0077276

SAF-RC-087
618-7 Burial Ground - Soil
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

RECEIVED
MAY 21 2008
EDMC

Rick Kerkow	L6-06	KW 5/15/08 Initials/Date
Kathy Wendt	H4-21	KW 5/15/08 Initials/Date

COMMENTS:

SDG K1189 SAF-RC-087

Rad only X Chem only Rad & Chem

X Complete Partial

WASTE SITE: 618-7 Burial Ground/Stockpiles

LIONVILLE LABORATORY INC.

13 May 2008

RECEIVED MAY 2008

Joan Kessner
WC-Hanford
2620 Fermi Avenue
MSIN H9-03
Richland, WA 99354

Subject: 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 #	0804L914
SDG #	K1189
SAF #	RC-087
Date Received	4/15/08
# Samples	2
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	X
Inorganics	

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

208 Welsh Pool Road • Exton, PA 19341- 1313 • (610) 280-3000 • Fax (610) 280-3041

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-087 K1189

RECEIVED MAY 2008

DATE RECEIVED: 04/15/08 LVL LOT # :08D01814

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16J83						
TCLP	001	S		04/04/08		
J16J85						
TCLP	002	S		04/07/08		
J16J83						
SILVER, TCLP LEACHAT	003	W	08L0160	04/04/08	04/22/08	04/23/08
SILVER, TCLP LEACHAT	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	003	W	08L0160	04/04/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	003	W	08L0160	04/04/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	003	W	08L0160	04/04/08	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	003	W	08L0160	04/04/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	003	W	08C0073	04/04/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	003 REP	W	08C0073	04/04/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	003 MS	W	08C0073	04/04/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	003	W	08L0160	04/04/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	003	W	08L0160	04/04/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	003 MS	W	08L0160	04/04/08	04/22/08	04/23/08
J16J85						
SILVER, TCLP LEACHAT	004	W	08L0160	04/07/08	04/22/08	04/23/08
SILVER, TCLP LEACHAT	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	004	W	08L0160	04/07/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	004	W	08L0160	04/07/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	004	W	08L0160	04/07/08	04/22/08	04/23/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-087 K1189

DATE RECEIVED: 04/15/08 LVL LOT # :0804L914

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TCLP LEACHA	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	004	W	08L0160	04/07/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	004	W	08C0073	04/07/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	004	W	08L0160	04/07/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	004	W	08L0160	04/07/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	004 REP	W	08L0160	04/07/08	04/22/08	04/23/08

AB QC:

SILVER LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
SILVER, TCLP LEACHAT	MB1	W	08L0160	N/A	04/22/08	04/23/08
SILVER, TCLP LEACHAT	MB2	W	08L0160	N/A	04/22/08	04/23/08
ARSENIC LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	MB1	W	08L0160	N/A	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	MB2	W	08L0160	N/A	04/22/08	04/23/08
BARIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	MB1	W	08L0160	N/A	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	MB2	W	08L0160	N/A	04/22/08	04/23/08
CADMIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	MB1	W	08L0160	N/A	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	MB2	W	08L0160	N/A	04/22/08	04/23/08
CHROMIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	MB1	W	08L0160	N/A	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	MB2	W	08L0160	N/A	04/22/08	04/23/08
MERCURY LABORATORY	LC1 BS	W	08C0073	N/A	04/22/08	04/23/08
MERCURY, TOTAL	MB1	W	08C0073	N/A	04/22/08	04/23/08
MERCURY, TCLP LEACHA	MB2	W	08C0073	N/A	04/22/08	04/23/08
MERCURY, TCLP LEACHA	MB3	W	08C0073	N/A	04/22/08	04/23/08
LEAD LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
LEAD, TCLP LEACHATE	MB1	W	08L0160	N/A	04/22/08	04/23/08
LEAD, TCLP LEACHATE	MB2	W	08L0160	N/A	04/22/08	04/23/08
SELENIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
SELENIUM, TCLP LEACH	MB1	W	08L0160	N/A	04/22/08	04/23/08
SELENIUM, TCLP LEACH	MB2	W	08L0160	N/A	04/22/08	04/23/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-087
LVL#: 0804L914
SDG/SAF#: K1189/RC-087

W.O.#: 11343-606-001-9999-00
Date Received: 04-15-08

METALS CASE NARRATIVE

The following is a summary of the QC results accompanying the sample results. Lionville Laboratory (LvLI) certifies that all test results meet the requirements of NELAC except as noted below.

1. This narrative covers the analyses of 2 TCLP leachates.

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

   All samples for ICP metals were run with a 6-fold dilution.

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

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

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

6. All preparation/method blanks (MB) were within method criteria {less than the Limit of Quantitation (3-10X the LOD), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

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

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

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

10. The TCLP extract from samples J16J83 was selected for the matrix spike (MS) for this analytical batch.

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 18 pages.

11. The MS recoveries for all analytes in the TCLP extract were above 50% except for Silver (1.0%). The result in the TCLP Leachate was below 80-120% of the action level so standard addition was not required per Federal Register, Vol.57, No.227, Nov. 24, 1992, page 55117.

12. For the purposes of this report, the data has been reported to the Limit of Detection (LOD). Values between the LOD and the Limit of Quantitation (LOQ) are acquired in a region of less-certain quantification.

13. LvLI is NELAP accredited by the state of Pennsylvania. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.

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

5/8/08
Date

alm/m04-914

METALS METHOD GLOSSARY

he following methods are used as reference for the digestion and analysis of samples contained within th
ot#: 0804L914

eaching Procedure: __1310 __1311 __1312 __Other:_____

LP 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
luminum	__6010B		__200.7				__99
ntimony	__6010B	__7041 [5]	__200.7	__204.2			__99
rsenic	✓6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
arium	✓6010B		__200.7				__99
eryllium	__6010B		__200.7				__99
ismuth	__6010B [1]		__200.7 [1]			__1620	__99
oron	__6010B		__200.7				__99
admium	✓6010B	__7131A [5]	__200.7	__213.2			__99
alcium	__6010B		__200.7				__99
hromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
obalt	__6010B		__200.7				__99
opper	__6010B	__7211 [5]	__200.7	__220.2			__99
ron	__6010B		__200.7				__99
ead	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
ithium	__6010B	__7430 [4]	__200.7			__1620	__99
agnesium	__6010B		__200.7				__99
anganese	__6010B		__200.7				__99
ercury	✓7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
olybdenum	__6010B		__200.7				__99
ickel	__6010B		__200.7				__99
otassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
are Earths	__6010B [1]		__200.7 [1]			__1620	__99
elenium	✓6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
ilicon	__6010B [1]		__200.7			__1620	__99
ilica	__6010B		__200.7			__1620	__99
ilver	✓6010B	__7761 [5]	__200.7	__272.2			__99
odium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
trontium	__6010B		__200.7				__99
hallium	__6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
in	__6010B		__200.7				__99
itanium	__6010B		__200.7				__99
ranium	__6010B [1]		__200.7 [1]			__1620	__99
anadium	__6010B		__200.7				__99
inc	__6010B		__200.7				__99
irconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-03/01
000000005

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 04/24/08

CLIENT: TNUHANFORD RC-087 K1189 LVL LOT #: 0804L914

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	J16J83	Silver, TCLP Leachate	10.7		UG/L	6.0	6.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Barium, TCLP Leachate	303		UG/L	6.0	6.0
		Cadmium, TCLP Leachate	3.2		UG/L	3.0	6.0
		Chromium, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0
		Lead, TCLP Leachate	23.6		UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
-004	J16J85	Silver, TCLP Leachate	11.5		UG/L	6.0	6.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Barium, TCLP Leachate	221		UG/L	6.0	6.0
		Cadmium, TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Chromium, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Mercury, TCLP Leachate	0.11		UG/L	0.06	1.0
		Lead, TCLP Leachate	28.4		UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/24/08

CLIENT: TNUHANFORD RC-087 K1189 LVL LOT #: 0804L914

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0160-MB1	Silver, TCLP Leachate	3.5		UG/L	1.0	1.0
		Arsenic, TCLP Leachate	5.0	u	UG/L	5.0	1.0
		Barium, TCLP Leachate	3.0		UG/L	1.0	1.0
		Cadmium, TCLP Leachate	0.59		UG/L	0.50	1.0
		Chromium, TCLP Leachate	2.4		UG/L	2.0	1.0
		Lead, TCLP Leachate	5.4		UG/L	3.0	1.0
		Selenium, TCLP Leachate	6.0	u	UG/L	6.0	1.0
BLANK2	08L0160-MB2	Silver, TCLP Leachate	19.6		UG/L	6.0	6.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Barium, TCLP Leachate	6.0	u	UG/L	6.0	6.0
		Cadmium, TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Chromium, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Lead, TCLP Leachate	18.0	u	UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
BLANK1	08C0073-MB1	Mercury, Total	0.06	u	UG/L	0.06	1.0
BLANK2	08C0073-MB2	Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0
BLANK3	08C0073-MB3	Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/24/08

CLIENT: TNUHANFORD RC-087 K1189 LVL LOT #: 0804L914

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-003	J16J83	Silver, TCLP Leachate	62.6	10.7	5000	1.0	6.0
		Arsenic, TCLP Leachate	4830	30.0 u	5000	96.6	6.0
		Barium, TCLP Leachate	95000	303	100000	94.7	6.0
		Cadmium, TCLP Leachate	993	3.2	1000	99.0	6.0
		Chromium, TCLP Leachat	4870	12.0 u	5000	97.4	6.0
		Mercury, TCLP Leachate	198	0.06u	200	98.9	50.0
		Lead, TCLP Leachate	5000	23.6	5000	99.5	6.0
		Selenium, TCLP Leachat	981	36.0 u	1000	98.1	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/24/08

CLIENT: TNUHANFORD RC-087 K1189 LVL LOT #: 0804L914

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-003REP	J16J83	Mercury, TCLP Leachate	0.06u	0.06u	NC	1.0
-004REP	J16J85	Silver, TCLP Leachate	11.5	11.5	0.00	6.0
		Arsenic, TCLP Leachate	30.0 u	34.2	NC	6.0
		Barium, TCLP Leachate	221	219	0.95	6.0
		Cadmium, TCLP Leachate	3.0 u	3.0 u	NC	6.0
		Chromium, TCLP Leachate	12.0 u	12.0 u	NC	6.0
		Lead, TCLP Leachate	28.4	60.4	72.1	6.0
		Selenium, TCLP Leachate	36.0 u	36.0 u	NC	6.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/24/08

CLIENT: TNUHANFORD RC-087 K1189 LVL LOT #: 0804L914

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0160-LC1	Silver, LCS	489	500	UG/L	97.7
		Arsenic, LCS	9490	10000	UG/L	94.9
		Barium, LCS	4450	5000	UG/L	89.0
		Cadmium, LCS	226	250	UG/L	90.5
		Chromium, LCS	456	500	UG/L	91.1
		Lead, LCS	2280	2500	UG/L	91.1
		Selenium, LCS	9500	10000	UG/L	95.0
LCS1	08C0073-LC1	Mercury, LCS	5.2	5.0	UG/L	103.3

Lionville Laboratory Incorporated

Logbook #: 140

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0160
Date/Time Initiated: 4/22/08 1130
Date/Time Completed: 4/22/08 1730
Analyst(s): MW
Matrix: Soil Water Other: TCLP
Instr. Type: AA (ICP)
Parameters: RCRA

Digested / Undigested (circle one)
Balance #: N/A
Balance Cal Verif: Y (NA)
Hot Plate Temp: 90°

Method: SW (circle)
3005A
3010A
3015
3020A
7060A (As/Se)
7760A (Ag)
3050B
3051
CLP ILMO3.0
ILMO4.0

DW 200.7 (1994)
200.9
3113B
MCAWW 200.7 (1982)
200 (AA)
206.2 (As/Se)
SM 3030C (NC)
Other

TMW

COC Batch #	Spike Vol(s) (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/So/ TC	Texture	Color/Appearance	Artifact	Turb
0804L914-003		100ml	100ml	<2	TC	N/A	clear/colorless		PAD
003S	1.0ml								
004									
004R									
0804L921-002		50ml							
002R									
002S	1.0ml	100ml							
08LT0030-LB1									
08L0160-MB1									
LCS1	1.0ml								
W.E. MW 4/22/08									

MW 4/22/08

Spiking IDs:
MS #: 6072-73-05
6072-78-06

LCS #: 6072-78-08
09
10
11

Reagent IDs:
HNO_3 E46025
HCL
H_2O_2
1:1 HNO_3
1:1 HCL 6072-069-03

File ID#: ICO16001
LIMS Transfer: (Y) N Updated
Data Review By/Date: PMP, 04/23/08

onville Laboratory
corporated

MERCURY PREPARATION

Logbook # 422

nalyst: TCB
ate 4/22/08
art Time/Temp: 1235 | 93°
nd Time/Temp: 1435 | 96°

Instrument ID HG3.1
Balance #: NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 080073
Worksheet: HG042301
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? ✓ Yes __ No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank	P0			33mL	33mL	
0.2 µg/L	2B	0.0667				
1.0	HH	0.334				
2.0	11A	0.667				
5.0	P5	1.667				
10.0	JC	3.334				
ICV	31	0.0834	2.5			
CCV	E7	0.167	5.0			
ICB/CCB	2V					
MBI	WN					PB173
LCI	Gd	0.167	5.0			LCSW173
0804L914-003	3VG					
003R	183					
003S	711	0.667	200			
004	NJ					
0804L921-002	401					
002R	RU					
002S	1721	0.667	200			
08LT0030-LB1	514					
08LT0031-LB1	HT					
0804L919-004	871					
004R	M1					
004S	AB	0.334	1.0			
008	CT					
012	A4					
016	N4					
0804L926-003	8H					

Standard:	ID	Prep Date/Time
ICAL/MS	RI6072-78-14B	4/22/08 1020
ICV/CCV/LCS	US6072-78-015A	↓

Reviewed By/Date: [signature] 5/1/08

see book # 9368 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Water LCS Spiking Concentration: 1.0 µg/ml

nville Laboratory
orporated

MERCURY PREPARATION

Logbook # 422

alyst: CB
e 4/22/08
rt Time/Temp: see page 082
d Time/Temp:

Instrument ID HG3.1
Balance #: NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0073
Worksheet: HG042301
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? ✓ Yes __ No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
0804L926-008	L2			33mL	33mL	
0804L945-002	522					
0804L953-004	DX					
0804L955-009	886					
009R	C48					
009S	41	0.334	1.0			
0804L956-005	A94					
009	CX					
014	Z					

CB 4/22/08

Standard:	ID	Prep Date/Time
ICAL/MS		
ICV/CCV/LCS	See page 082	

Reviewed By/Date: [signature] 5/1/0

see book # 9368 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Water LCS Spiking Concentration: 1.0 µg/ml

ME-HgCVAA-Prep1007

Page #:

nville Laboratory Use Only

0804L914

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000015

nt TNU Hanford SAF BC-087

Final Proj. Sampling Date

ject# 11343-606-001-9999-00

ject Contact/Phone#

nville Laboratory Project Manager O Johnson

SW846 Del STD TAT 7 Day

te Rec'd 4-15-08 Date Due 4-22-08

Refrigerator #												A 3							
#/Type Container	Liquid																		
	Solid											1P							
Volume												500							
Preservatives												–							
ANALYSES REQUESTED →		ORGANIC										INORG							
		VOA	BNA	Pest/PCB	Herb							TCLP Metal	CN	LEACHATE					
		Lionville Laboratory Use Only																	
												ITCLP		RCRA					
Matrix Codes: Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum, Solids, Drum, Liquids, EP/TCLP, Leachate, Wipe, Other, Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
	001	J16J83	VH 4	15-08	Soil	4-4-08	0805					x							
	002	J16J85			⊥	4-7-08	0815					x							
	003	⊥ 83 TCLP of 001			⊥	⊥								X					
	004	⊥ 85 ⊥ 002			⊥	⊥								X					

ecial Instructions:

Matrix QC

Special Instructions:

1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
[signature]	[signature]	4/15/08	1030					ORIGIN L REWRITTEN		"COMPOSITE WASTE"	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-087-0858	Page 1 of 1
ollector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 8F ~~8G~~ RK 4/4/08	Data Turnaround ~~15~~ 7 Days RK 4/4/08
roject Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087		
e Chest No. SAWS-109	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment Fed Ex		
ipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A080235		Bill of Lading/Air Bill No. See OSPC		

OSSIBLE SAMPLE HAZARDS/REMARKS

otential Radiological and Beryllium contamination

pecial Handling and/or Storage

lone

Preservation	None										
Type of Container	P										
No. of Container(s)	1										
Volume	500mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.									Tie To	

Sample No.	Matrix *	Sample Date	Sample Time										
~~16J82~~	~~SOIL~~	RK 4/4/08											
16J83	SOIL	4.4.08	0805	X								J16J43	G005
~~16J84~~	~~SOIL~~	~~4.4.08~~	~~0810~~	~~X~~	RK 4/14/08							J16J43	G004

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
. Harries/E. Harries	4/4/08 0845	R. Fahlberg R. Falley	0845 4.4.08
Fahlberg R. Falley	4.4.08 0930	Ref 1A Shipping Facility	4.4.08 0930
060/1A	4/14/08 0945	MS Mstankouch 1F	4/14/08 0945
MS Mstankouch WCH	4/14/08 1500		Fed Ex
Fed Ex	4-15-08 1030	[signature]	4-15-08 1030

SPECIAL INSTRUCTIONS

None

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

ABORATORY SECTION	Received By	Title	Date/Time
INAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

000000016

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-086	Page 1 of 1

Collector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087
Ice Chest No. SAWS-109	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment Fed Ex
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A080235		Bill of Lading/Air Bill No. see GSPC

Price Code 8F ~~2B~~ RK 4/4/08 Data Turnaround ~~15~~ 7 Days RK 4/7/08

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None									
Type of Container	P									
No. of Container(s)	1									
Volume	500mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions.									

Sample No.	Matrix *	Sample Date	Sample Time										
J16J85	SOIL	4-7-08	0815	X								Seg.	G-006
~~J16J86~~	~~SOIL~~	~~4-7-08~~	~~0825~~	~~X~~	MJ 4/14/08							"	G-007
~~J16J87~~	~~SOIL~~												
RTC 4/7/08													

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: E. Harries / E. Harries — Date/Time: 4/7/08 0900	Received By/Stored In: RT Coffman / RT Coffman — Date/Time: ~~1025~~ 0900 4/7/08		
Relinquished By/Removed From: RT Coffman / RT Coffman — Date/Time: 1025 4/7/08	Received By/Stored In: MJ MStankovich — Date/Time: 4/7/08 1025		
Relinquished By/Removed From: WCH MJ MStankovich — Date/Time: 4/14/08	Received By/Stored In: Fed Ex — Date/Time:		
Relinquished By/Removed From: Fed Ex — Date/Time: 4/15/08 1030	Received By/Stored In: [signature] — Date/Time: 4/15/08 1030		
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

None RTC 4/7/08

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

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

WCH-EE-011

000000017

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/SAF/SOW/Release #: RC-087

Date: 4/15/08

LvLI Batch #: 0804L914

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 791884002550
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2-2	°C	Cooler # SAWS-109
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LvLI