0059112

RECEIVED
APR 28 2003
EDMC

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B02-024 H1999

DATE RECEIVED: 11/21/02 LVL LOT # :0211L203

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J00496						
TCLP	001	SO	02LTO348	11/18/02	11/24/02	11/25/02
SILVER, TCLP LEACHAT	002	W	02L0690	11/25/02	11/25/02	11/25/02
SILVER, TCLP LEACHAT	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
SILVER, TCLP LEACHAT	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	002	W	02L0690	11/25/02	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	002	W	02L0690	11/25/02	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	002	W	02L0690	11/25/02	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	002	W	02L0690	11/25/02	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
MERCURY, TCLP LEACHA	002	W	02C0348	11/25/02	11/25/02	11/26/02
MERCURY, TCLP LEACHA	002 REP	W	02C0348	11/25/02	11/25/02	11/26/02
MERCURY, TCLP LEACHA	002 MS	W	02C0348	11/25/02	11/25/02	11/26/02
LEAD, TCLP LEACHATE	002	W	02L0690	11/25/02	11/25/02	11/25/02
LEAD, TCLP LEACHATE	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
LEAD, TCLP LEACHATE	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
SELENIUM, TCLP LEACH	002	W	02L0690	11/25/02	11/25/02	11/25/02
SELENIUM, TCLP LEACH	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
SELENIUM, TCLP LEACH	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02

LAB QC:

SILVER LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
SILVER, TCLP LEACHAT	MB1	W	02L0690	N/A	11/25/02	11/25/02
SILVER, TCLP LEACHAT	MB2	W	02L0690	N/A	11/25/02	11/25/02
ARSENIC LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	MB1	W	02L0690	N/A	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	MB2	W	02L0690	N/A	11/25/02	11/25/02
BARIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B02-024

DATE RECEIVED: 11/21/02 LVL LOT # :0211L203

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BARIUM, TCLP LEACHAT	MB1	W	02L0690	N/A	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	MB2	W	02L0690	N/A	11/25/02	11/25/02
CADMIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	MB1	W	02L0690	N/A	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	MB2	W	02L0690	N/A	11/25/02	11/25/02
CHROMIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	MB1	W	02L0690	N/A	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	MB2	W	02L0690	N/A	11/25/02	11/25/02
MERCURY LABORATORY	LC1 BS	W	02C0348	N/A	11/25/02	11/26/02
MERCURY, TOTAL	MB1	W	02C0348	N/A	11/25/02	11/26/02
MERCURY, TCLP LEACHA	MB2	W	02C0348	N/A	11/25/02	11/26/02
MERCURY, TCLP LEACHA	MB3	W	02C0348	N/A	11/25/02	11/26/02
LEAD LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
LEAD, TCLP LEACHATE	MB1	W	02L0690	N/A	11/25/02	11/25/02
LEAD, TCLP LEACHATE	MB2	W	02L0690	N/A	11/25/02	11/25/02
SELENIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
SELENIUM, TCLP LEACH	MB1	W	02L0690	N/A	11/25/02	11/25/02
SELENIUM, TCLP LEACH	MB2	W	02L0690	N/A	11/25/02	11/25/02

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD B02-024
LVL#: 0211L203
SDG/SAF#: H1999/B02-024

W.O.#: 11343-606-001-9999-00
Date Received: 11-21-02

METALS CASE NARRATIVE

1. This narrative covers the analysis of 1 TCLP leachate sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary. All samples were reported with dilutions due to sample matrix.

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

4. Please refer to the Sample Receipt Check List for sample discrepancies in LvLI'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. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

11. The TCLP extract from sample J00496 was selected for the matrix spike (MS) for this analytical batch. All MS recoveries were greater than 50% as per method criteria.

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 14 pages. (Includes 2A, 2B)

12. 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.

13. 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

12-03-02
Date

gmb/m11-203

LVLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 0211L203

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-03/01

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

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J00496	Silver, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Arsenic, TCLP Leachate	22.8	u	UG/L	22.8	6.0
		Barium, TCLP Leachate	3070		UG/L	1.8	6.0
		Cadmium, TCLP Leachate	2.4	u	UG/L	2.4	6.0
		Chromium, TCLP Leachate	25.9		UG/L	6.0	6.0
		Mercury, TCLP Leachate	0.20	u	UG/L	0.20	2.0
		Lead, TCLP Leachate	8620		UG/L	14.4	6.0
		Selenium, TCLP Leachate	22.8	u	UG/L	22.8	6.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/27/02

CLIENT: TNU-HANFORD B02-024 LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	02L0690-MB1	Silver, TCLP Leachate	1.4	u	UG/L	1.4	1.0
		Arsenic, TCLP Leachate	3.8	u	UG/L	3.8	1.0
		Barium, TCLP Leachate	0.49		UG/L	0.30	1.0
		Cadmium, TCLP Leachate	0.40	u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	1.2		UG/L	1.0	1.0
		Lead, TCLP Leachate	2.4	u	UG/L	2.4	1.0
		Selenium, TCLP Leachate	3.8	u	UG/L	3.8	1.0
BLANK2	02L0690-MB2	Silver, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Arsenic, TCLP Leachate	22.8	u	UG/L	22.8	6.0
		Barium, TCLP Leachate	1.8		UG/L	1.8	6.0
		Cadmium, TCLP Leachate	2.4	u	UG/L	2.4	6.0
		Chromium, TCLP Leachate	6.0	u	UG/L	6.0	6.0
		Lead, TCLP Leachate	14.4	u	UG/L	14.4	6.0
		Selenium, TCLP Leachate	22.8	u	UG/L	22.8	6.0
BLANK1	02C0348-MB1	Mercury, Total	0.10	u	UG/L	0.10	1.0
BLANK2	02C0348-MB2	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
BLANK3	02C0348-MB3	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	J00496	Silver, TCLP Leachate	5280	8.4 u	5000	105.6	6.0
		Arsenic, TCLP Leachate	5330	22.8 u	5000	106.6	6.0
		Barium, TCLP Leachate	110000	3070	100000	106.9	6.0
		Cadmium, TCLP Leachate	1080	2.4 u	1000	107.6	6.0
		Chromium, TCLP Leachat	5310	25.9	5000	105.6	6.0
		Mercury, TCLP Leachate	196	0.20u	200	98.0	50.0
		Lead, TCLP Leachate	14100	8620	5000	109.8	6.0
		Selenium, TCLP Leachat	1090	22.8 u	1000	109.0	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	J00496	Silver, TCLP Leachate	8.4 u	8.4 u	NC	6.0
		Arsenic, TCLP Leachate	22.8 u	22.8 u	NC	6.0
		Barium, TCLP Leachate	3070	3110	1.4	6.0
		Cadmium, TCLP Leachate	2.4 u	2.4 u	NC	6.0
		Chromium, TCLP Leachate	25.9	26.7	3.0	6.0
		Mercury, TCLP Leachate	0.20u	0.20u	NC	2.0
		Lead, TCLP Leachate	8620	8710	1.1	6.0
		Selenium, TCLP Leachate	22.8 u	22.8 u	NC	6.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	02L0690-LC1	Silver, LCS	516	500	UG/L	103.3
		Arsenic, LCS	9980	10000	UG/L	99.8
		Barium, LCS	5120	5000	UG/L	102.4
		Cadmium, LCS	255	250	UG/L	102.1
		Chromium, LCS	522	500	UG/L	104.4
		Lead, LCS	2560	2500	UG/L	102.3
		Selenium, LCS	9930	10000	UG/L	99.3
LCS1	02C0348-LC1	Mercury, LCS	5.2	5.0	UG/L	104.0

nville Laboratory Use Only

0211L203

Custody Transfer Record/...

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LIONVILLE LABORATORY INC

Client: TNU Hanford B02-024

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Orlette Johnson

QC: SPEC Del: STD TAT: 7 days

Date Rec'd: 11.21.02 Date Due: 11-28-02

Refrigerator #															A 4						
#/Type Container	Liquid																				
	Solid														lag						
Volume	Liquid																				
	Solid														60						
Preservatives															1						
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	Pest/PCB	Herb				INORG: ICP Metal	CN	TCLP LEACHATE										
		Lionville Laboratory Use Only																			
									ITCLP		RCRATCW										
001	J00496	X	X	SO	11.18.02	0934			X												
002	J00496 tclp of 001			L	*						✓										

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

Special Instructions: SAF # B02-024

DATE/REVISIONS:
* 1. See labchron
2.
3.
4.
5.
6.

