0077906

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

COMPLETE COPY OF DATA PACKAGE TO:

Rick Kerkow	L6-06	KW 6/9/08 Initials/Date
Kathy Wendt	H4-21	KW 6/9/08 Initials/Date

COMMENTS:

SDG K1212 **SAF-RC-087**

Rad only X Chem only Rad & Chem

X Complete Partial

RECEIVED
JUN 11 2008
EDMC

WASTE SITE: 618-7 Burial Ground/Stockpiles

LIONVILLE LABORATORY INC.

RECEIVED JUN 2008

2 June 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 #	0804L024
SDG #	K1212
SAF #	RC-087
Date Received	4/30/08
# Samples	2
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	
Glycols	
DRO/KRO/GRO	
GC Organics	
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 K1212

RECEIVED JUN 2008

DATE RECEIVED: 04/30/08 LVL LOT # :0804L024

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16MK5						
TCLP	001	S	08LTO040	04/25/08	05/06/08	05/07/08
J16MK7						
TCLP	002	S	08LTO040	04/25/08	05/06/08	05/07/08
J16MK5						
SILVER, TCLP LEACHAT	003	W	08L0190	05/07/08	05/09/08	05/12/08
ARSENIC, TCLP LEACHA	003	W	08L0190	05/07/08	05/09/08	05/12/08
BARIUM, TCLP LEACHAT	003	W	08L0190	05/07/08	05/09/08	05/12/08
CADMIUM, TCLP LEACHA	003	W	08L0190	05/07/08	05/09/08	05/12/08
CHROMIUM, TCLP LEACH	003	W	08L0190	05/07/08	05/09/08	05/12/08
MERCURY, TCLP LEACHA	003	W	08C0081	05/07/08	05/08/08	05/09/08
LEAD, TCLP LEACHATE	003	W	08L0190	05/07/08	05/09/08	05/12/08
SELENIUM, TCLP LEACH	003	W	08L0190	05/07/08	05/09/08	05/12/08
J16MK7						
SILVER, TCLP LEACHAT	004	W	08L0190	05/07/08	05/09/08	05/12/08
SILVER, TCLP LEACHAT	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
SILVER, TCLP LEACHAT	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08
ARSENIC, TCLP LEACHA	004	W	08L0190	05/07/08	05/09/08	05/12/08
ARSENIC, TCLP LEACHA	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
ARSENIC, TCLP LEACHA	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08
BARIUM, TCLP LEACHAT	004	W	08L0190	05/07/08	05/09/08	05/12/08
BARIUM, TCLP LEACHAT	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
BARIUM, TCLP LEACHAT	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08
CADMIUM, TCLP LEACHA	004	W	08L0190	05/07/08	05/09/08	05/12/08
CADMIUM, TCLP LEACHA	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
CADMIUM, TCLP LEACHA	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08
CHROMIUM, TCLP LEACH	004	W	08L0190	05/07/08	05/09/08	05/12/08
CHROMIUM, TCLP LEACH	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
CHROMIUM, TCLP LEACH	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08
MERCURY, TCLP LEACHA	004	W	08C0081	05/07/08	05/08/08	05/09/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-087 K1212

DATE RECEIVED: 04/30/08 LVL LOT # :0804L024

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MERCURY, TCLP LEACHA	004 REP	W	08C0081	05/07/08	05/08/08	05/09/08
MERCURY, TCLP LEACHA	004 MS	W	08C0081	05/07/08	05/08/08	05/09/08
LEAD, TCLP LEACHATE	004	W	08L0190	05/07/08	05/09/08	05/12/08
LEAD, TCLP LEACHATE	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
LEAD, TCLP LEACHATE	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08
SELENIUM, TCLP LEACH	004	W	08L0190	05/07/08	05/09/08	05/12/08
SELENIUM, TCLP LEACH	004 REP	W	08L0190	05/07/08	05/09/08	05/12/08
SELENIUM, TCLP LEACH	004 MS	W	08L0190	05/07/08	05/09/08	05/12/08

AB QC:

SILVER LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
SILVER, TCLP LEACHAT	MB1	W	08L0190	N/A	05/09/08	05/12/08
ARSENIC LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
ARSENIC, TCLP LEACHA	MB1	W	08L0190	N/A	05/09/08	05/12/08
BARIUM LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
BARIUM, TCLP LEACHAT	MB1	W	08L0190	N/A	05/09/08	05/12/08
CADMIUM LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
CADMIUM, TCLP LEACHA	MB1	W	08L0190	N/A	05/09/08	05/12/08
CHROMIUM LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
CHROMIUM, TCLP LEACH	MB1	W	08L0190	N/A	05/09/08	05/12/08
MERCURY LABORATORY	LC1 BS	W	08C0081	N/A	05/08/08	05/09/08
MERCURY, TOTAL	MB1	W	08C0081	N/A	05/08/08	05/09/08
LEAD LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
LEAD, TCLP LEACHATE	MB1	W	08L0190	N/A	05/09/08	05/12/08
SELENIUM LABORATORY	LC1 BS	W	08L0190	N/A	05/09/08	05/12/08
SELENIUM, TCLP LEACH	MB1	W	08L0190	N/A	05/09/08	05/12/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-087
LVL#: 0804L024
SDG/SAF#: K1212/RC-087

W.O.#: 11343-606-001-9999-00
Date Received: 04-30-08

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.

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 (80-120% for Mercury) with the exception of Lead CCV3 (112.5%) and CCV4 (113.9%) in file PS0512A. All samples were rerun in file PS0512B for Lead.

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

7. 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.

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.

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 TCLP extract from sample J16MK7 was selected for the matrix spike (MS) for this analytical batch. All MS recoveries were greater than 50% as per method criteria.

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

5/15/08
Date

alm/m04-024

LvLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

ıe following methods are used as reference for the digestion and analysis of samples contained within th

ɔt#: 08041024

:aching Procedure: __1310 __1311 __1312 __Other:_____

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

etals 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
ɔron	__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
on	__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
ɔtassium	__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
licon	__6010B [1]		__200.7			__1620	__99
lica	__6010B		__200.7			__1620	__99
lver	✓6010B	__7761 [5]	__200.7	__272.2			__99
ɔdium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
rontium	__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

ther:_____ 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 05/12/08

CLIENT: TNUHANFORD RC-087 K1212 LVL LOT #: 0804L024

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	J16MK5	Silver, TCLP Leachate	4.5	u	UG/L	4.5	1.0
		Arsenic, TCLP Leachate	31.7	u	UG/L	31.7	1.0
		Barium, TCLP Leachate	708		UG/L	3.1	1.0
		Cadmium, TCLP Leachate	16.2		UG/L	5.6	1.0
		Chromium, TCLP Leachate	9.5		UG/L	4.6	1.0
		Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
		Lead, TCLP Leachate	63.0		UG/L	34.8	1.0
		Selenium, TCLP Leachate	41.3	u	UG/L	41.3	1.0
-004	J16MK7	Silver, TCLP Leachate	4.5	u	UG/L	4.5	1.0
		Arsenic, TCLP Leachate	31.7	u	UG/L	31.7	1.0
		Barium, TCLP Leachate	753		UG/L	3.1	1.0
		Cadmium, TCLP Leachate	17.2		UG/L	5.6	1.0
		Chromium, TCLP Leachate	77.3		UG/L	4.6	1.0
		Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
		Lead, TCLP Leachate	12700		UG/L	34.8	1.0
		Selenium, TCLP Leachate	41.3	u	UG/L	41.3	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 05/12/08

CLIENT: TNUHANFORD RC-087 K1212 LVL LOT #: 0804L024

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0190-MB1	Silver, TCLP Leachate	4.5	u	UG/L	4.5	1.0
		Arsenic, TCLP Leachate	31.7	u	UG/L	31.7	1.0
		Barium, TCLP Leachate	3.1	u	UG/L	3.1	1.0
		Cadmium, TCLP Leachate	5.6	u	UG/L	5.6	1.0
		Chromium, TCLP Leachate	4.6	u	UG/L	4.6	1.0
		Lead, TCLP Leachate	34.8	u	UG/L	34.8	1.0
		Selenium, TCLP Leachate	41.3	u	UG/L	41.3	1.0
BLANK1	08C0081-MB1	Mercury, Total	0.10	u	UG/L	0.10	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 05/12/08

CLIENT: TNUHANFORD RC-087 K1212 LVL LOT #: 0804L024

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-004	J16MK7	Silver, TCLP Leachate	3010	4.5 u	5000	60.1	1.0
		Arsenic, TCLP Leachate	5090	31.7 u	5000	101.9	1.0
		Barium, TCLP Leachate	104000	753	100000	102.8	6.0
		Cadmium, TCLP Leachate	988	17.2	1000	97.0	1.0
		Chromium, TCLP Leachat	4780	77.3	5000	94.0	1.0
		Mercury, TCLP Leachate	208	0.10u	200	104.2	50.0
		Lead, TCLP Leachate	16300	12700	5000	70.2	1.0
		Selenium, TCLP Leachat	1060	41.3 u	1000	105.7	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 05/12/08

CLIENT: TNUHANFORD RC-087 K1212 LVL LOT #: 0804L024

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-004REP	J16MK7	Silver, TCLP Leachate	4.5 u	4.5 u	NC	1.0
		Arsenic, TCLP Leachate	31.7 u	31.7 u	NC	1.0
		Barium, TCLP Leachate	753	738	2.0	1.0
		Cadmium, TCLP Leachate	17.2	16.7	2.9	1.0
		Chromium, TCLP Leachate	77.3	77.9	0.77	1.0
		Mercury, TCLP Leachate	0.10u	0.10u	NC	1.0
		Lead, TCLP Leachate	12700	12300	3.7	1.0
		Selenium, TCLP Leachate	41.3 u	41.3 u	NC	1.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 05/12/08

CLIENT: TNUHANFORD RC-087 K1212 LVL LOT #: 0804L024

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0190-LC1	Silver, LCS	477	500	UG/L	95.3
		Arsenic, LCS	9740	10000	UG/L	97.4
		Barium, LCS	5110	5000	UG/L	102.2
		Cadmium, LCS	241	250	UG/L	96.2
		Chromium, LCS	490	500	UG/L	98.1
		Lead, LCS	2420	2500	UG/L	96.9
		Selenium, LCS	9730	10000	UG/L	97.3
LCS1	08C0081-LC1	Mercury, LCS	5.4	5.0	UG/L	108.1

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0190
Date/Time Initiated: 5/9/08 1000
Date/Time Completed: 5/9/08 1830
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: 92°

Method: SW (circle) 3005A, 3010A, 3015, 3020A, 7060A (As/Se), 7760A (Ag), 3050B, 3051
DW 200.7 (1994), 200.9, 3113B
MCAWW 200.7 (1982), 200 (AA), 206.2 (As/Se)
SM 3030C (NC)
CLP ILMO3.0, ILMO4.0
Other

MW Stock

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
0804L014-002		100ml	100ml	<2	TC	N/A	clear/colorless	ABM	
002R		↓	↓	↓	↓	↓	↓	↓	
002S	1.0ml	50ml	50ml	↓	↓	↓	↓	↓	
0804L017-004		100ml	100ml	↓	↓	↓	↓	↓	
004R		↓	↓	↓	↓	↓	↓	↓	
004S	1.0ml	↓	↓	↓	↓	↓	↓	↓	
005		↓	↓	↓	↓	↓	↓	↓	
006		↓	↓	↓	↓	↓	↓	↓	
0804L024-003		↓	↓	↓	↓	↓	↓	↓	
004		↓	↓	↓	↓	↓	↓	↓	
004R		↓	↓	↓	↓	↓	↓	↓	
004S	1.0ml	↓	↓	↓	↓	↓	↓	↓	
0804L003-003		↓	↓	↓	↓	↓	↓	↓	
003S	1.0ml	50ml	50ml	↓	↓	↓	↓	↓	
08L0190-MB1		100ml	100ml	↓	↓	↓	↓		
LC1	1.0ml	↓	↓	↓	↓	↓	↓		

MW 5/9/08

Spiking IDs:
MS #: 6072-73-05
6072-078-06

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#: IC019001
LIMS Transfer: Y N updated
Data Review By/Date: PMP, 05/09/08

nville Laboratory
orporated

MERCURY PREPARATION

Logbook # 422

lyst: Ten
e 5/9/08
t Time/Temp: 1300 | 97°
l Time/Temp: 1500 | 93°

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

Prep Batch: 08C0081
Worksheet: HG050901
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	CM			33mL	33mL	
0.2 µg/L	CB2	0.0667				
1.0	B14	0.334				
2.0	AB	0.667				
5.0	PC	1.667				
10.0	PA	3.334				
ICV	HR	0.0834	2.5			
CCV	NR	0.167	5.0			
ICB/CCB	L15					
MB1	27					PBW181
LC1	503	0.167	5.0			LCSW181
0804L008-008	2B					
008S	76	0.667	200			
008T	B32	0.667	200			
009	R2					
010	500					
0804L009-005	~~N60~~ WK TEST 5/9/08					
005S	X5	0.667	200			
005T	92	0.667	200			
006	~~WK~~ N60 TEST 5/9/08					
0804L017-004	SPRT					
004R	ET					
004S	HH	0.667	200			
005	154					
006	G12					
0804L024-003	71L					
004	BB					

ndard:	ID	Prep Date/Time
L/MS	RI 6072-78-14B	5/9/08 1210
/CCV/LCS	US 6072-78-15A	

Reviewed By/Date: [signature] 5/12/08

see book # 9368 for std traceability information

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

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

HgCVAA-Prep1007

Page #:

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ille Laboratory
porated

MERCURY PREPARATION

Logbook # 422

: TEB
5/9/08
me/Temp:
ne/Temp: see page 097

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

Prep Batch: 08C0031
Worksheet: HG050901
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.
8041L024-004R	A1R			33mL	33mL	
004S	M1	0.667	200			
8041L014-002	R11					
002R	P18					
002S	114	0.667	200			
8041L003-003	857					
003S	W0	0.667	200			
08LT0040-LB1	297					
~~8041L89 TEB 5/9/08~~						

TEB 5/9/08

t:	ID	Prep Date/Time
;		
/LCS	see page 097	

Reviewed By/Date: 5/12/08

see book # 9368 for std traceability information

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

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

VAA-Prep1007

Page #:

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nville Laboratory Use Only

804L024

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000015

nt TNU Hanford RC-087

Final Proj. Sampling Date

ect# 11343-606-001-9999-00

ect Contact/Phone#

ville Laboratory Project Manager Orlitta Johnson

SW846 Del STD TAT 7 Days

Rec'd 4-30-08 Date Due 5-7-08

Refrigerator #														A 3							
#/Type Container	Liquid																				
	Solid													1pl							
Volume	Solid													500							
Preservatives														1							
ANALYSES REQUESTED →		ORGANIC												INORG							
		VOA	BNA	Pest/PCB	Herb									TCLP Metal + Hg	CN	LEACHATE					
		Lionville Laboratory Use Only																			
														ITCLP		RCRA					
Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected															
001	J16MK5			S	4-25-07	0920								X							
002	J16MK7			↓	↓	0940								X							
003	↓ K5 TCLP of 001			↓	*											X					
004	↓ K7 ↓ 002			↓	↓											X					

Matrix Codes: Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum, Solids, Drum, Liquids, EP/TCLP, Leachate, Wipe, Other, Fish

cial Instructions:

Special Instructions:

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

* See Labchron

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	4-30-08	0950

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		"COMPOSITE WASTE"	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-119	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
Data Turnaround ~~15~~ Days 7 MK 4/22/08			
roject Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles	SAF No. RC-087	
e Chest No. ERC-01-061	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment Fed Ex
hipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A080243		Bill of Lading/Air Bill No. See ospc

OSSIBLE SAMPLE HAZARDS/REMARKS

otential Radiological and Beryllium contamination

pecial Handling and/or Storage

one

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										
~~3MK2~~	~~SOIL~~	~~4.25.08~~	~~0850~~	~~X~~								See #	K-001
~~3MK3~~	~~SOIL~~	~~4.25.08~~	~~0900~~	~~X~~			MK 4/29/08					"	K-002
~~3MK4~~	~~SOIL~~	~~4.25.08~~	~~0910~~	~~X~~								"	K-003
~~3MK5~~	~~SOIL~~	~~4.25.08~~	~~0920~~	~~X~~								"	~~K-004~~
												PTL	~~K-005~~

CHAIN OF POSSESSION	Sign/Print Names	
nquished By/Removed From Harris/E. Harries	Date/Time 4/25/08 1030	Received By/Stored In R. Fahlberg R. Fahlberg 4.25.08
Date/Time 1030		
nquished By/Removed From . Fahlberg R. Fahlberg 4.25.08	Date/Time 1100	Received By/Stored In 1060 Shipping 1-A 4.25.08
Date/Time 1100		
nquished By/Removed From 60/1A 4/29/08	Date/Time 0915	Received By/Stored In MCH MStankovich 4/29/08
Date/Time 0915		
nquished By/Removed From WCH MCH MStankovich 4/29/08	Date/Time 0915	Received By/Stored In Fed Ex
Date/Time		
nquished By/Removed From Fed Ex	Date/Time 4.30.08/0950	Received By/Stored In N. Smith
Date/Time 4.30.08/0950		
nquished By/Removed From	Date/Time	Received By/Stored In
Date/Time		

SPECIAL INSTRUCTIONS

None

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

Chains split J16MK5, sent in early

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

BORATORY SECTION	Received By	Title	Date/Time
AL SAMPLE ISPOSITION	Disposal Method	Disposed By	Date/Time

H-EE-011

000000016

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-120	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
roject Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087	Data Turnaround ~~15~~ 7 Days
ce Chest No. ERC-01-061	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment Fed Ex	
hipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A080243		Bill of Lading/Air Bill No. See OSPC	

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									
~~16MK6~~	~~SOIL~~	~~4.25.08~~	~~0930~~	~~X~~							~~See #~~	~~K-005~~
16MK7	SOIL	4.25.08	0940	X							"	K-006
~~16MK8~~	~~SOIL~~	~~4.25.08~~	~~0950~~	~~X~~							~~"~~	~~K-007~~

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	4/25/08 1030	R. Fahlberg R. Fahlberg	4.25.08 1030
R. Fahlberg R. Fahlberg	4.25.08 1100	1060 Shpng 1-A	4.25.08 1100
1060/1A 4/28/08	4/29/08 0915	MLL MStankouch	4/29/08 0915
MLL MStankouch WCH	4/29/08 0915	Fed Ex	
Fed Ex	4.30.08/0950	[signature]	4.30.08/0950

SPECIAL INSTRUCTIONS

None

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

Chains split. J16MK7 sent in early

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
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

VCH-EE-011

000000017

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford

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

Date: 4.30.08

LvLI Batch #: 0804L024

Sample Custodian: D Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7920 4788 005
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 15.2 °C		Cooler # ERC-01-061
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 temp. 15.2	
16. Project Manager contacted concerning any discrepancies?	☑ Yes	☐ No	☐ N/A
Person Contacted OK		Date 4.30.08	

LVLI LIONVILLE LABORATORY INC