H1088

0054366

DEC 2000 RECEIVED

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-046 H1088

DATE RECEIVED: 10/13/00 RFW LOT # :0010L947

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10F65						
SILVER, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
SILVER, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
SILVER, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
ALUMINUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
ALUMINUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
ALUMINUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
ARSENIC, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
ARSENIC, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
ARSENIC, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
BARIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
BARIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
BARIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
CALCIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
CALCIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
CALCIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
CADMIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
CADMIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
CADMIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
CHROMIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
CHROMIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
CHROMIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
COPPER, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
COPPER, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
COPPER, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
IRON, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
IRON, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
IRON, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
POTASSIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/06/00
POTASSIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/06/00
POTASSIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/06/00
MAGNESIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
MAGNESIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
MAGNESIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
MANGANESE, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
MANGANESE, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00

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Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-046 H1088

DATE RECEIVED: 10/13/00 RFW LOT # :0010L947

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MANGANESE, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
MOLYBDENUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
MOLYBDENUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
MOLYBDENUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
SODIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/06/00
SODIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/06/00
SODIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/06/00
LEAD, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
LEAD, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
LEAD, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
SILICA, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
SILICA, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
SILICA, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
SELENIUM, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
SELENIUM, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
SELENIUM, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00
ZINC, TOTAL	001	W	99L1673	10/09/00	11/03/00	11/03/00
ZINC, TOTAL	001 REP	W	99L1673	10/09/00	11/03/00	11/03/00
ZINC, TOTAL	001 MS	W	99L1673	10/09/00	11/03/00	11/03/00

LAB QC:

SILVER LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
SILVER, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
ALUMINUM LABORTORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
ALUMINUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
ARSENIC LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
ARSENIC, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
BARIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
BARIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
CALCIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
CALCIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
CADMIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
CADMIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
CHROMIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
CHROMIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
COPPER LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
COPPER, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-046 H1088

DATE RECEIVED: 10/13/00 RFW LOT # :0010L947

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
IRON LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
IRON, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
POTASSIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
POTASSIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
MAGNESIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
MAGNESIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
MANGANESE LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
MANGANESE, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
MOLYBDENUM LABORATOR	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
MOLYBDENUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
SODIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
SODIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
LEAD LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
LEAD, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
SILICA LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
SILICA, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
SELENIUM LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
SELENIUM, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00
ZINC LABORATORY	LC1 BS	W	99L1673	N/A	11/03/00	11/03/00
ZINC, TOTAL	MB1	W	99L1673	N/A	11/03/00	11/03/00

Recra LabNet Philadelphia
Analytical Report

Client: TNU-HANFORD B00-046
RFW#: 0010L947
SDG/SAF#: H1088/B00-046

W.O.#: 10985-001-001-9999-00
Date Received: 10-13-00

METALS CASE NARRATIVE

1. This narrative covers the analyses of 1 water sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary. The sample was reported with a twenty fold dilution for Potassium and Sodium due to the high concentration of these analytes. The sample was received with a pH of @5-6. An aliquot was preserved and digested.

3. All analyses were performed within the required holding times.

4. The cooler temperature has been recorded on the Chain of Custody.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury).

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).

7. The preparation/method blanks for 2 analytes were outside method criteria. {less than the Practical Quantitation Limit (3X the IDL), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

   a.) The MB results for Aluminum and Zinc were greater than the Practical Quantitation Limit (PQL) {3 x the (IDL) Instrument Detection Level} and the sample read less than 20 times the MB concentration. However, no corrective action criteria for MBs were provided in SW846 method 6010B. The sample results were reported herein "uncorrected" for the levels found in the MB.

8. All ICP Interference Check Standards were within control limits.

9. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to form 7.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 15 pages.

10. The matrix spike (MS) recovery for 1 analyte was outside the 75-125% control limits. Refer to the Inorganics Accuracy Report.

11. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial dilution are performed. A serial dilution is performed for Mercury. A PDS was prepared at meaningful concentration levels, due to high concentrations of the following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
B10F65	Potassium	10,000	108.4

12. The duplicate analysis for 1 analyte was outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

13. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

14. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, 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.

for Pat EC

J. Michael Taylor
VP, Laboratory General Manager
Lionville Laboratory

Date 12-6-00

gmb/m10-947

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Recra Lot#: 0010L947

Leaching Procedure: __1310 __1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A __3010A __3015 __3020A __3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	✓6010B		__200.7				__99
Antimony	__6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	✓6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	✓6010B		__200.7				__99
Beryllium	__6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	✓6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	✓6010B		__200.7				__99
Chromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	✓6010B	__7211 [5]	__200.7	__220.2			__99
Iron	✓6010B		__200.7				__99
Lead	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	✓6010B		__200.7				__99
Manganese	✓6010B		__200.7				__99
Mercury	__7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	✓6010B		__200.7				__99
Nickel	__6010B		__200.7				__99
Potassium	✓6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	✓6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	✓6010B		__200.7			__1620	__99
Silver	✓6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	✓6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	__6010B		__200.7				__99
Zinc	✓6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-11/99

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

RFW 21-21L-033/N-10/96

Recra LabNet Philadelphia **Sample Discrepancy Report (SDR)** SDR #: 00MR059

Initiator: Dan Nogent Batch: 00102947 Parameter: _____
Date: 11/6/00 Samples: 007 Matrix: H2O
Client: TNJ Method: SW846/MCAWW/CLP/ 3005A Prep Batch: 99L1673
H1088

1. Reason for SDR

a. COC Discrepancy __ Tech Profile Error __ Client Request __ Sampler Error on C-O-C
__ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy

__ Missing Sample/Extract __ Container Broken __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample ✓ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

c. Problem (Include all relevant specific results; attach data if necessary)