Lionville Laboratory Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___
Airbill # 7921 3814 9170
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Samples Properly Preserved Y or N
5) Received Within Holding Times Y or N

Tamper Resistant Seal 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. 15.2 °C

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

Relinquished by	Received by	Date	Time
[signature]	[signature]	11-21-02	0945

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		
Collector: Doug Bowers	Company Contact: Jeff Lerch — Telephone No.: 373-5904	Project Coordinator: TRENT, SJ	Price Code: 9J — Data Turnaround:
Project Designation: 618-4 Burial Ground - Anomalous Waste (Solids)	Sampling Location: 300FF-1	SAF No.: B02-024	Air Quality ☐ 7 day
Ice Chest No.: ERC-01-019	Field Logbook No.: EL 1395-5 — COA: RG61842600	Method of Shipment: Fed Ex	
Shipped To: TMA/RECRA	Offsite Property No.: A030044	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
< 2,000 PCi/gr

Special Handling and/or Storage

Preservation	None										
Type of Container	aG										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time									
~~J00 494~~	~~OTHER SOLID~~	~~11-18-02~~	~~0930~~	X	11/20/02 DAS							
~~J00 495~~	~~OTHER SOLID~~	~~11-18-02~~	~~0932~~	X	11/20/02 DAS							
J00 496	OTHER SOLID	11-18-02	0934	X								
~~J00 497~~	~~OTHER SOLID~~	~~11-18-02~~	~~0938~~	X	11/20/02 DAS							
~~J00 498~~	~~OTHER SOLID~~	~~11-18-02~~	~~0940~~	X	11/20/02 DAS							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Doug Bowers — Date/Time: 11-18-02/1630	Received By/Stored In: Ref 1A 3728 — Date/Time: 11-18-02/1630		
Relinquished By/Removed From: 3728 Ref 1A — Date/Time: 11/20/02 1300	Received By/Stored In: David St. John — Date/Time: 11/20/02 1300		
Relinquished By/Removed From: David St. John ERC — Date/Time: 11/20/02 1300	Received By/Stored In: FED EX — Date/Time: 11/20/02 1300		
Relinquished By/Removed From: Fed Ex — Date/Time: 11-21-02 / 0945	Received By/Stored In: D. Smith — Date/Time: 11-21-02 / 0945		
Relinquished By/Removed From: — Date/Time:	Received By/Stored In: — Date/Time:		
Relinquished By/Removed From: — Date/Time:	Received By/Stored In: — Date/Time:		

SPECIAL INSTRUCTIONS

(1) Metals by ICP (TCLP) - 1311/6010 (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Mercury (TCLP) - 1311/7470

Personnel not available to relinquish samples from the 3728 Ref # 1A on 11/20/02

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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 (03/01/2002)

LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST

.IENT: TRU Hanford

rchase Order/Project:

DATE: 11-21-02

.F# / SOW# / Release #: B02-024

.boratory SDG #: 0211L203

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

1. Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
2. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
3. Airbill # recorded?	☑ Yes	☐ No	☐ N/A	☐ 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)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
5. Sample containers are intact?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
7. All samples on coc received?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
8. All sample label information matches coc?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
10. Shipment meets LvLI Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	☐ Yes	☑ No	~~☑ N/A~~ 11-21-02	☑ see Comment # 1
11. Where applicable, bar code labels are affixed to coc?	☐ Yes	☐ No	☑ N/A	☐ see Comment #
12. coc signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
13. coc will be faxed or emailed to client?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
14. Project Manager/Client contacted concerning discrepancies? (name/date)	☐ Yes	☐ No	☑ N/A	☐ see Comment #

Cooler # / temp (°C) and Comments:

#1 ERC-01-019 / 15.2°C

#1 Cooler = 15.2°C

Laboratory Sample Custodian: D. Smith

Laboratory Project Manager:

SAF-B02-024
618-4 Burial Ground – Anomalous Waste (Solids)
FINAL DATA PACKAGE

FAX RESULTS TO:

Jeff Lerch 373-5373 _____N/A_____
INITIAL/DATE

VERIFICATION OF CLIENT RECEIPT:

Phone or CC:Mail to Jeff Lerch _____N/A_____
INITIAL/DATE

MAIL COMPLETE COPY OF DATA PACKAGE TO:

Jeff Lerch L6-06 _____12-13-02
INITIAL/DATE

COMMENTS: (PLEASE INCLUDE THE FOLLOWING ON THE FAX COVER SHEET)

SDG _____H1999___ SAF-B02-024

Rad only X Chem only Rad & Chem

X Complete Partial

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B02-024 H1999

DATE RECEIVED: 11/21/02 LVL LOT # :0211L203

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J00496						
TCLP	001	SO	02LTO348	11/18/02	11/24/02	11/25/02
SILVER, TCLP LEACHAT	002	W	02L0690	11/25/02	11/25/02	11/25/02
SILVER, TCLP LEACHAT	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
SILVER, TCLP LEACHAT	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	002	W	02L0690	11/25/02	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	002	W	02L0690	11/25/02	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	002	W	02L0690	11/25/02	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	002	W	02L0690	11/25/02	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
MERCURY, TCLP LEACHA	002	W	02C0348	11/25/02	11/25/02	11/26/02
MERCURY, TCLP LEACHA	002 REP	W	02C0348	11/25/02	11/25/02	11/26/02
MERCURY, TCLP LEACHA	002 MS	W	02C0348	11/25/02	11/25/02	11/26/02
LEAD, TCLP LEACHATE	002	W	02L0690	11/25/02	11/25/02	11/25/02
LEAD, TCLP LEACHATE	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
LEAD, TCLP LEACHATE	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02
SELENIUM, TCLP LEACH	002	W	02L0690	11/25/02	11/25/02	11/25/02
SELENIUM, TCLP LEACH	002 REP	W	02L0690	11/25/02	11/25/02	11/25/02
SELENIUM, TCLP LEACH	002 MS	W	02L0690	11/25/02	11/25/02	11/25/02

LAB QC:

SILVER LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
SILVER, TCLP LEACHAT	MB1	W	02L0690	N/A	11/25/02	11/25/02
SILVER, TCLP LEACHAT	MB2	W	02L0690	N/A	11/25/02	11/25/02
ARSENIC LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	MB1	W	02L0690	N/A	11/25/02	11/25/02
ARSENIC, TCLP LEACHA	MB2	W	02L0690	N/A	11/25/02	11/25/02
BARIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B02-024

DATE RECEIVED: 11/21/02 LVL LOT # :0211L203

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BARIUM, TCLP LEACHAT	MB1	W	02L0690	N/A	11/25/02	11/25/02
BARIUM, TCLP LEACHAT	MB2	W	02L0690	N/A	11/25/02	11/25/02
CADMIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	MB1	W	02L0690	N/A	11/25/02	11/25/02
CADMIUM, TCLP LEACHA	MB2	W	02L0690	N/A	11/25/02	11/25/02
CHROMIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	MB1	W	02L0690	N/A	11/25/02	11/25/02
CHROMIUM, TCLP LEACH	MB2	W	02L0690	N/A	11/25/02	11/25/02
MERCURY LABORATORY	LC1 BS	W	02C0348	N/A	11/25/02	11/26/02
MERCURY, TOTAL	MB1	W	02C0348	N/A	11/25/02	11/26/02
MERCURY, TCLP LEACHA	MB2	W	02C0348	N/A	11/25/02	11/26/02
MERCURY, TCLP LEACHA	MB3	W	02C0348	N/A	11/25/02	11/26/02
LEAD LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
LEAD, TCLP LEACHATE	MB1	W	02L0690	N/A	11/25/02	11/25/02
LEAD, TCLP LEACHATE	MB2	W	02L0690	N/A	11/25/02	11/25/02
SELENIUM LABORATORY	LC1 BS	W	02L0690	N/A	11/25/02	11/25/02
SELENIUM, TCLP LEACH	MB1	W	02L0690	N/A	11/25/02	11/25/02
SELENIUM, TCLP LEACH	MB2	W	02L0690	N/A	11/25/02	11/25/02

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD B02-024
LVL#: 0211L203
SDG/SAF#: H1999/B02-024

W.O.#: 11343-606-001-9999-00
Date Received: 11-21-02

METALS CASE NARRATIVE

1. This narrative covers the analysis of 1 TCLP leachate sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary. All samples were reported with dilutions due to sample matrix.

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

4. Please refer to the Sample Receipt Check List for sample discrepancies in LvLI'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. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

11. The TCLP extract from sample J00496 was selected for the matrix spike (MS) for this analytical batch. All MS recoveries were greater than 50% as per method criteria.

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 1A pages. (INCLUDES 2A, 2B)

12. 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.

