CD13S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
STRONTIUM	1.24E+01		1.0E+00	3.7E+00	7.17E-01	pCi/L	96.60%	1.37E+01	90.10%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86CG12S MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
U-234	8.43E+00		1.3E+00	2.0E+00	2.43E-01	pCi/L	87.95%	8.61E+00	97.93%
U-235	6.23E-01		3.5E-01	3.7E-01	2.43E-01	pCi/L	87.95%	3.93E-01	158.53%
U-238	6.72E+00		1.1E+00	1.6E+00	2.76E-01	pCi/L	87.95%	9.02E+00	74.48%

Number of Results: 3

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D86CK12S	MATRIX:	WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
NI-63	1.23E+03		2.1E+01	9.6E+01	1.70E+01	pCi/L	74.94%	1.52E+03	81.44%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W02999 / 9859

LAB SAMPLE ID: D86CM12S MATRIX: WATER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
AM-241	2.42E+01		2.0E+00	4.7E+00	1.72E-01	pCi/L	98.02%	2.27E+01	106.66%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999	/ 9859
LAB SAMPLE ID:	D71PE1AW	MATRIX:	WATER	

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
HEXCHROME	5.13E-01		N/A	N/A	2.00E-03	mg/L	5.00E-03	5.26E-01	97.53%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1CW	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
HEXCHROME	5.15E-01		N/A	N/A	2.00E-03	mg/L	5.00E-03	5.26E-01	97.91%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1HW	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
TC-99	3.46E+03		3.0E+01	3.0E+02	1.22E+01	pCi/L	5.03E+00	3.63E+03	95.28%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D71PE1LW	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
NI-63	1.22E+03		2.0E+01	9.4E+01	1.57E+01	pCi/L	8.51E+00	1.52E+03	80.30%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ19W	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
HEXCHROME	5.05E-01		N/A	N/A	2.00E-03	mg/L	2.00E-03	5.26E-01	96.01%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1AW	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
HEXCHROME	5.07E-01		N/A	N/A	2.00E-03	mg/L	2.00E-03	5.26E-01	96.39%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1EW	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
NI-63	1.27E+03		2.0E+01	9.6E+01	1.49E+01	pCi/L	2.60E+01	1.69E+03	75.10%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02999 / 9859
LAB SAMPLE ID:	D75KQ1GW	MATRIX:	WATER

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
TC-99	3.16E+03		2.9E+01	2.8E+02	1.22E+01	pCi/L	-5.62E+0	3.63E+03	87.12%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Q-27023

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-014-03	Page 1 of 1

Collector: Falberg	Company Contact: J Adler	Telephone No.: 373-4316	Project Coordinator: TRENT, SJ
Project Designation: 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location: 105 F		SAF No.: B00-014
Ice Chest No.: SML 452	Field Logbook No.: EL 1424	COA: R105F2280C	Method of Shipment: Gov. vehicle
Shipped To: Quanterra Incorporated	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

Price Code: 7L

Air Quality: ☐

Data Turnaround: 21 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	Cool 4C	HNO3 to pH <2	Cooled to 4C	HCl to pH <2	HNO3 to pH <2	HNO3 to pH <2			
Type of Container	P	P	P	aG	P	P	P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	20mL	500mL	500mL	1000mL	1000mL	1000mL	1000mL			
SAMPLE ANALYSIS	Activity Scan	7196_CR6: Hexavalent Chromium (1)	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7470 - (CV)	PCBs - 8082	Technetium-99	See item (1) in Special Instructions.	Isotopic Uranium			
		✓			✓		✓			

Due 1-24-99 00
SH 1-3-00

W02999 J0A030125

Sample No.	Matrix *	Sample Date	Sample Time	Activity Scan	7196_CR6	ICP Metals	PCBs	Technetium-99	See item (1)	Isotopic Uranium			
B0XBJ1 D71PE	Water	1-3-00	10:25	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: R.Falberg / R.Falberg	Date/Time: 1030 / 13:00	Received By: R. Thoren	Date/Time: 1-3-00/1030
Relinquished By: R. Thoren	Date/Time: 1-3-00/1140	Received By: K. Achtenberg	Date/Time: 1-3-00 1140
Relinquished By	Date/Time	Received By: <100cpm	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy(Water) {Cobalt-60}; Gamma Spec - Add-on {Barium-133}; Isotopic Plutonium; Strontium-89,90; Total Sr; Americium-241; Carbon-14; Nickel-63

NO ACTIVITY REPORT REQ. FROM NON-RAD SOURCE.

Matrix *

S=Soil
SE=Sediment
SO=Solid
S=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
	CT		

FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 1-300 1140 SG#: W02999

Work Order Number: J0A030125 SAF #: B00-014 / B00-013

Shipping Container ID: SM452 Chain of Custody # B00-014-03

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 4 °C
5. Vermiculite/packing materials is Wet [ ] Dry [✓]
6. Number of samples in shipping container: 28
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:
   - ✓ tape
   - ✓ custody seals
   - ____ hazard labels
   - ____ appropriate sample labels

9. Samples are:
   - ✓ in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles

10. Where any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: K. DeDenling Date: 01-03-00

Telephoned To: _____ On _____ By _____

CLIENT CODE ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
BHI B0XB59D72HA		1/4/2000 4:38:00 PM	QUAD21C	1/4/2000 10:36:47 PM	B0XB59D72HA	30	4	0.021666667	81	1.725
D72HA	SOLID		Bkg:	1/4/2000 7:21:27 AM	BKG	600	67	0.111666667	585	0.975

Anl Date: 1/4/00 Tot Sa, Alq: 1.63E+02 , 1.21E+02 Alp; (Dpm/ 1.74E-02 (uCi/ 1.05E-05 (pCi/ 6.44E-02 ± 4.2E+00 CAT I 7.8E+02 Lab Alq L|g
Ppt mg: 121.4 Units: g , mg Bet; Alq): 3.93E+00 Sa): 2.38E-03 L|g): 1.46E+01 ± 2.6E+00 6.9E+00

BHI B0XBH1D71PV		1/4/2000 4:38:00 PM	QUAD21D	1/4/2000 10:36:47 PM	B0XBH1D71PV	30	9	0.208333333	65	1.21
D71PV	SOLID		Bkg:	1/4/2000 7:21:27 AM	BKG	600	55	0.091666667	574	0.95666667

Anl Date: 1/4/00 Tot Sa, Alq: 1.27E+02 , 9.35E+01 Alp; (Dpm/ 1.32E+00 (uCi/ 8.12E-04 (pCi/ 6.37E+00 ± 5.4E+00 CAT I 7.8E+00 Lab Alq L|g
Ppt mg: 93.5 Units: g , mg Bet; Alq): 2.59E+00 Sa): 1.59E-03 L|g): 1.25E+01 ± 2.9E+00 8.0E+00

BHI B0XBH2D71Q8		1/4/2000 4:38:00 PM	QUAD22A	1/4/2000 10:36:51 PM	B0XBH2D71Q8	30	11	0.253333333	85	1.75
D71Q8	SOLID		Bkg:	1/4/2000 7:21:32 AM	BKG	600	68	0.113333333	650	1.08333333

Anl Date: 1/4/00 Tot Sa, Alq: 1.41E+02 , 9.69E+01 Alp; (Dpm/ 1.57E+00 (uCi/ 1.03E-03 (pCi/ 7.28E+00 ± 5.4E+00 CAT I 6.9E+00 Lab Alq L|g
Ppt mg: 96.9 Units: g , mg Bet; Alq): 3.61E+00 Sa): 2.37E-03 L|g): 1.68E+01 ± 3.1E+00 6.0E+00

BHI B0XBH3D71QA		1/4/2000 4:38:00 PM	QUAD22B	1/4/2000 10:36:51 PM	B0XBH3D71QA	30	10	0.2	75	1.295
D71QA	SOLID		Bkg:	1/4/2000 7:21:32 AM	BKG	600	80	0.133333333	723	1.205

Anl Date: 1/4/00 Tot Sa, Alq: 1.25E+02 , 8.50E+01 Alp; (Dpm/ 1.18E+00 (uCi/ 7.77E-04 (pCi/ 6.24E+00 ± 6.0E+00 CAT I 8.0E+00 Lab Alq L|g
Ppt mg: 85 Units: g , mg Bet; Alq): 2.66E+00 Sa): 1.76E-03 L|g): 1.41E+01 ± 3.4E+00 7.1E+00

BHI B0XBH4D71QC		1/4/2000 4:38:00 PM	QUAD22C	1/4/2000 10:36:51 PM	B0XBH4D71QC	30	13	0.291666667	94	2.09
D71QC	SOLID		Bkg:	1/4/2000 7:21:32 AM	BKG	600	85	0.141666667	626	1.04333333

Anl Date: 1/4/00 Tot Sa, Alq: 1.28E+02 , 9.95E+01 Alp; (Dpm/ 1.82E+00 (uCi/ 1.06E-03 (pCi/ 8.24E+00 ± 5.4E+00 CAT I 6.1E+00 Lab Alq L|g
Ppt mg: 99.5 Units: g , mg Bet; Alq): 4.37E+00 Sa): 2.54E-03 L|g): 1.98E+01 ± 3.2E+00 5.0E+00

BHI B0XBJ1D71PE		1/4/2000 4:38:00 PM	QUAD23B	1/4/2000 10:36:52 PM	B0XBJ1D71PE	30	4	0.045	28	-0.1383333
D71PE	LIQUID		Bkg:	1/4/2000 7:21:42 AM	BKG	600	53	0.088333333	643	1.07166667

Anl Date: 1/4/00 Tot Sa, Alq: 3.50E+00 , 1.00E+01 Alp; (Dpm/ 1.38E-01 (uCi/ 2.18E-05 (pCi/ 6.22E+00 ± 2.1E+01 CAT I 4.0E+00 Lab Alq L|g
Ppt mg: 0.1 Units: L , ml Bet; Alq): -2.91E-01 Sa): -4.60E-05 L|g): -1.31E+01 ± 1.8E+01 3.5E+00

Reviewed 1/5/00 [illegible]

0087

0-27023

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-014-04	Page 1 of 1

Collector: Fahlberg	Company Contact: J Adler	Telephone No.: 373-4316	Project Coordinator: TRENT, SJ
Price Code: 7L	Data Turnaround: 21 Days	Air Quality ☐	
Project Designation: 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location: 105F	SAF No.: B00-014	
Ice Chest No.: ERC-960065	Field Logbook No.: EL 1424	COA: R105F2280C	Method of Shipment: Hand Delivered
Shipped To: Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SDG W02999

Due 1-27

SAMPLE ANALYSIS

JOA060214

Preservation	None	Cool 4C	HNO3 to pH <2	HCl to pH <2	HNO3 to pH <2					
Type of Container	P	P	P	P	P					
No. of Container(s)	1	1	1	1	1					
Volume	20mL	500mL	500mL	1000mL	1000mL					
	Activity Scan	7196 CR6: Hexavalent Chromium (1)	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7470 - (CV)	Technetium-99	See item (1) in Special Instructions.					

Sample No.	Matrix *	Sample Date	Sample Time										
B0XBJ2 D75KQ	Water	1-6-00	11:05	X	X	X	X	X					

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By: R Fahlberg / R Fahlberg	Date/Time: 1.6.00 1200	Received By: K. Adlfenberg / K. Adlfenberg	Date/Time: 1-6-00 1200
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy(Water) {Cobalt-60}; Gamma Spec - Add-on {Barium-133}; Isotopic Plutonium; Strontium-89,90 -- Total Sr; Americium-241; Carbon-14; Nickel-63

SAMPLE ORIGINATED FROM NON RAD AREA. NO ACTIVITY REPORT REQ.

Matrix *

S=Soil
SE=Sediment
SO=Solid
S=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

BHI-EE-011 (10/99)

Quanterra Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CASE NARRATIVE

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

February 2, 2000

Attention: Joan Kessner

Quote Number	:	33833
SDG	:	W02999
Number of Samples	:	two (2)
Sample Matrix	:	Water
Data Deliverable	:	Summary
Date SDG Closed	:	January 17, 2000

II. Introduction

On January 3, 2000, and January 6, 2000, two (2) "water" samples were received by Quanterra, Richland and transferred to Quanterra, St. Louis for chemical analysis. The samples were received at the St. Louis lab on 1/4/00 and 1/7/00 at a temperature of 2 degrees C. See the attached Sample Summary for a listing of Client Ids and their associated Lab numbers.

III. 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: ICP Metals – (SuperTrace Lead)
Mercury – 7470 (CV)
PCB - 8082

Deviation from Request: None

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
MS- Matrix Spike.
MSD- Matrix Spike Duplicate.

V. Comments

General:

The term "Detection Limit" used in the analytical data reports refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

Please refer to the attached cross-reference table for the standard preparation methods used at Quanterra, St. Louis.

The EDD for this SDG will be sent at a later date. The switch to our new LIMs system required a re-programming of the EDD software. That is currently in process.

Metals:

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

There were no comments or non-conformances associated with this data.

PCB:

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch per the protocol for this analysis.

An MS/MSD for PCBs was not done for this SDG. There was insufficient volume to extract and MS/MSD.

I certify that this Summary 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:

Marti Ward
St. Louis Project Manager

SAMPLE SUMMARY

F0A040172

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D730C	001	B0XBJ1	01/03/00	10:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SAMPLE SUMMARY

F0A070142

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D76HV	001	B0XBJ2	01/06/00	11:05

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

METHODS SUMMARY

F0A040172

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
PCBs by SW-846 8082	SW846 8082	SW846 8082
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3010A

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHODS SUMMARY

F0A070142

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3010A

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 1/04/00
Time: 16:20:36
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: 105-F/DR PHASE3
REPORT TO: Accounts Payable
P.O. NUMBER:
SITE: B00-014
AMOUNT REC"D: 500P, 1LG
STORAGE LOC: T5F
LOT COMMENTS: Sample has limited volume.
MATRIX: WATER
SAMPLE ID: B0XBJ1
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33833
LAB ID: F-0A040172-001
WORK ORDER: D730C
RECEIVING DATE: 1/03/00
SAMPLING DATE: 1/03/00
ANALYTICAL DUE DATE: 1/18/00N
REPORT DUE DATE: 1/24/00
PRIORITY: 15
SAMPLING TIME: 10:25
RECEIVING TIME: 11:40
SDG# : W02999

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace)	06	1/04/00	0/00/00	7/01/00
METALS, TOTAL - Waters				
MT6010_L PB				
(I-05-QM-01) D730C Protocol: A QC Program: STANDARD TEST SET				
Mercury (7470A, Cold Vapor) - Liquid	06	1/04/00	0/00/00	1/31/00
METALS, TOTAL (Method exclusive) - Waters				
M7470_L HG				
(I-19-08-01) D730C Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	1/04/00	1/10/00	2/19/00
3510C LIQ/LIQ, SEP FUNNEL w/ACID STRIP (PCB) - Nominal				
STL: HANFORD PCB GC:LIST-1(7)				
(I-60-QH-01) D730C-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 1/04/00
Time: 16:20:36
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: 105-F/DR PHASE3
REPORT TO: Accounts Payable
P.O. NUMBER:
SITE: B00-014
AMOUNT REC"D: 500P, 1LG
STORAGE LOC: T5F
LOT COMMENTS: Sample has limited volume.
MATRIX: WATER
SAMPLE ID: B0XBJ1
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33833
LAB ID: F-0A040172-001-D
WORK ORDER: D730C MSD
RECEIVING DATE: 1/03/00
SAMPLING DATE: 1/03/00
ANALYTICAL DUE DATE: 1/18/00N
REPORT DUE DATE: 1/24/00
PRIORITY: 15
SAMPLING TIME: 10:25
RECEIVING TIME: 11:40
SDG# : W02999

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace)	06	1/04/00	0/00/00	7/01/00
METALS, TOTAL - Waters				
MT6010_L PB				
(I-05-QM-01) D730C Protocol: A QC Program: STANDARD TEST SET				
Mercury (7470A, Cold Vapor) - Liquid	06	1/04/00	0/00/00	1/31/00
METALS, TOTAL (Method exclusive) - Waters				
M7470_L HG				
(I-19-O8-01) D730C Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	1/04/00	1/10/00	2/19/00
3510C LIQ/LIQ, SEP FUNNEL w/ACID STRIP (PCB) - Nominal				
STL: HANFORD PCB GC:LIST-1(7)				
(I-60-QH-01) D730C-1-06 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 1/04/00
Time: 16:20:36
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: 105-F/DR PHASE3
REPORT TO: Accounts Payable
P.O. NUMBER:
SITE: B00-014
AMOUNT REC"D: 500P, 1LG
STORAGE LOC: T5F
LOT COMMENTS: Sample has limited volume.
MATRIX: WATER
SAMPLE ID: B0XBJ1
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33833
LAB ID: F-0A040172-001-S
WORK ORDER: D730C MS
RECEIVING DATE: 1/03/00
SAMPLING DATE: 1/03/00
ANALYTICAL DUE DATE: 1/18/00N
REPORT DUE DATE: 1/24/00
PRIORITY: 15
SAMPLING TIME: 10:25
RECEIVING TIME: 11:40
SDG# : W02999

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace)	06	1/04/00	0/00/00	7/01/00
METALS, TOTAL - Waters				
MT6010_L PB				
(I-05-QM-01) D730C Protocol: A QC Program: STANDARD TEST SET				
Mercury (7470A, Cold Vapor) - Liquid	06	1/04/00	0/00/00	1/31/00
METALS, TOTAL (Method exclusive) - Waters				
M7470_L HG				
(I-19-O8-01) D730C Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	1/04/00	1/10/00	2/19/00
3510C LIQ/LIQ, SEP FUNNEL w/ACID STRIP (PCB) - Nominal				
STL: HANFORD PCB GC:LIST-1(7)				
(I-60-QH-01) D730C-1-05 Protocol: A QC Program: STANDARD TEST SET				

CUR#020561 2° Q-27023

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-014-03	Page 1 of 1

Collector: Falberg	Company Contact: J Adler	Telephone No.: 373-4316	Project Coordinator: TRENT, SJ
Price Code: 7L	Data Turnaround: 21 Days	Air Quality ☐	
Project Designation: 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location: 105 F	SAF No.: B00-014	
Ice Chest No.: SML 452	Field Logbook No.: EL 1424	COA: R105F2280C	Method of Shipment: Gov. vehicle
Shipped To: Quanterra Incorporated	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A airborne 004012582

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SAMPLE ANALYSIS

Due 1-24-9900 JH 1-3-00

W02999 ✓ OA030125

Preservation	None	Cool 4C	HNO3 to pH <2	Cooled to 4C	HCl to pH <2	HNO3 to pH <2	HNO3 to pH <2			
Type of Container	P	P	P	aG	P	P	P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	20mL	500mL	500mL	1000mL	1000mL	1000mL	1000mL			
	Activity Scan	7196_CR6: Hexavalent Chromium (1)	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7470 - (CV)	PCBs - 8082	Technetium-99	See item (1) in Special Instructions.	Isotopic Uranium			

Sample No.	Matrix *	Sample Date	Sample Time										
B0XBJ1 D'1PE	Water	1-3-00	10:25	X	X	X	X	X	X	X			
						100% Full	100% Full						
						pH=1							

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
R. Fahlberg / R. Fahlberg	1030 1-3-00	R. Thoren	1-3-00/1030
R. Thoren	1-3-00/1140	K. Ackterling	1-3-00 1140
K. Ackterling	1-3-00 1600	Jason Lemann	108cpm 01-04-00 0900

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy(Water) {Cobalt-60}; Gamma Spec - Add-on {Barium-133}; Isotopic Plutonium; Strontium-89,90; Total Sr; Americium-241; Carbon-14; Nickel-63

NO ACTIVITY REPORT REQ. FROM NON-RAD SOURCE.

Matrix *
S=Soil
SE=Sediment
SO=Solid
S=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

BHI-EE-011 (10/99)

000011

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 1-300 1140 SG#: W02999

Work Order Number: J0A030125 SAF #: B00-014 / B00-013

Shipping Container ID: SM452 Chain of Custody # B00-014-03

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 4 °C
5. Vermiculite/packing materials is Wet [ ] Dry [✓]
6. Number of samples in shipping container: 28
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:
   - ✓ tape
   - ✓ custody seals
   - ____ hazard labels
   - ____ appropriate sample labels

9. Samples are:
   - ✓ in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles

10. Where any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: K. DeDenling Date: 01-03-00

Telephoned To: _____ On _____ By _____

Quanterra Environmental Services

020561

Login No.: F0A040172
W02999

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland
Date: 01-04-00 Time: 0900
Project No: 33833
Initiated by: Jason Tiemann
Shipper/No: Airborne / 4019121 593
RFA/COC Numbers: B00-014-03

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: 2°

Temperature Variance Does Not Affect the Following Analyses: _____

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: Jason Tiemann Date: 01-04-00

Project Management Review: MWard Date: 1-4-00

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 12/12/98

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 1/07/00
Time: 15:26:11
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: 105-F/DR PHASE3
REPORT TO: Accounts Payable
P.O. NUMBER:
SITE: B00-014
AMOUNT REC"D: 500MLP
STORAGE LOC: T7F
LOT COMMENTS: Sample has limited volume.
MATRIX: WATER
SAMPLE ID: B0XBJ2
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33833
LAB ID: F-0A070142-001
WORK ORDER: D76HV
RECEIVING DATE: 1/06/00
SAMPLING DATE: 1/06/00
ANALYTICAL DUE DATE: 1/21/00N
REPORT DUE DATE: 1/27/00
PRIORITY: 15
SAMPLING TIME: 11:05
RECEIVING TIME: 12:00
SDG# : W02999

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace) METALS, TOTAL - Waters MT6010_L PB (I-05-QM-01) D76HV Protocol: A QC Program: STANDARD TEST SET	06	1/07/00	0/00/00	7/04/00
Mercury (7470A, Cold Vapor) - Liquid METALS, TOTAL (Method exclusive) - Waters M7470_L HG (I-19-08-01) D76HV Protocol: A QC Program: STANDARD TEST SET	06	1/07/00	0/00/00	2/03/00

Q-27023 CUL020586 Temp 2°

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-014-04	Page 1 of 1

Collector: Fahlberg W02999	Company Contact: J Adler	Telephone No.: 373-4316	Project Coordinator: TRENT, SJ
Price Code: 7L	Data Turnaround: 21 Days	Air Quality ☐	
Project Designation: 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location: 105F		SAF No.: B00-014
Ice Chest No.: ERC-960065	Field Logbook No.: EL 1424	COA: R105F2280C	Method of Shipment: Hand Delivered
Shipped To: Quanterra Incorporated	Offsite Property No.		Bill of Lading/Air Bill No.

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SDG W02999

Due 1-27

SAMPLE ANALYSIS JOA060214

Preservation	None	Cool 4C	HNO3 to pH <2	HCl to pH <2	HNO3 to pH <2					
Type of Container	P	P	P	P	P					
No. of Container(s)	1	1	1	1	1					
Volume	20mL	500mL	500mL	1000mL	1000mL					
	Activity Scan	7196_CR6: Hexavalent Chromium (1)	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7470 - (CV)	Technetium-99	See item (1) in Special Instructions.					

Sample No.	Matrix *	Sample Date	Sample Time										
B0XBJ2 D75KG	Water	1-6-00	11:05	X	X	X	X	X					

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
R Fahlberg / R Fahlberg	1200 1-6-00	K. Schlottenberg	1200 1-6-00
K. Schlottenberg	1-6-00 1600	K. Schlottenberg	1-7-00 1000

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy(Water) {Cobalt-60}; Gamma Spec - Add-on {Barium-133}; Isotopic Plutonium; Strontium-89,90 – Total Sr; Americium-241; Carbon-14; Nickel-63

SAMPLE ORIGINATED FROM NON RAD AREA. NO ACTIVITY REPORT REQ.

Matrix *
S=Soil
SE=Sediment
SO=Solid
S=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

BHI-EE-011 (10/99)

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 46-00 1200 SG#: W02999

Work Order Number: JOA060214 SAF #: B00014 / B00043

Shipping Container ID: ERC96-005 Chain of Custody # B00-014-04

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 4°C
5. Vermiculite/packing materials is Wet [ ] Dry [✓]
6. Number of samples in shipping container: 26
7. Sample holding times exceeded? Yes [ ] No [ ]

8. Samples have:
   - ✓ tape
   - ✓ custody seals
   - ____ hazard labels
   - ____ appropriate sample labels

9. Samples are:
   - ✓ in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles

10. Where any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: K. Dettinley Date: 01-06-00

Telephoned To: _____ On _____ By _____

Quanterra Environmental Services

020586

Login No.: FOA070142
W02999

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Bechtel Harbert

Date: 1-7-00 Time: 1000

Project No:

Initiated by: [illegible]

Shipper/No: Airborne

RFA/COC Numbers: B00-014-04

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:** 2°

Temperature Variance Does Not Affect the Following Analyses: _____

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: [illegible] Date: 1-7-00

Project Management Review: Jennifer Smith Date: 1-7-00

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 12/12/98

000018

BECHTEL HANFORD, INC.

Client Sample ID: B0XBJ1

GC ~~Semivolatiles~~ PCB
Sal 02/11/00

Lot-Sample #...:	F0A040172-001	**Work Order #...:**	D730C104	**Matrix.....:**	WATER
Date Sampled...:	01/03/00	**Date Received..:**	01/03/00		
Prep Date.....:	01/10/00	**Analysis Date..:**	01/11/00		
Prep Batch #...:	0010224				
Dilution Factor:	1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(26 - 157)
Decachlorobiphenyl	33	(13 - 147)

BECHTEL HANFORD, INC.

Client Sample ID: B0XBJ1

GC ~~Semivolatiles~~ PCB
Sal 02/11/00

Lot-Sample #...: F0A040172-001 Work Order #...: D730C104 Matrix.....: WATER
Date Sampled...: 01/03/00 Date Received..: 01/03/00
Prep Date.....: 01/10/00 Analysis Date..: 01/11/00
Prep Batch #...: 0010224
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(26 - 157)
Decachlorobiphenyl	33	(13 - 147)

BECHTEL HANFORD, INC.

Client Sample ID: B0XBJ1

GC ~~Semivolatiles~~ PCB

Sal 02/11/00

Lot-Sample #...: F0A040172-001 Work Order #...: D730C104 Matrix.....: WATER
Date Sampled...: 01/03/00 Date Received..: 01/03/00
Prep Date.....: 01/10/00 Analysis Date..: 01/11/00
Prep Batch #...: 0010224
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(26 - 157)
Decachlorobiphenyl	33	(13 - 147)

BECHTEL HANFORD, INC.

Client Sample ID: B0XBJ1

TOTAL Metals

Lot-Sample #...: F0A040172-001 **Matrix.....:** WATER
Date Sampled...: 01/03/00 **Date Received..:** 01/03/00

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0018414						
Mercury	ND	0.20	ug/L	SW846 7470A	01/18-01/20/00	D730C107
		Dilution Factor: 1				
Prep Batch #...: 0024337						
Lead	ND	3.0	ug/L	SW846 6010B	01/24/00	D730C101
		Dilution Factor: 1				

BECHTEL HANFORD, INC.

Client Sample ID: B0XBJ2

TOTAL Metals

Lot-Sample #...: F0A070142-001 **Matrix.....:** WATER
Date Sampled...: 01/06/00 **Date Received..:** 01/06/00

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0018414						
Mercury	ND	0.20	ug/L	SW846 7470A	01/18-01/20/00	D76HV102
		Dilution Factor: 1				
Prep Batch #...: 0024337						
Lead	ND	3.0	ug/L	SW846 6010B	01/24/00	D76HV101
		Dilution Factor: 1				