2. Known or Probable Causes(s)

PH 5-6; Not less than 2

3. Discussion and Proposed Action

Other Description: aliquot Samples were preserved and digested

__ Re-log
__ Entire Batch
__ Following Samples: _____
__ Re-leach
__ Re-extract
__ Re-digest
__ Revise EDD
__ Change Test Code to _____
__ Place On/Take Off Hold (circle)

4. Project Manager Instructions...signature/date: [signature] 11/10/00

✓ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
✓ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: [signature] 12/6/00

Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
__	X Initiator	X	__ Metals: ~~Doughty~~ Bagle
__	X Lab General Manager: M. Taylor	__	__ Inorganic: Perrone
X	X Project Mgr: Stone/Johnson	__	__ GC/LC: Pastor
__	X Technical Mgr: Wesson/Daniels	__	__ MS: Rycklak/Layman
__	X QA (file): Popp	__	__ Log-in: Keppel
__	__ Data Management: Feldman	__	__ Admin: Soos
__	__ Sample Prep: Doughty/Kiger	__	__ Other: _____

L-WI-006/E-11/00

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 11/08/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B10F65	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	119		UG/L	10.6	1.0
		Arsenic, Total	12.9		UG/L	3.4	1.0
		Barium, Total	87.0		UG/L	0.20	1.0
		Calcium, Total	13000		UG/L	11.0	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Chromium, Total	0.90	u	UG/L	0.90	1.0
		Copper, Total	0.80	u	UG/L	0.80	1.0
		Iron, Total	234		UG/L	16.4	1.0
		Potassium, Total	574000		UG/L	598	20.0
		Magnesium, Total	10500		UG/L	7.8	1.0
		Manganese, Total	47.9		UG/L	0.20	1.0
		Molybdenum, Total	11.7		UG/L	0.90	1.0
		Sodium, Total	126000		UG/L	76.0	20.0
		Lead, Total	2.1	u	UG/L	2.1	1.0
		SILICA , Total	8310		UG/L	13.0	2.1
		Selenium, Total	4.3	u	UG/L	4.3	1.0
		Zinc, Total	3.6		UG/L	0.40	1.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/08/00

CLIENT: TNUHANFORD B00-046 H1088

RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	99L1673-MB1	Silver, Total	1.1	u	UG/L	1.1	1.0
		Aluminum, Total	64.4		UG/L	10.6	1.0
		Arsenic, Total	3.4	u	UG/L	3.4	1.0
		Barium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	11.0	u	UG/L	11.0	1.0
		Cadmium, Total	0.30	u	UG/L	0.30	1.0
		Chromium, Total	0.90	u	UG/L	0.90	1.0
		Copper, Total	0.80	u	UG/L	0.80	1.0
		Iron, Total	35.4		UG/L	16.4	1.0
		Potassium, Total	29.9	u	UG/L	29.9	1.0
		Magnesium, Total	7.8	u	UG/L	7.8	1.0
		Manganese, Total	0.28		UG/L	0.20	1.0
		Molybdenum, Total	0.90	u	UG/L	0.90	1.0
		Sodium, Total	5.4		UG/L	3.8	1.0
		Lead, Total	2.1	u	UG/L	2.1	1.0
		SILICA , Total	13.0	u	UG/L	13.0	2.1
		Selenium, Total	4.3	u	UG/L	4.3	1.0
		Zinc, Total	3.9		UG/L	0.40	1.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 11/08/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B10F65	Silver, Total	50.7	1.1 u	50.0	101.4	1.0
		Aluminum, Total	2240	119	2000	106.0	1.0
		Arsenic, Total	2130	12.9	2000	106.0	1.0
		Barium, Total	2090	87.0	2000	100.4	1.0
		Galcium, Total	39000	13000	25000	103.8	1.0
		Cadmium, Total	51.7	0.30u	50.0	103.4	1.0
		Chromium, Total	204	0.90u	200	101.8	1.0
		Copper, Total	249	0.80u	250	99.6	1.0
		Iron, Total	1200	234	1000	96.8	1.0
		Potassium, Total	620000	574000	25000	186.6*	20.0
		Magnesium, Total	34900	10500	25000	97.5	1.0
		Manganese, Total	574	47.9	500	105.3	1.0
		Molybdenum, Total	1010	11.7	1000	100	1.0
		Sodium, Total	156000	126000	25000	119.5*	20.0
		Lead, Total	505	2.1 u	500	101.1	1.0
		SILICA , Total	10600	8310	2140	104.9	2.1
		Selenium, Total	2110	4.3 u	2000	105.4	1.0
		Zinc, Total	539	3.6	500	107.1	1.0

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 11/08/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B10F65	Silver, Total	1.1 u	1.1 u	NC	1.0
		Aluminum, Total	119	118	0.76	1.0
		Arsenic, Total	12.9	14.4	11.0	1.0
		Barium, Total	87.0	86.9	0.12	1.0
		Calcium, Total	13000	13100	0.66	1.0
		Cadmium, Total	0.30u	0.30u	NC	1.0
		Chromium, Total	0.90u	0.90u	NC	1.0
		Copper, Total	0.80u	0.80u	NC	1.0
		Iron, Total	234	232	1.1	1.0
		Potassium, Total	574000	583000	1.7	20.0
		Magnesium, Total	10500	10500	0.036	1.0
		Manganese, Total	47.9	48.1	0.42	1.0
		Molybdenum, Total	11.7	11.8	0.85	1.0
		Sodium, Total	126000	128000	1.6	20.0
		Lead, Total	2.1 u	2.1 u	NC	1.0
		SILICA , Total	8310	8330	0.28	2.1
		Selenium, Total	4.3 u	4.3 u	NC	1.0
		Zinc, Total	3.6	2.4	40.0	1.0

Recra LabNet - Lionville

INORGANICS LABORATORY CONTROL STANDARDS REPORT 11/08/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	99L1673-LC1	Silver, LCS	492	500	UG/L	98.3
		Aluminum, LCS	5100	5000	UG/L	102.0
		Arsenic, LCS	9860	10000	UG/L	98.6
		Barium, LCS	4920	5000	UG/L	98.4
		Calcium, LCS	24500	25000	UG/L	98.1
		Cadmium, LCS	249	250	UG/L	99.8
		Chromium, LCS	491	500	UG/L	98.1
		Copper, LCS	1220	1250	UG/L	97.2
		Iron, LCS	4820	5000	UG/L	96.4
		Potassium, LCS	26400	25000	UG/L	105.5
		Magnesium, LCS	25400	25000	UG/L	101.6
		Manganese, LCS	766	750	UG/L	102.1
		Molybdenum, LCS	4940	5000	UG/L	98.8
		Sodium, LCS	24700	25000	UG/L	98.7
		Lead, LCS	2480	2500	UG/L	99.3
		SILICA , LCS	11100	10700	UG/L	104.1
		Selenium, LCS	10100	10000	UG/L	100.6
		Zinc, LCS	999	1000	UG/L	99.9

RECRA LabNet Use Only

00102947

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client DOE-HANFORD SAF# B00-046

Est. Final Proj. Sampling Date

Project # 10985-001-001-9999-00

Project Contact/Phone #

RECRA Project Manager

QC Spec Del Std TAT 21 day

Date Rec'd 10-13-00 Date Due 11-3-00

Account #

Refrigerator #								A	B		C					
#/Type Container	Liquid							4	4		4					
	Solid						(2)	1PL	1PL		1PL					
Volume	Liquid							125	500		500					
	Solid															
Preservatives								—	HNO3		—					
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb			Sulfide	Metal	CN	TC					
								RECRA LabNet Use Only								
							ICSOH	IBomb	Met (1)		IC (1)					

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	MS	MSD	Matrix	Date Collected	Time Collected	ICSOH	IBomb	Met (1)		IC (1)
001	B10F65	✓	✓	W	10/9/00	1245		1	1		1
002	B10F65 Bomb of 001			W	*	-	✓				

Special Instructions: SAF B00-046

DATE/REVISIONS:

Met (1) 1. As, Ba, Cd, Cr, Pb, Se, Ag, Al, Ca, Cu, Fe,
1 2. Mg, Mn, Mo, K, Sr, Na, Zn, SA TE 10-30-00
IC (1) 3. Cl, F, NO3, NO2, SO4
* 4. See lab chron
10:30:00 5. Sr concentrated, SA added
6.

Relinquished by	Received by	Date	Time
FedEx	K Henry	10/13/00	0915

Relinquished by	Received by	Date	Time
COMPOSITE WASTE		ORIGINAL REWRITTEN	

Discrepancies Between Samples Labels and COC Record? Y. or (N)
NOTES:

4235 7953 9735

RECRA LabNet Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # See Below
2) Ambient or Chilled
3) Received in Good Condition (Y) or N
4) Labels Indicate Properly Preserved (Y) or N
5) Received Within Holding Times (Y) or (N) NO3 NO2 TE 10 13 00

COC Tape was:
1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample (Y) or N
4) Unbroken on Sample (Y) or N

COC Record Present Upon Sample Rec't (Y) or N

Cooler Temp. 2.4 °C

14

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-046-041	Page 1 of 1

Collector: Greg Dcroos / Keith MAKI	Company Contact: Julian Laurenz	Telephone No.: 372-9351	Project Coordinator: TRENT, SJ
Price Code: 7L	Data Turnaround: 21 Days	Air Quality	
Project Designation: 100-HR-3 ISRM Sampling and Analysis	Sampling Location: 100 Area	SAF No.: B00-046	
Ice Chest No.: SM1-188 (1 of 1)	Field Logbook No.: N/A	COA: T10HR3C140	Method of Shipment: FED EX / Gov vehicle
Shipped To: TMA/RECRA	Offsite Property No.: A0003459		Bill of Lading/Air Bill No.: 4235 7953 -9735

POSSIBLE SAMPLE HAZARDS/REMARKS
Samples originated from NON-RAD Controlled area. <2000 pCi/g
NO TA Required
Special Handling and/or Storage

Preservation	HNO3 to pH <2	Cool 4C	HNO3 to pH <2	Cool 4C						
Type of Container	G/P	G/P	G/P	P						
No. of Container(s)		1	1	1						
Volume	100mL	125mL	500mL	500mL						
SAMPLE ANALYSIS	Total Uranium (Uranium)	Sulfate by Bomb Combustion	See item (1) in Special Instructions.	IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrite, Sulfate)						

Sample No.	Matrix *	Sample Date	Sample Time										
B10F65	WATER	10/9/00	1245	✓	✓	✓	✓						

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Keith Maki	10/11/00-1315	J A Laurenz	10-11-00/1315
J A Laurenz	10-11-00/1405	Stored in Fridge 2B	10-11-00/1405
Removed from Ref. 2B 3728	10/12/00 0800	R T Thoren	10/12/00 0800
R T Thoren	10/12/00 0800	FED EX	
FED EX	10/13/00 0915	Field Hernandez	10/13/00 0915

SPECIAL INSTRUCTIONS
** No radiological screening is required prior to shipping samples off-site.

(1) ICP Metals- 6010A (Supertrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals-6010A (Supertrace Add-On) (Aluminum, Calcium, Copper, Iron, Magnesium, Manganese, Molybdenum, Potassium, Silica, Sodium, Zinc)

RT 10/12/00

Samples stored in Ref.# 2B at the 3728 Shipping Facility on 10/11/00.
Collector not available to relinquish samples on 10/12/00 for shipment.
RT 10/12/00

Matrix *
SoSoil
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)

15

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H1088 was composed of one water sample designated under SAF No. B00-046 with a Project Designation of: 100-HR-3 ISRM Sampling and Analysis.

The sample was received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Thermo Retec Sample Receipt Checklist. The results were transmitted to BHI via e-Fax on November 2, 2000.

2.0 ANALYSIS NOTES

2.1 Total Uranium Analyses

No problems were encountered during the course of the analyses.

Case Narrative Certification Statement

"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 obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."

Melissa Mannion
Melissa C. Mannion
Program Manager

11/6/00
Date

NOV 2000
RECEIVED

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H1088 was composed of one water sample designated under SAF No. B00-046 with a Project Designation of: 100-HR-3 ISRM Sampling and Analysis.

The sample was received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Thermo Retec Sample Receipt Checklist. The results were transmitted to BHI via e-Fax on November 2, 2000.

2.0 ANALYSIS NOTES

2.1 Total Uranium Analyses

No problems were encountered during the course of the analyses.

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"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 obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."

Melissa Mannion
Melissa C. Mannion
Program Manager

11/6/00
Date

NOV 2000
RECEIVED

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

SAMPLE SUMMARY

SDG 7526
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1088

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
B10F65	100 Area	WATER		R010091-01	B00-046	B00-046-41	10/09/00 12:45
Method Blank		WATER		R010091-03	B00-046		
Lab Control Sample		WATER		R010091-02	B00-046		
Duplicate (R010091-01)	100 Area	WATER		R010091-04	B00-046		10/09/00 12:45

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CS
Version 3.06
Report date 11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

QC SUMMARY

SDG 7526
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1088

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	DAYS SINCE COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7526	B00-046-41	B10F65	WATER				10/13/00	4	R010091-01	7526-001
		Method Blank	WATER						R010091-03	7526-003
		Lab Control Sample	WATER						R010091-02	7526-002
		Duplicate (R010091-01)	WATER				10/13/00	4	R010091-04	7526-004

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

PREP BATCH SUMMARY

SDG 7526
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1088

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Kinetic Phosphorimetry												
U_T	WATER	Uranium, Total in Water	6955-188	9.0	1			1	1	1/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.
Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

WORK SUMMARY

SDG 7526
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1088

CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	LAB SAMPLE ID / COLLECTED / RECEIVED	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
B10F65 100 Area B00-046-41	B00-046	WATER	R010091-01 10/09/00 10/13/00	7526-001	U_T		10/26/00	11/01/00	MCM	Uranium, Total in Water
Method Blank	B00-046	WATER	R010091-03	7526-003	U_T		10/26/00	11/01/00	MCM	Uranium, Total in Water
Lab Control Sample	B00-046	WATER	R010091-02	7526-002	U_T		10/26/00	11/01/00	MCM	Uranium, Total in Water
Duplicate (R010091-01) 100 Area	B00-046	WATER	R010091-04 10/09/00 10/13/00	7526-004	U_T		10/26/00	11/01/00	MCM	Uranium, Total in Water

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
U_T	B00-046	Uranium, Total in Water	UTOT_KPA	1			1	1	1	4
TOTALS				1			1	1	1	4

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CWS
Version 3.06
Report date 11/02/00

TMA / RICHMOND
SAMPLE DELIVERY GROUP H1088

R010091-03 Method Blank

METHOD BLANK

SDG	7526	Client/Case no	Hanford	SDG H1088	
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925		
Lab sample id	R010091-03	Client sample id	Method Blank		
Dept sample id	7526-003	Material/Matrix		WATER	
		SAF No	B00-046		

ANALYTE	CAS NO	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST
Total Uranium	7440-61-1	0	0.011	0.026	0.10	U	U_T

100-HR-3 ISRM Sampling & Analysis

QC-BLANK 36214

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

R010091-02

Lab Control Sample

LAB CONTROL SAMPLE

SDG	7526	Client/Case no	Hanford SDG H1088
Contact	Melissa C. Mannion	Case no	TRC-SBB-207925
Lab sample id	R010091-02	Client sample id	Lab Control Sample
Dept sample id	7526-002	Material/Matrix	WATER
		SAF No	B00-046

ANALYTE	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST	ADDED ug/L	2σ ERR ug/L	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Total Uranium	73.5	11	0.26	0.10		U_T	72.0	2.9	102	73-127	80-120

100-HR-3 ISRM Sampling & Analysis

QC-LCS 36213

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

R010091-04 B10F65

DUPLICATE

SDG	7526			Client/Case no	Hanford SDG H1088
Contact	Melissa C. Mannion			Case no	TRC-SBB-207925
	DUPLICATE		ORIGINAL		
Lab sample id	R010091-04	Lab sample id	R010091-01	Client sample id	B10F65
Dept sample id	7526-004	Dept sample id	7526-001	Location/Matrix	100 Area WATER
		Received	10/13/00	Collected	10/09/00 12:45
				Custody/SAF No	B00-046-41 B00-046

ANALYTE	DUPLICATE ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST	ORIGINAL ug/L	2σ ERR (COUNT)	MDA ug/L	QUALI-FIERS	RPD %	3σ TOT	PROT LIMIT
Total Uranium	0.183	0.030	0.026	0.10		U_T	0.169	0.028	0.026		8	40	

100-HR-3 ISRM Sampling & Analysis

QC-DUP#1 36215

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

R010091-01 B10F65

DATA SHEET

SDG	7526	Client/Case no	Hanford SDG_H1088
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010091-01	Client sample id	B10F65
Dept sample id	7526-001	Location/Matrix	100 Area WATER
Received	10/13/00	Collected	10/09/00 12:45
		Custody/SAF No	B00-046-41 B00-046

ANALYTE	CAS NO	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST
Total Uranium	7440-61-1	0.169	0.028	0.026	0.10		U_T

100-HR-3 ISRM Sampling & Analysis

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

Test	U T
Matrix	WATER
SDG	7526
Contact	Melissa C. Mannion

METHOD SUMMARY

URANIUM, TOTAL IN WATER

KINETIC PHOSPHORIMETRY

Client	Hanford
Contract	TRC-SBB-207925
Contract	SDG H1088

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Total Uranium
Preparation batch 6955-188					
B10F65	R010091-01			7526-001	0.169
BLK (QC ID=36214)	R010091-03			7526-003	U
LCS (QC ID=36213)	R010091-02			7526-002	ok
Duplicate (R010091-01)	R010091-04			7526-004	ok
Nominal values and limits from method				RDLs (ug/L)	0.10
100-HR-3 ISRM Sampling & Analysis					

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA ug/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-188	2σ prep error 9.0 %			Reference Lab Notebook 6955 pg. 188												
B10F65	R010091-01			0.026	0.0200								17	10/26/00	10/26	KPA-001
BLK (QC ID=36214)	R010091-03			0.026	0.0200									10/26/00	10/26	KPA-001
LCS (QC ID=36213)	R010091-02			0.26	0.0200									10/26/00	10/26	KPA-001
Duplicate (R010091-01) (QC ID=36215)	R010091-04			0.026	0.0200								17	10/26/00	10/26	KPA-001
Nominal values and limits from method				0.10	0.0200								180			

PROCEDURES	REFERENCE	UTOT_KPA
	CP-040	Environmental Water Dissolution, rev 3
	CP-044	Sample Preparation for Total Uranium by Kinetic Phosphorimetry, rev 2
	CP-928	Total Uranium by Kinetic Phosphorimetry, rev 2

AVERAGES ± 2 SD FOR 4 SAMPLES				
MDA	0.084	±	0.23	
YIELD		±		

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

R010091-01 B10F65

DATA SHEET

SDG	7526	Client/Case no	Hanford	SDG H1088	
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925		
Lab sample id	R010091-01	Client sample id	B10F65		
Dept sample id	7526-001	Location/Matrix	100 Area	WATER	
Received	10/13/00	Collected	10/09/00 12:45		
		Custody/SAF No	B00-046-41	B00-046	

ANALYTE	CAS NO	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST
Total Uranium	7440-61-1	0.169	0.028	0.026	0.10		U_T

100-HR-3 ISRM Sampling & Analysis

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	11/02/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1088

Test U T	Matrix WATER
SDG 7526	
Contact Melissa C. Mannion	

METHOD SUMMARY

URANIUM, TOTAL IN WATER

KINETIC PHOSPHORIMETRY

Client Hanford	
Contract TRC-SBB-207925	
Contract SDG H1088	

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Total Uranium
Preparation batch 6955-188					
B10F65	R010091-01			7526-001	0.169
BLK (QC ID=36214)	R010091-03			7526-003	U
LCS (QC ID=36213)	R010091-02			7526-002	ok
Duplicate (R010091-01)	R010091-04			7526-004	ok
Nominal values and limits from method 100-HR-3 ISRM Sampling & Analysis				RDLs (ug/L)	0.10

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA ug/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-188	2σ prep error 9.0 %													Reference Lab Notebook 6955 pg. 188		
B10F65	R010091-01			0.026	0.0200								17	10/26/00	10/26	KPA-001
BLK (QC ID=36214)	R010091-03			0.026	0.0200									10/26/00	10/26	KPA-001
LCS (QC ID=36213)	R010091-02			0.26	0.0200									10/26/00	10/26	KPA-001
Duplicate (R010091-01) (QC ID=36215)	R010091-04			0.026	0.0200								17	10/26/00	10/26	KPA-001
Nominal values and limits from method				0.10	0.0200								180			

PROCEDURES	REFERENCE	UTOT_KPA
	CP-040	Environmental Water Dissolution, rev 3
	CP-044	Sample Preparation for Total Uranium by Kinetic Phosphorimetry, rev 2
	CP-928	Total Uranium by Kinetic Phosphorimetry, rev 2

AVERAGES ± 2 SD FOR 4 SAMPLES	MDA	0.084	± 0.23
	YIELD		±

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	11/02/00

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-046-041	Page 1 of 1

Collector: Greg Dcroos/Keith MAKI	Company Contact: Julian Laurenz	Telephone No.: 372-9351	Project Coordinator: TRENT, SJ
Price Code: 7L	Data Turnaround: 21 Days	Air Quality: ☐	
Project Designation: 100-HR-3 ISRM Sampling and Analysis	Sampling Location: 100 Area H1088 (7526)	SAF No.: B00-046	
Ice Chest No.: SM1-601 (1 OF 1)	Field Logbook No.: NA	COA: T10HR3C140	Method of Shipment: Gov Vehicle/FED EXP
Shipped To: TMA/RECRA	Offsite Property No.: A000333		Bill of Lading/Air Bill No.: 42357953 9746

POSSIBLE SAMPLE HAZARDS/REMARKS
Samples originated in Non-RAD Controlled area <2000pCi/g NO TA Required

Special Handling and/or Storage

Preservation	HNO3 to pH <2	~~Cool 4C~~ RT 10/12/00	~~HNO3 to pH<2~~ RT 10/12/00	~~Cool 4C~~ RT 10/12/00						
Type of Container	G/P	G/P	G/P	P						
No. of Container(s)	1	1		1						
Volume	100mL	125mL	500mL	500mL						
SAMPLE ANALYSIS	Total Uranium (Uranium)	Sulfate by Bomb Combustion	See item (1) in Special Instructions.	IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrite, Sulfate)						

Sample No.	Matrix *	Sample Date	Sample Time											
B10F65	WATER	10/9/00	1245	✓	✓	✓	✓							

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Keith Maki / K Maki	10/11/00-1315	JA Laurenz / [illegible]	10-11-00/1315
JA Laurenz / [illegible]	10-11-00/1405	Stored in Fridge 2B / JAL 10-11-00	10-11-00/1405
~~Relinquished By~~ Removed from Ref 2B 3728	~~Date/Time~~ 0800 10/12/00	~~Received By~~ R Thorne	~~Date/Time~~ 0800 10/12/00
R Thorne	0800 10/12/00	FED EXP	10/12/00
FED EXPRESS	9:45 10/13/00	E. Segura	9:45 10/13/00
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
** No radiological screening is required prior to shipping samples off-site.

~~(1) ICP Metals - 6010A (Superfrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals - 6010A (Superfrace Add-On) (Aluminum, Calcium, Copper, Iron, Magnesium, Manganese, Molybdenum, Potassium, Silica, Sodium, Zinc)~~ RT 10/12/00

Samples stored in Ref.# 2B at the 3728 Shipping Facility on 10/11/00
Collector not available to relinquish samples on 10/12/00 for shipment.
RT 10/12/00

Matrix *
S=Soil
SD=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)

ThermoRetec
Richmond Laboratory

Analytical Services

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: BECHTEL HANFORD INC Date/Time received 10-13-00 9:45 AM

CoC No. B00-046-041

Container I.D. No. SML-601 Requested TAT (Days) 21 P.O. Received Yes [ ] No [✓]

INSPECTION

1. Custody seals on shipping container intact? Yes [✓] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [✓] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [✓] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [✓] No [ ] N/A [ ]
5. Cooler Temperature: _____ Packing material is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 1
7. Number of containers per sample: 1 (Or see CoC _____)
8. Paperwork agrees with samples? Yes [✓] No [ ]
9. Samples have: Tape [ ] Hazard labels [ ] Rad labels [ ] Appropriate sample labels [✓]
10. Samples are: In good condition [✓] Leaking [ ] Broken Container [ ] Missing [ ]
11. Describe any anomalies: _____
13. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
14. Received by E. Aguirre Date: 10/13/00 Time: 9:45 AM

Customer Sample No.	cpm	mr/hr	Customer Sample No.	Cpm	mr/hr

Ion Chamber Ser. No. _____ Calibration date _____

Survey Meter Ser No. _____ Calibration date _____

DEC 2000
RECEIVED

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-046 H1088

DATE RECEIVED: 10/13/00 RFW LOT # :0010L947

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10F65						
CALORIMETER BOMB PRE	001	W	00BOMB11	10/09/00	10/24/00	10/24/00
CHLORIDE BY IC	001	W	00LAC063	10/09/00	10/19/00	10/19/00
CHLORIDE BY IC	001 REP	W	00LAC063	10/09/00	10/19/00	10/19/00
CHLORIDE BY IC	001 MS	W	00LAC063	10/09/00	10/19/00	10/19/00
FLUORIDE BY IC	001	W	00LBC063	10/09/00	10/19/00	10/19/00
FLUORIDE BY IC	001 REP	W	00LBC063	10/09/00	10/19/00	10/19/00
FLUORIDE BY IC	001 MS	W	00LBC063	10/09/00	10/19/00	10/19/00
NITRITE BY IC	001	W	00LBC063	10/09/00	10/19/00	10/19/00
NITRITE BY IC	001 REP	W	00LBC063	10/09/00	10/19/00	10/19/00
NITRITE BY IC	001 MS	W	00LBC063	10/09/00	10/19/00	10/19/00
NITRATE BY IC	001	W	00LBC063	10/09/00	10/19/00	10/19/00
NITRATE BY IC	001 REP	W	00LBC063	10/09/00	10/19/00	10/19/00
NITRATE BY IC	001 MS	W	00LBC063	10/09/00	10/19/00	10/19/00
SULFATE BY IC	001	W	00LIC063	10/09/00	10/19/00	10/19/00
SULFATE BY IC	001 REP	W	00LIC063	10/09/00	10/19/00	10/19/00
SULFATE BY IC	001 MS	W	00LIC063	10/09/00	10/19/00	10/19/00
SULFATE BY IC	002	W	00LDC065	10/09/00	10/25/00	10/25/00
SULFATE BY IC	002 REP	W	00LDC065	10/09/00	10/25/00	10/25/00
SULFATE BY IC	002 MS	W	00LDC065	10/09/00	10/25/00	10/25/00

LAB QC:

CHLORIDE BY IC	MB1	W	00LAC063	N/A	10/19/00	10/19/00
CHLORIDE BY IC	MB1 BS	W	00LAC063	N/A	10/19/00	10/19/00
FLUORIDE BY IC	MB1	W	00LBC063	N/A	10/19/00	10/19/00
FLUORIDE BY IC	MB1 BS	W	00LBC063	N/A	10/19/00	10/19/00
NITRITE BY IC	MB1	W	00LBC063	N/A	10/19/00	10/19/00
NITRITE BY IC	MB1 BS	W	00LBC063	N/A	10/19/00	10/19/00
NITRATE BY IC	MB1	W	00LBC063	N/A	10/19/00	10/19/00
NITRATE BY IC	MB1 BS	W	00LBC063	N/A	10/19/00	10/19/00
SULFATE BY IC	MB1	W	00LIC063	N/A	10/19/00	10/19/00
SULFATE BY IC	MB1 BS	W	00LIC063	N/A	10/19/00	10/19/00
SULFATE BY IC	MB1	S	00LDC065	N/A	10/25/00	10/25/00
SULFATE BY IC	MB1 BS	S	00LDC065	N/A	10/25/00	10/25/00
SULFATE BY IC	MB2	S	00LDC065	N/A	10/25/00	10/25/00

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-046 H1088

DATE RECEIVED: 10/13/00 RFW LOT # :0010L947

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SULFATE BY IC	MB3	S	00LDC065	N/A	10/25/00	10/25/00

RECRA
ENVIRONMENTAL
INC.

Chemical and Environmental Measurement Information

Recra LabNet Philadelphia
Analytical Report
e 600-046 cej 12/12/00

Client : TNU-HANFORD B99-028 H1088
RFW# : 0010L973

W.O. # : 10985-001-001-9999-00
Date Received: 10-18-00

INORGANIC CASE NARRATIVE

1. This narrative covers the analyses of 2 water samples.

2. The samples were prepared and analyzed in accordance with the methods indicated on the attached glossary.

3. Sample holding times as required by the method and/or contract were met.

4. The cooler temperature was recorded on the chain-of-custody.

5. The method blanks for Nitrate were within method criteria.

6. The Laboratory Control Samples (LCS) for Nitrate were within the laboratory control limits.

7. The matrix spike recovery for Nitrate was within the 75-125% control limits.

8. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit.

9. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, 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.

J. Michael Taylor
VP, Laboratory General Manager
Lionville Laboratory

12-8-00
Date

njp&pef\i10-973

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 10 pages.

Recra LabNet Philadelphia

WET CHEMISTRY

METHODS GLOSSARY FOR WATER SAMPLE ANALYSIS

	EPA /600	SW846	OTHER
Acidity	___ 305.1		
___Alkalinity ___Bicarbonate ___Carbonate	___ 310.1		
BOD	___ 405.1		___ 5210B (b)
Ion Chormatography:			
___Bromide ✓Chloride ✓Fluoride	✓ 300.0	___ 9056	
✓Nitrate ✓Nitrite ___Phosphate	___ 300.0	___ 9056	
✓Sulfate ___Formate ___Acetate ___Oxalate	___ 300.0	___ 9056	
Chloride	___ 325.2	___ 9251	
Chorine, Residual	___ 330.5 (mod)		
Cyanide, Amenable to Chorination	___ 335.2	___ 9010B	
Cyanide, Total	___ 335.2	___ 9010B ___ 9014	___ ILMO4.0 (e)
Cyanide, Weak Acid Dissociable		___	___ 412 (a) ___ 4500CN-I (b
COD	___ 410.4(mod)		___ 5220C (b)
Color	___ 110.2		
Corrosivity by Coupon		___ 1110(mod)	
Chromium VI		___ 7196A	___ 3500Cr-D (b)
Fluoride	___ 340.2		___ 4500-FC
Hardness, Calcium	___ 215.2		
Hardness, Total	___ 130.2		
Iodide			___ ASTM D19P202 (1)
Surfactant	___ 425.1		
___Nitrate-Nitrite ___Nitrate ___Nitrite	___ 353.2		
Ammonia	___ 350.3		
Total___ Kjeldahl ___ Organic Nitrogen	___ 351.4		
Total___ Organic ___ Inorganic Carbon	___ 415.1	___ 9060	
Oil & Grease	___ 413.1	___ 9070	
___ pH ____ pH; paper	___ 150.1	___ 9040B ___ 9041A	
Petroleum Hydrocarbons, Total Recoverable	___ 418.1		
Phenol	___ 420.1 ___ 420.2	___ 9065 ___ 9066	
___Ortho ___Total Phosphate	___ 365.2		___ 4500-P B ___ C
Salinity			___ 210A (a) ___ 2520 (b)
Settleable Solids	___ 160.5		
Sulfide	___ 376.1 ___ 376.2	___ 9030B/9034 (acid soluble)	
Reactive ___Cyanide ___Sulfide		___ Section 7.3 (___9014___9030B)	
Silica	___ 370.1		
Sulfite	___ 377.1		
Sulfate	___ 375.4	___ 9038	
Specific Conductance	___ 120.1	___ 9050A	
Specific Gravity			___ D5057-90 ___ 213E (a)
Synthetic Precipitation Leach	___ 1312		
Total ___Dissolved ___Suspended ___Solids	160 ___.1 ___.2 ___.3		
Total Organic Halides	___ 450.1	___ 9020B	
Turbidity	___ 180.1		
Volatile Solids:			
___Total ___Dissolved ___Suspended	___ 160.4		

Other: Oxygen Bomb Preparation for Anions (Sulfate) **Method:** ASTM-D240-87(mod)

Recra LabNet Philadelphia
METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).

3. Test Methods for Evaluating Solid Waste (USEPA SW-846).

a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).

d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).

e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.

f. Code of Federal Regulations.

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 11/06/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B10F65	Chloride by IC	21.3		MG/L	1.2	5.0
		Fluoride by IC	2.5	u	MG/L	2.5	5.0
		Nitrite by IC	5.6		MG/L	1.2	5.0
		Nitrate by IC	35		MG/L	1.2	5.0
		Sulfate by IC	550		MG/L	125	500
-002	B10F65	Sulfate by IC	769		MG/KG	250	20.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/06/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	00LAC063-MB1	Chloride by IC	0.25	u	MG/L	0.25	1.0
BLANK10	00LBC063-MB1	Fluoride by IC	0.50	u	MG/L	0.50	1.0
		Nitrite by IC	0.25	u	MG/L	0.25	1.0
		Nitrate by IC	0.25	u	MG/L	0.25	1.0
BLANK10	00LIC063-MB1	Sulfate by IC	0.25	u	MG/L	0.25	1.0
BLANK10	00LDC065-MB1	Sulfate by IC	12.5	u	MG/KG	12.5	1.0
BLANK20	00LDC065-MB2	Sulfate by IC	250	u	MG/KG	250	20.0
BLANK30	00LDC065-MB3	Sulfate by IC	268		MG/KG	250	20.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 11/06/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B10F65	Chloride by IC	47.9	21.3	25.0	106.6	5.0
		Fluoride by IC	54.8	0.88	50.0	107.9	5.0
		Nitrite by IC	30	5.6	25	98.7	5.0
		Nitrate by IC	85	35	50	100.4	10
		Sulfate by IC	3070	550	2500	100.9	500
-002	B10F65	Sulfate by IC	13100	769	12500	99.0	50.0
BLANK10	00LAC063-MB1	Chloride by IC	4.9	0.25u	5.0	98.7	1.0
BLANK10	00LBC063-MB1	Fluoride by IC	10.9	0.50u	10.0	109.1	1.0
		Nitrite by IC	5.0	0.25u	5.0	100	1.0
		Nitrate by IC	5.0	0.25u	5.0	99.8	1.0
BLANK10	00LIC063-MB1	Sulfate by IC	4.9	0.25u	5.0	98.5	1.0
BLANK10	00LDC065-MB1	Sulfate by IC	247	12.5 u	250	98.8	1.0

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 11/06/00

CLIENT: TNUHANFORD B00-046 H1088 RECRA LOT #: 0010L947

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B10F65	Chloride by IC	21.3	21.4	0.52	5.0
		Fluoride by IC	2.5 u	2.5 u	NC	5.0
		Nitrite by IC	5.6	5.7	0.39	5.0
		Nitrate by IC	35	35	0.62	5.0
		Sulfate by IC	550	589	7.0	500
-002REP	B10F65	Sulfate by IC	769	734	4.6	20.0

RECRA LabNet Use Only

00102947

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: ZNU-HANFORD SAF# B00-046

Est. Final Proj. Sampling Date

Project # 10985-001-001-9999-00

Project Contact/Phone #

RECRA Project Manager QJ

QC Spec Del Std TAT 21 day

Date Rec'd 10-13-00 Date Due 11-3-00

Account #

		A	B	C
Refrigerator #		4	4	4
#/Type Container	Liquid	1PL	1PL	1PL
	Solid			
Volume	Liquid	125	500	500
	Solid			
Preservatives		—	HNO3	—
ANALYSES REQUESTED (ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN)		Sulfide		IC
RECRA LabNet Use Only		ICSOH	ICBOHB	Met ① / IC ①

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	ICSOH	ICBOHB	Met ①	IC ①
001	B10F65	✓	✓	W	10/9/00	1245		1	1	1
002	B10F65 Bomb of 001			W	*	-	✓			

Special Instructions: SAF B00-046

DATE/REVISIONS:

Met ① 1. As, Ba, Cd, Cr, Pb, Se, Ag, Al, Ca, Cu, Fe,
1 2. Mg, Mn, Mo, K, Si, Na, Zn
IC ① 3. Cl, Fl, NO3, NO2, SO4
* 4. See lab chron
5.
6.

RECRA LabNet Use Only

Samples were: 1) Shipped ___ or Hand Delivered ___ Airbill # See Below
2) Ambient or Chilled
3) Received in Good Condition (Y) or N
4) Labels Indicate Properly Preserved (Y) or N
5) Received Within Holding Times (Y) or N NO2 NO3 TR 10-13-00

COC Tape was: 1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
3) Present on Sample (Y) or N
4) Unbroken on Sample (Y) or N
COC Record Present Upon Sample Rec't (Y) or N
Cooler Temp. 2.4 °C

Relinquished by	Received by	Date	Time
Fed Ex	[illegible]	10/13/00	0915

Relinquished by	Received by	Date	Time
COMPOSITE WASTE			

ORIGINAL! REWRITTEN

Discrepancies Between Samples Labels and COC Record? Y or (N)

NOTES:

4235 7953 9735

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		B00-046-041	Page 1 of 1
Collector: Greg Deroos / Keith MAKI	Company Contact: Julian Laurenz	Telephone No.: 372-9351	Project Coordinator: TRENT, SJ	Price Code: 7L
Project Designation: 100-HR-3 ISRM Sampling and Analysis	Sampling Location: 100 Area		SAF No.: B00-046	Data Turnaround: 21 Days
Ice Chest No.: SM1-188 (10F1)	Field Logbook No.: N/A	COA: T10HR3C140	Method of Shipment: FED EX / Gov vehicle	Air Quality:
Shipped To: TMA/RECRA	Offsite Property No.: A00034		Bill of Lading/Air Bill No.: 4235 9453 -9735	

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples originated from NON-RAD Controlled area. <2000pCi/g
NO TA Required

Special Handling and/or Storage

Preservation	HNO3 to pH <2	Cool 4C	HNO3 to pH <2	Cool 4C							
Type of Container	G/P	G/P	G/P	P							
No. of Container(s)		1	1	1							
Volume	100mL	125mL	500mL	500mL							
SAMPLE ANALYSIS	Total Uranium (Uranium)	Sulfate by Bomb Combustion	See item (1) in Special Instructions.	IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrite, Sulfate)							
Sample No. / Matrix * / Sample Date / Sample Time											
B10F65 / WATER / 10/9/00 / 1245	✓	✓	✓	✓							

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By	Date/Time
Relinquished By	Keith Maki / K. Maki	10/11/00-1315	J.A. Laurenz / [illegible]	10-11-00/1315
Relinquished By	J.A. Laurenz / [illegible]	10-11-00/1405	Stored in Fridge 2B	10-11-00/1405
Relinquished By	Removed from Ref. 2B 3728	10/12/00 0800	R.T. Thorene	10/12/00 0800
Relinquished By	R.T. Thorene	10/12/00 0800	FED EXP	
Relinquished By	Fed Ex	10/13/00 0915	Vicki Hernandez	10/13/00 0915
Relinquished By			Received By	

SPECIAL INSTRUCTIONS

** No radiological screening is required prior to shipping samples off-site.

(1) ICP Metals- 6010A (Supertrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals-6010A (Supertrace Add-On) (Aluminum, Calcium, Copper, Iron, Magnesium, Manganese, Molybenum, Potassium, Silica, Sodium, Zinc)

RT 10/12/00

Samples stored in Ref.# 2B at the 3728 Shipping Facility on 10/11/00.
Collector not available to relinquish samples on 10/12/00 for shipment.

RT 10/12/00

Matrix *
C=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)