13. 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

12-03-02
Date

gmb/m11-203

LVLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 0211L203

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-03/01

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

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J00496	Silver, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Arsenic, TCLP Leachate	22.8	u	UG/L	22.8	6.0
		Barium, TCLP Leachate	3070		UG/L	1.8	6.0
		Cadmium, TCLP Leachate	2.4	u	UG/L	2.4	6.0
		Chromium, TCLP Leachate	25.9		UG/L	6.0	6.0
		Mercury, TCLP Leachate	0.20	u	UG/L	0.20	2.0
		Lead, TCLP Leachate	8620		UG/L	14.4	6.0
		Selenium, TCLP Leachate	22.8	u	UG/L	22.8	6.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	02L0690-MB1	Silver, TCLP Leachate	1.4	u	UG/L	1.4	1.0
		Arsenic, TCLP Leachate	3.8	u	UG/L	3.8	1.0
		Barium, TCLP Leachate	0.49		UG/L	0.30	1.0
		Cadmium, TCLP Leachate	0.40	u	UG/L	0.40	1.0
		Chromium, TCLP Leachate	1.2		UG/L	1.0	1.0
		Lead, TCLP Leachate	2.4	u	UG/L	2.4	1.0
		Selenium, TCLP Leachate	3.8	u	UG/L	3.8	1.0
BLANK2	02L0690-MB2	Silver, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Arsenic, TCLP Leachate	22.8	u	UG/L	22.8	6.0
		Barium, TCLP Leachate	1.8		UG/L	1.8	6.0
		Cadmium, TCLP Leachate	2.4	u	UG/L	2.4	6.0
		Chromium, TCLP Leachate	6.0	u	UG/L	6.0	6.0
		Lead, TCLP Leachate	14.4	u	UG/L	14.4	6.0
		Selenium, TCLP Leachate	22.8	u	UG/L	22.8	6.0
BLANK1	02C0348-MB1	Mercury, Total	0.10	u	UG/L	0.10	1.0
BLANK2	02C0348-MB2	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
BLANK3	02C0348-MB3	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	J00496	Silver, TCLP Leachate	5280	8.4 u	5000	105.6	6.0
		Arsenic, TCLP Leachate	5330	22.8 u	5000	106.6	6.0
		Barium, TCLP Leachate	110000	3070	100000	106.9	6.0
		Cadmium, TCLP Leachate	1080	2.4 u	1000	107.6	6.0
		Chromium, TCLP Leachat	5310	25.9	5000	105.6	6.0
		Mercury, TCLP Leachate	196	0.20u	200	98.0	50.0
		Lead, TCLP Leachate	14100	8620	5000	109.8	6.0
		Selenium, TCLP Leachat	1090	22.8 u	1000	109.0	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024

LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	J00496	Silver, TCLP Leachate	8.4 u	8.4 u	NC	6.0
		Arsenic, TCLP Leachate	22.8 u	22.8 u	NC	6.0
		Barium, TCLP Leachate	3070	3110	1.4	6.0
		Cadmium, TCLP Leachate	2.4 u	2.4 u	NC	6.0
		Chromium, TCLP Leachate	25.9	26.7	3.0	6.0
		Mercury, TCLP Leachate	0.20u	0.20u	NC	2.0
		Lead, TCLP Leachate	8620	8710	1.1	6.0
		Selenium, TCLP Leachate	22.8 u	22.8 u	NC	6.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 11/27/02

CLIENT: TNU-HANFORD B02-024 LVL LOT #: 0211L203

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	02L0690-LC1	Silver, LCS	516	500	UG/L	103.3
		Arsenic, LCS	9980	10000	UG/L	99.8
		Barium, LCS	5120	5000	UG/L	102.4
		Cadmium, LCS	255	250	UG/L	102.1
		Chromium, LCS	522	500	UG/L	104.4
		Lead, LCS	2560	2500	UG/L	102.3
		Selenium, LCS	9930	10000	UG/L	99.3
LCS1	02C0348-LC1	Mercury, LCS	5.2	5.0	UG/L	104.0

onville Laboratory Use Only

0211L203

Custody Transfer Record/...

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LIONVILLE LABORATORY INC

Client: TNU Hanford B02-024

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Arlette Johnson

QC: SPEC Del: STD TAT: 7 days

Date Rec'd: 11-21-02 Date Due: 11-28-02

Refrigerator #															A 4								
#/Type Container	Liquid																						
	Solid														1 g								
Volume	Liquid																						
	Solid														60								
Preservatives															1								
ANALYSES REQUESTED →		ORGANIC													INORG								
		VOA	BNA	Pest/PCB	Herb										ICP Metal	CN	TCLP						
		Lionville Laboratory Use Only																					
															ITCLP		RCRATCW						
															X								
																	✓						

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
001	J00496	X	X	SO	11.18.02	0934
002	J00496 tclp of 001			L	*	

Special Instructions: SAF # B02-024

DATE/REVISIONS:
* 1. See labchron
2.
3.
4.
5.
6.

Lionville Laboratory Use Only

Samples were:
1) Shipped ✓ or
Hand Delivered ___
Airbill # 7921 3814 9170
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Samples Properly Preserved Y or N
5) Received Within Holding Times Y or N

Tamper Resistant Seal 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. 15.2 C

Relinquished by	Received by	Date	Time
[signature]	[signature]	11-21-02	0945

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

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

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		
Collector: Doug Bowers	Company Contact: Jeff Lerch — Telephone No.: 373-5904	Project Coordinator: TRENT, SJ	Price Code: 9J — Data Turnaround:
Project Designation: 618-4 Burial Ground - Anomalous Waste (Solids)	Sampling Location: 300FF-1	SAF No.: B02-024	Air Quality ☐ 7 day
Ice Chest No.: ERC-01-019	Field Logbook No.: EL 1395-5 — COA: RG61842600	Method of Shipment: Fed Ex	
Shipped To: TMA/RECRA	Offsite Property No.: A030044	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
< 2,000 PCi/gr

Special Handling and/or Storage

Preservation	None									
Type of Container	aG									
No. of Container(s)	1									
Volume	60mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions.									

Sample No.	Matrix *	Sample Date	Sample Time									
~~J00 494~~	~~OTHER SOLID~~	~~11-18-02~~	~~0930~~	X	11/20/02 DAS							
~~J00 495~~	~~OTHER SOLID~~	~~11-18-02~~	~~0932~~	X	11/20/02 DAS							
J00 496	OTHER SOLID	11-18-02	0934	X								
~~J00 497~~	~~OTHER SOLID~~	~~11-18-02~~	~~0938~~	X	11/20/02 DAS							
~~J00 498~~	~~OTHER SOLID~~	~~11-18-02~~	~~0940~~	X	11/20/02 DAS							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Doug Bowers Bowers — Date/Time: 11-18-02/1630	Received By/Stored In: Ref 1A 3728 — Date/Time: 11-18-02/1630		
Relinquished By/Removed From: 3728 Ref 1A — Date/Time: 11/20/02 1300	Received By/Stored In: David St. John — Date/Time: 11/20/02 1300		
Relinquished By/Removed From: David St. John ERC — Date/Time: 11/20/02 1300	Received By/Stored In: FED EX — Date/Time: 11/20/02 1300		
Relinquished By/Removed From: Fed Ex — Date/Time: 11-21-02 / 0945	Received By/Stored In: D. Smith — Date/Time: 11-21-02 / 0945		
Relinquished By/Removed From: — Date/Time:	Received By/Stored In: — Date/Time:		
Relinquished By/Removed From: — Date/Time:	Received By/Stored In: — Date/Time:		

SPECIAL INSTRUCTIONS

(1) Metals by ICP (TCLP) - 1311/6010 (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Mercury (TCLP) - 1311/7470

Personnel not available to relinquish samples from the 3728 Ref # 1A on 11/20/02

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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 (03/01/2002)

LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST

.IENT: TRU Hanford

rchase Order/Project:

DATE: 11-21-02

.F# / SOW# / Release #: B02-024

.boratory SDG #: 0211L203

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

1. Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
2. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
3. Airbill # recorded?	☑ Yes	☐ No	☐ N/A	☐ 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)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
5. Sample containers are intact?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
7. All samples on coc received?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
8. All sample label information matches coc?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
10. Shipment meets LvLI Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	☐ Yes	☑ No	~~☑ N/A~~ 11-21-02	☑ see Comment #
11. Where applicable, bar code labels are affixed to coc?	☐ Yes	☐ No	☑ N/A	☐ see Comment #
12. coc signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
13. coc will be faxed or emailed to client?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
14. Project Manager/Client contacted concerning discrepancies? (name/date)	☐ Yes	☐ No	☑ N/A	☐ see Comment #

Cooler # / temp (°C) and Comments:

* ERC-01-019 / 15.2°C

#1 Cooler = 15.2°C

Laboratory Sample Custodian: D. Smith

Laboratory Project Manager: