



3 April 2003

Joan Kessner
Bechtel-Hanford, Inc.
3190 Washington Way
MSIN H9-03
Richland, WA 99352

**Subject: Contract No. 630
Analytical Data Package**

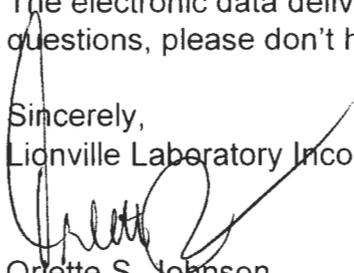
Dear Ms. Kessner:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	0303L024
SDG #	H2124
SAF #	B01-052
Date Received	3-26-03
# Samples	1
Matrix	Soil
Volatiles	
Semivolatiles	
Pest/PCB	
DRO	
GRO	
Metals	X
Inorganics	X

The electronic data deliverable (EDD) will be emailed shortly. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,
Lionville Laboratory Incorporated


Orlette S. Johnson
Project Manager



r:\group\pm\orlette\tnu-hanford\data\b_ltrs.doc



Lionville Laboratory, Inc.
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNUHANFORD B01-052 H2124

DATE RECEIVED: 03/26/03

LVL LOT # :0303L024

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J00JC6						
CHROMIUM, TOTAL	001	S	03L0167	03/19/03	03/28/03	04/01/03
CHROMIUM, TOTAL	001 REP	S	03L0167	03/19/03	03/28/03	04/01/03
CHROMIUM, TOTAL	001 MS	S	03L0167	03/19/03	03/28/03	04/01/03
MERCURY, TOTAL	001	S	03C0059	03/19/03	03/27/03	03/27/03
MERCURY, TOTAL	001 REP	S	03C0059	03/19/03	03/27/03	03/27/03
MERCURY, TOTAL	001 MS	S	03C0059	03/19/03	03/27/03	03/27/03
LEAD, TOTAL	001	S	03L0167	03/19/03	03/28/03	04/01/03
LEAD, TOTAL	001 REP	S	03L0167	03/19/03	03/28/03	04/01/03
LEAD, TOTAL	001 MS	S	03L0167	03/19/03	03/28/03	04/01/03

LAB QC:

CHROMIUM LABORATORY	LC1 BS	S	03L0167	N/A	03/28/03	04/01/03
CHROMIUM, TOTAL	MB1	S	03L0167	N/A	03/28/03	04/01/03
MERCURY LABORATORY	LC1 BS	S	03C0059	N/A	03/27/03	03/27/03
MERCURY, TOTAL	MB1	S	03C0059	N/A	03/27/03	03/27/03
LEAD LABORATORY	LC1 BS	S	03L0167	N/A	03/28/03	04/01/03
LEAD, TOTAL	MB1	S	03L0167	N/A	03/28/03	04/01/03



Analytical Report

Client: TNU-HANFORD B01-052
LVL#: 0303L024
SDG/SAF#: H2124/B01-052

W.O.#: 11343-606-001-9999-00
Date Received: 03-26-03

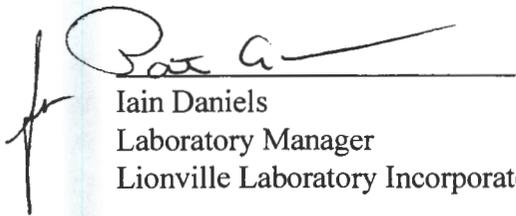
METALS CASE NARRATIVE

1. This narrative covers the analysis of 1 soil sample.
2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary. The sample was run with a ten fold dilution for Mercury due to the high concentration of this analyte.
3. All analyses were performed within the required holding times.
4. All results presented in this report are derived from samples that met LVL's sample acceptance policy.
5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits.
6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).
7. All preparation/method blanks (MB) were within 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.
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 the Inorganics Laboratory Control Standards Report.
10. The matrix spike (MS) recoveries for 3 analytes were 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 level for the following analytes:

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 13 pages.

<u>Sample ID</u>	<u>Element</u>	<u>PDS</u> <u>Concentration (ppb)</u>	<u>PDS</u> <u>% Recovery</u>
J00JC6	Chromium	2000	104.7
	Lead	1000	106.7

12. All duplicate analyses were within 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.


 Iain Daniels
 Laboratory Manager
 Lionville Laboratory Incorporated
 gmb/m03-024

04-02-03
 Date

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 0303L024

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 ^s	200.7 204.2			99
Arsenic	6010B 7060A ^s	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 ^s	200.7 213.2			99
Calcium	6010B	200.7			99
Chromium	6010B 7191 ^s	200.7 218.2			SS17
Cobalt	6010B	200.7			99
Copper	6010B 7211 ^s	200.7 220.2			99
Iron	6010B	200.7			99
Lead	6010B 7421 ^s	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 ^s 7471A ^s	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 ^s	200.7 270.2	3113B		99
Silicon	6010B ¹	200.7		1620	99
Silica	6010B	200.7		1620	99
Silver	6010B 7761 ^s	200.7 272.2			99
Sodium	6010B 7770 ⁴	200.7 273.1 ⁴			99
Strontium	6010B	200.7			99
Thallium	6010B 7841 ^s	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: _____

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, approximately 0.3 grams of sample is taken to a final volume of 50 mL (including all reagents).
3. Flame AA.
4. Graphite Furnace AA.

L-WI-033/N-04/98

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/02/03

CLIENT: TNUHANFORD B01-052 H2124
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J00JC6	Chromium, Total	765	MG/KG	0.07	1.0
		Mercury, Total	10.7	MG/KG	0.17	10.0
		Lead, Total	245	MG/KG	0.29	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/02/03

CLIENT: TNUHANFORD B01-052 H2124
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	03L0167-NB1	Chromium, Total	0.06 u	MG/KG	0.06	1.0
		Lead, Total	0.26 u	MG/KG	0.26	1.0
BLANK1	03C0059-NB1	Mercury, Total	0.02 u	MG/KG	0.02	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/02/03

CLIENT: TNUHANFORD B01-052 H2124
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	J00JC6	Chromium, Total	722	765	21.0	-200. *	1.0
		Mercury, Total	10.6	10.7	0.17	-79. *	10.0
		Lead, Total	230	245	52.5	-29. *	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/02/03

CLIENT: TNUHANFORD B01-052 H2124
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION FACTOR (REP)
			RESULT	REPLICATE	RPD	
-001REP	J00JC6	Chromium, Total	765	661	14.6	1.0
		Mercury, Total	10.7	11.4	6.7	10.0
		Lead, Total	245	213	14.0	1.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/02/03

CLIENT: TNUHANFORD B01-052 H2124
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	SPIKED	SPIKED	UNITS	%RECOV
			SAMPLE	AMOUNT		
LCS1	03L0167-LC1	Chromium, LCS	52.1	50.0	MG/KG	104.2
		Lead, LCS	257	250	MG/KG	102.8
LCS1	03C0059-LC1	Mercury, LCS	5.9	6.2	MG/KG	94.6

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B01-052-142	Page 1 of 1	
Collector D. Shea	Company Contact Dave Shea	Telephone No. 373-6425	Project Coordinator KESSNER, JH	Price Code	Data Turnaround			
Project Designation 100 B/C Area Effluent Pipeline & Proximity Site Remediation	Sampling Location 100 BC Pipelines deep zones	SAF No. B01-052	Air Quality !!		7 days			
Ice Chest No. ERC-99-013	Field Logbook No. EL-1548-3	COA R100BC2600	Method of Shipment FED EX					
Shipped To TMA/RECRA	Offsite Property No. RSR 106956	Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS Possibly radiologically contaminated				Preservation	Cool 4C	Cool 4C		
Special Handling and/or Storage				Type of Container	G/P	G		
				No. of Container(s)	1	1		
				Volume	60mL	60mL		
SAMPLE ANALYSIS				ICP Metals - 6010A (Add-on) (Chromium, Lead); Mercury - 7471 - (CV)	Chromium Hex - 7196			
Sample No.	Matrix *	Sample Date	Sample Time					
J00J05	SOIL	3/19/03	0904	✓	✓	N/A 3203		
J00J06	SOIL		0937	✓	✓			
J00J07	SOIL		0919	✓	✓	N/A 3203		
J00J08	SOIL		0928	✓	✓			
J00J09	SOIL		0926	✓	✓			
CHAIN OF POSSESSION			Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	Personnel not available to relinquish samples from the 3728 Ref # 1A on 3/27/03				S=Soil SE=Soil/mud SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tank W=Wipe L=Liquid V=Vegetation X=Other
Dwisha Dwisha	3/19/03 1423	100 BC Sample RUSA	3/19/03 1423					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
100 BC sample RUSA	3/19/03 1823	Dwisha Dwisha	3/19/03 1823					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
Dwisha Dwisha	3/19/03 1808	Fridge 1A	3/19/03 1808					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	181				
REF 1A	32503 0900	NOALE/Dale	32503 0900					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
SUGALE/Dale	32503 0900	FED EX						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
FED EX	3-26-03 0945	D. Shea	3-26-03 1045					
LABORATORY SECTION	Received By	Title		Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time				

**LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST**

CLIENT: TNU Hanford
Purchase Order/Project:

DATE: 3-26-03

AF# / SOW# / Release #: B01-052

Laboratory SDG #: 03031024

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	<input type="checkbox"/> see Comment #
1. Custody seals on coolers or shipping container intact, signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Outside of coolers or shipping containers are free from damage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Airbill # recorded?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Sample containers are intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Custody seals on sample containers intact, signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. All samples on coc received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. All sample label information matches coc?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Shipment meets LVL1 Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Where applicable, bar code labels are affixed to coc?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. coc signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. coc will be faxed or emailed to client?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Project Manager/Client contacted concerning discrepancies? (name/date)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

03/26-03

Cooler # / temp (°C) and Comments:

ERR 99-03 / 1.8

Laboratory Sample Custodian: [Signature]

Laboratory Project Manager:



Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B01-052 H2124

DATE RECEIVED: 03/26/03

LVL LOT # :0303L024

CLIENT ID /ANALYSIS LVL # MTX PREP # COLLECTION EXTR/PREP ANALYSIS

J00JC6

% SOLIDS	001	S	03L*S042	03/19/03	03/26/03	03/27/03
% SOLIDS	001 REP	S	03L*S042	03/19/03	03/26/03	03/27/03
CHROMIUM VI	001	S	03LVI017	03/19/03	03/27/03	03/27/03
CHROMIUM VI	001 REP	S	03LVI017	03/19/03	03/27/03	03/27/03
CHROMIUM VI	001 MS	S	03LVI017	03/19/03	03/27/03	03/27/03
CHROMIUM VI	001 MSD	S	03LVI017	03/19/03	03/27/03	03/27/03

LAB QC:

CHROMIUM VI	MB1	S	03LVI017	N/A	03/27/03	03/27/03
CHROMIUM VI	MB1 BS	S	03LVI017	N/A	03/27/03	03/27/03
CHROMIUM VI	MB1 BSD	S	03LVI017	N/A	03/27/03	03/27/03



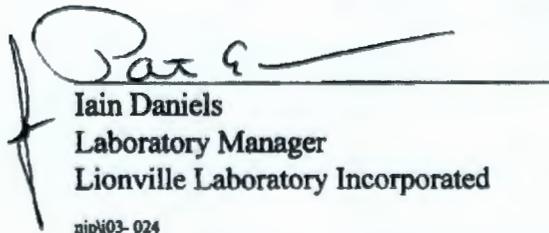
Analytical Report

Client: TNU-HANFORD B01-052 H2124
LVL#: 0303L014

W.O.#: 11343-606-001-9999-00
Date Received: 03-26-03

INORGANIC NARRATIVE

1. This narrative covers the analyses of 1 soil sample.
2. The sample was prepared and analyzed in accordance with the methods checked on the attached glossary.
3. Sample holding times as required by the method and/or contract were met.
4. The results presented in this report are derived from samples that met LvLI's sample acceptance policy.
5. The method blank for Chromium VI was within the method criteria.
6. The Laboratory Control Samples (LCS) for Chromium VI were within the laboratory control limits.
7. The matrix spike recoveries for Chromium VI were within the 75-125% control limits.
8. The replicate analyses for Percent Solids and Chromium VI were within the 20% Relative Percent Difference (RPD) control limit.
9. Results for solid samples are reported on a dry weight basis.
10. 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 package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.


Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated
njpl03-024

03-31-03
Date

The results presented in this report relate to the analytical testing and conditions of the samples upon 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 11 pages.

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	<u>ASTM</u>	<u>SW846</u>	<u>OTHER</u>
% Ash	— D2216-80		
% Moisture	— D2216-80		— ILMO4.0 (e)
% Solids	✓ D2216-80		— ILMO4.0 (e)
% Volatile Solids	— D2216-80		
ASTM Extraction in Water	— D3987-81/85		
BTU	— D240-87		
CEC		✓ 9081	— c
Chromium VI		✓ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		— 1110(mod) — 9045C	
Cyanide, Total		— 9010B	— ILMO4.0 (e)
Cyanide, Reactive		— Section 7.3/9014	
Halides, Extractable Organic		— 9020B	— EPA 600/4/84-008
Halides, Total		— 9020B	— EPA 600/4/84-008
EP Toxicity		— 1310A	
Flash Point		— 1010	
Ignitability		— 1010	
Oil & Grease		— 9071A	
Carbon, Total Organic		— 9060	— Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	— D240-87(mod)	— 5050	
Petroleum Hydrocarbons, Total Recoverable		— 9071	— EPA 418.1
pH, Soil		— 9045C	
Sulfide, Reactive		— Section 7.3/9030B	
Sulfide		— 9030B(mod)	
Specific Gravity	— D1429-76C/	— D5057-90	
Sulfur, Total		— 9056	
Synthetic Preparation Leach		— 1312	
Paint Filter		— 9095A	
Other:	Method:		
Other:	Method		

Lionville Laboratory Incorporated

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.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/31/03

CLIENT: TNUHANFORD B01-052 H2124
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J00JC6	% Solids	88.1	%	0.01	1.0
		Chromium VI	10.9	MG/KG	0.45	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/31/03

CLIENT: TNUHANFORD B01-052 H2124

LVL LOT #: 0303L024

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	03LV1017-MB1	Chromium VI	0.40 u	MG/KG	0.40	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 01/31/03

CLIENT: TNUHANFORD B01-052 M2124

LVL LOT #: 0303L024

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-001	J00JC6	Soluble Chromium VI	16.5	10.9	4.6	122.4	1.0
		Insoluble Chromium VI	1380	10.9	1360	101.0	100
BLANK10	03LVI017-NB1	Soluble Chromium VI	3.9	0.40u	4.0	97.6	1.0
		Insoluble Chromium VI	1220	0.40u	1140	106.7	100

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 03/31/03

CLIENT: TNUMANFORD B01-052 H2124
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0303L024

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-001REP	J00JC6	% Solids	88.1	82.8	6.2	1.0
		Chromium VI	10.9	11.2	2.8	1.0

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B01-052-142	Page 1 of 1
Collector D. Shea	Company Contact Dave Shea	Telephone No. 373-6425	Project Coordinator KESSNER, JH	Price Code	Data Turnaround		
Project Designation 100 B/C Area Effluent Pipeline & Proximity Site Remediation	Sampling Location 100 BC Pipelines deep zones	SAF No. B01-052	Air Quality		7 days		
Ice Chest No. FRC-99-013	Field Logbook No. EL-1548-3	COA R100BC2600	Method of Shipment FED EX				
Shipped To TMA/RECRA	Offsite Property No. RSR 106956	Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS Possibly radiologically contaminated				Preservation	Cool 4C	Cool 4C	
Special Handling and/or Storage				Type of Container	G/P	G	
				No. of Container(s)	1	1	
				Volume	60mL	60mL	
SAMPLE ANALYSIS				ICP Metals - 6010A (Add-on) (Chromium, Lead); Mercury - 7471 - (CV)	Chromium Hex - 7196		
Sample No.	Matrix *	Sample Date	Sample Time				
J00J05	SOIL	3/19/03	0904	✓	✓	N/A 3703	
J00J06	SOIL		0937	✓	✓		
J00J07	SOIL		0919	✓	✓		
J00J08	SOIL		0928	✓	✓		
J00J09	SOIL		0926	✓	✓		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drown Solids DL=Drown Liquids T=Time W=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From DWShea DWShea	Date/Time 3/19/03 1423	Received By/Stored In 100 BC Sample Rm SH	Date/Time 3/19/03 1423	Personnel not available to relinquish samples from the 3728 Ref # 1A on 3/25/03			1800
Relinquished By/Removed From 100 BC Sample Rm SH	Date/Time 3/19/03 1523	Received By/Stored In DWShea DWShea	Date/Time 3/19/03 1523				
Relinquished By/Removed From DWShea DWShea	Date/Time 3/19/03 1808	Received By/Stored In Fridge 1A	Date/Time 3/19/03 1808				
Relinquished By/Removed From REF 1A	Date/Time 3/25/03 0900	Received By/Stored In SJOALED/Dale	Date/Time 3/25/03 0900				
Relinquished By/Removed From SJOALED/Dale	Date/Time 3/25/03 0900	Received By/Stored In FED EX	Date/Time				
Relinquished By/Removed From FED EX	Date/Time 3-26-03 0945	Received By/Stored In D. Shea	Date/Time 3-26-03 0945				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

**LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST**

CLIENT: TNU *Hanford*
Purchase Order/Project:

DATE: 3-26-03

SAF# / SOW# / Release #: B01-052

Laboratory SDG #: 03031024

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

- | | | | | |
|--|---|-----------------------------|---|--|
| 1. Custody seals on coolers or shipping container intact, signed and dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 2. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 3. Airbill # recorded? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 4. All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 5. Sample containers are intact? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 6. Custody seals on sample containers intact, signed and dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 7. All samples on coc received? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 8. All sample label information matches coc? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 10. Shipment meets LvL1 Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 11. Where applicable, bar code labels are affixed to coc? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 12. coc signed and dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 13. coc will be faxed or emailed to client? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 14. Project Manager/Client contacted concerning discrepancies? (name/date) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |

Cooler # / temp (°C) and Comments:

ERE 99-013 / 1.8°

Laboratory Sample Custodian: *D. J. Miller*

Laboratory Project Manager: