0077899

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

COMPLETE COPY OF DATA PACKAGE TO:

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

COMMENTS:

SDG K1187 **SAF-RC-087**

Rad only X Chem only Rad & Chem

X Complete Partial

WASTE SITE: 618-7 Burial Ground/Stockpiles

RECEIVED
JUN 11 2008
EDMC

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 #	0804L890
SDG #	K1187
SAF #	RC-087
Date Received	4/9/08
# Samples	3
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

RECEIVED
MAY 2008

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-087 K1187

DATE RECEIVED: 04/09/08 LVL LOT # :0804L890

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16DY8						
TCLP	001	S	08LT0030	03/28/08	04/14/08	04/15/08
J16DY9						
TCLP	002	S	08LT0030	03/28/08	04/14/08	04/15/08
J16J82						
TCLP	003	S	08LT0030	04/03/08	04/14/08	04/15/08
J16DY8						
SILVER, TCLP LEACHAT	004	W	08L0158	04/15/08	04/21/08	04/22/08
ARSENIC, TCLP LEACHA	004	W	08L0154	04/15/08	04/17/08	04/18/08
ARSENIC, TCLP LEACHA	004 REP	W	08L0154	04/15/08	04/17/08	04/18/08
ARSENIC, TCLP LEACHA	004 MS	W	08L0154	04/15/08	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	004	W	08L0154	04/15/08	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	004 REP	W	08L0154	04/15/08	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	004 MS	W	08L0154	04/15/08	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	004	W	08L0154	04/15/08	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	004 REP	W	08L0154	04/15/08	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	004 MS	W	08L0154	04/15/08	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	004	W	08L0154	04/15/08	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	004 REP	W	08L0154	04/15/08	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	004 MS	W	08L0154	04/15/08	04/17/08	04/18/08
MERCURY, TCLP LEACHA	004	W	08C0071	04/15/08	04/16/08	04/17/08
MERCURY, TCLP LEACHA	004 REP	W	08C0071	04/15/08	04/16/08	04/17/08
MERCURY, TCLP LEACHA	004 MS	W	08C0071	04/15/08	04/16/08	04/17/08
LEAD, TCLP LEACHATE	004	W	08L0154	04/15/08	04/17/08	04/18/08
LEAD, TCLP LEACHATE	004 REP	W	08L0154	04/15/08	04/17/08	04/18/08
LEAD, TCLP LEACHATE	004 MS	W	08L0154	04/15/08	04/17/08	04/18/08
SELENIUM, TCLP LEACH	004	W	08L0154	04/15/08	04/17/08	04/18/08
SELENIUM, TCLP LEACH	004 REP	W	08L0154	04/15/08	04/17/08	04/18/08
SELENIUM, TCLP LEACH	004 MS	W	08L0154	04/15/08	04/17/08	04/18/08
J16DY9						
SILVER, TCLP LEACHAT	005	W	08L0158	04/15/08	04/21/08	04/22/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-087

DATE RECEIVED: 04/09/08 LVL LOT # :0804L890

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SILVER, TCLP LEACHAT	005 REP	W	08L0158	04/15/08	04/21/08	04/22/08
ARSENIC, TCLP LEACHA	005	W	08L0154	04/15/08	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	005	W	08L0154	04/15/08	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	005	W	08L0154	04/15/08	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	005	W	08L0154	04/15/08	04/17/08	04/18/08
MERCURY, TCLP LEACHA	005	W	08C0071	04/15/08	04/16/08	04/17/08
LEAD, TCLP LEACHATE	005	W	08L0154	04/15/08	04/17/08	04/18/08
SELENIUM, TCLP LEACH	005	W	08L0154	04/15/08	04/17/08	04/18/08
J16J82						
SILVER, TCLP LEACHAT	006	W	08L0158	04/15/08	04/21/08	04/22/08
SILVER, TCLP LEACHAT	006 MS	W	08L0158	04/15/08	04/21/08	04/22/08
ARSENIC, TCLP LEACHA	006	W	08L0154	04/15/08	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	006	W	08L0154	04/15/08	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	006	W	08L0154	04/15/08	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	006	W	08L0154	04/15/08	04/17/08	04/18/08
MERCURY, TCLP LEACHA	006	W	08C0071	04/15/08	04/16/08	04/17/08
LEAD, TCLP LEACHATE	006	W	08L0154	04/15/08	04/17/08	04/18/08
SELENIUM, TCLP LEACH	006	W	08L0154	04/15/08	04/17/08	04/18/08

LAB QC:

SILVER LABORATORY	LC1 BS	W	08L0158	N/A	04/21/08	04/22/08
SILVER, TCLP LEACHAT	MB1	W	08L0158	N/A	04/21/08	04/22/08
SILVER, TCLP LEACHAT	MB2	W	08L0158	N/A	04/21/08	04/22/08
ARSENIC LABORATORY	LC1 BS	W	08L0154	N/A	04/17/08	04/18/08
ARSENIC, TCLP LEACHA	MB1	W	08L0154	N/A	04/17/08	04/18/08
ARSENIC, TCLP LEACHA	MB2	W	08L0154	N/A	04/17/08	04/18/08
BARIUM LABORATORY	LC1 BS	W	08L0154	N/A	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	MB1	W	08L0154	N/A	04/17/08	04/18/08
BARIUM, TCLP LEACHAT	MB2	W	08L0154	N/A	04/17/08	04/18/08
CADMIUM LABORATORY	LC1 BS	W	08L0154	N/A	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	MB1	W	08L0154	N/A	04/17/08	04/18/08
CADMIUM, TCLP LEACHA	MB2	W	08L0154	N/A	04/17/08	04/18/08
CHROMIUM LABORATORY	LC1 BS	W	08L0154	N/A	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	MB1	W	08L0154	N/A	04/17/08	04/18/08
CHROMIUM, TCLP LEACH	MB2	W	08L0154	N/A	04/17/08	04/18/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-087

DATE RECEIVED: 04/09/08 LVL LOT # :0804L890

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MERCURY LABORATORY	LC1 BS	W	08C0071	N/A	04/16/08	04/17/08
MERCURY, TOTAL	MB1	W	08C0071	N/A	04/16/08	04/17/08
MERCURY, TCLP LEACHA	MB2	W	08C0071	N/A	04/16/08	04/17/08
LEAD LABORATORY	LC1 BS	W	08L0154	N/A	04/17/08	04/18/08
LEAD, TCLP LEACHATE	MB1	W	08L0154	N/A	04/17/08	04/18/08
LEAD, TCLP LEACHATE	MB2	W	08L0154	N/A	04/17/08	04/18/08
SELENIUM LABORATORY	LC1 BS	W	08L0154	N/A	04/17/08	04/18/08
SELENIUM, TCLP LEACH	MB1	W	08L0154	N/A	04/17/08	04/18/08
SELENIUM, TCLP LEACH	MB2	W	08L0154	N/A	04/17/08	04/18/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-087
LVL#: 0804L890
SDG/SAF#: K1187/RC-087

W.O.#: 11343-606-001-9999-00
Date Received: 04-09-08

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 3 TCLP leachates.

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

   The laboratory control sample (LCS) for Silver was outside the 80-120% control limits. All samples were redigested and rerun for Silver with matrix QC performed on samples J16DY9 and J16J82 due to insufficient sample volume.

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. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

10. The TCLP extract from samples J16DY8, J16DY9, and J16J82 was selected for the matrix

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 20 pages.

spike (MS) for this analytical batch.

11. The MS recoveries for all analytes in the TCLP extract were above 50% except for Silver (7.9%). 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

4/30/08
Date

alm/m04-890

METALS METHOD GLOSSARY

he following methods are used as reference for the digestion and analysis of samples contained within tl

ot#: 0804L890

eaching Procedure: __1310 __1311 __1312 __Other:_____

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

letals 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-W1-033/M-03/01
000000006

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 04/23/08

CLIENT: TNU-HANFORD RC-087 LVL LOT #: 0804L890

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-004	J16DY8	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	736		UG/L	3.1	1.0
		Cadmium, TCLP Leachate	93.3		UG/L	5.6	1.0
		Chromium, TCLP Leachate	57.5		UG/L	4.6	1.0
		Mercury, TCLP Leachate	0.12		UG/L	0.10	1.0
		Lead, TCLP Leachate	855		UG/L	34.8	1.0
		Selenium, TCLP Leachate	41.3	u	UG/L	41.3	1.0
-005	J16DY9	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	536		UG/L	3.1	1.0
		Cadmium, TCLP Leachate	12.3		UG/L	5.6	1.0
		Chromium, TCLP Leachate	10.6		UG/L	4.6	1.0
		Mercury, TCLP Leachate	0.78		UG/L	0.10	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
-006	J16J82	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	533		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
		Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
		Lead, TCLP Leachate	9420		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 04/23/08

CLIENT: TNU-HANFORD RC-087 LVL LOT #: 0804L890

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0158-MB1	Silver, TCLP Leachate	4.5	u	UG/L	4.5	1.0
BLANK2	08L0158-MB2	Silver, TCLP Leachate	4.5	u	UG/L	4.5	1.0
BLANK1	08L0154-MB1	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
BLANK2	08L0154-MB2	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	08C0071-MB1	Mercury, Total	0.10	u	UG/L	0.10	1.0
BLANK2	08C0071-MB2	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/23/08

CLIENT: TNU-HANFORD RC-087 LVL LOT #: 0804L890

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-004	J16DY8	Arsenic, TCLP Leachate	4720	31.7 u	5000	94.4	1.0
		Barium, TCLP Leachate	102000	736	100000	101.6	6.0
		Cadmium, TCLP Leachate	1010	93.3	1000	92.0	1.0
		Chromium, TCLP Leachat	4530	57.5	5000	89.4	1.0
		Mercury, TCLP Leachate	217	0.12	200	108.6	50.0
		Lead, TCLP Leachate	5300	855	5000	89.0	1.0
		Selenium, TCLP Leachat	942	41.3 u	1000	94.2	1.0
-006	J16J82	Silver, TCLP Leachate	397	4.5 u	5000	7.9	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/23/08

CLIENT: TNU-HANFORD RC-087 LVL LOT #: 0804L890

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-004REP	J16DY8	Arsenic, TCLP Leachate	31.7 u	31.7 u	NC	1.0
		Barium, TCLP Leachate	736	744	1.1	1.0
		Cadmium, TCLP Leachate	93.3	96.1	3.0	1.0
		Chromium, TCLP Leachate	57.5	61.9	7.4	1.0
		Mercury, TCLP Leachate	0.12	0.10u	NC	1.0
		Lead, TCLP Leachate	855	876	2.4	1.0
		Selenium, TCLP Leachate	41.3 u	41.3 u	NC	1.0
-005REP	J16DY9	Silver, TCLP Leachate	4.5 u	4.5 u	NC	1.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/23/08

CLIENT: TNU-HANFORD RC-087 LVL LOT #: 0804L890

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0158-LC1	Silver, LCS	496	500	UG/L	99.3
LCS1	08L0154-LC1	Arsenic, LCS	10200	10000	UG/L	101.6
		Barium, LCS	5060	5000	UG/L	101.2
		Cadmium, LCS	247	250	UG/L	98.8
		Chromium, LCS	513	500	UG/L	102.6
		Lead, LCS	2570	2500	UG/L	102.9
		Selenium, LCS	9960	10000	UG/L	99.6
LCS1	08C0071-LC1	Mercury, LCS	5.6	5.0	UG/L	112.0

Lionville Laboratory Incorporated

Logbook #: 770

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0154
Date/Time Initiated: 4/17/08 1230
Date/Time Completed: 4/17/08 1800
Analyst(s): MW
Matrix: Soil Water Other: leachate
Instr. Type: AA (ICP)
Parameters: RCRA

Digested / Undigested (circle one)
Balance #: N/A
Balance Cal Verif: Y (NA)
Hot Plate Temp: 91°

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

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
0804L890-004		100 ml	100 ml	<2	TC	N/A	clear/colorless	N/A	RAB
004R									
004S	1.0 ml								
005									
006									
08LT0030-LB1									
08L0154-MB1									
LC1	1.0 ml								

MW 4/17/08

Spiking IDs:
MS #: 6072-073-03
015

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#: IC015401
LIMS Transfer: (Y) N
Data Review By/Date: updated
RMP, 04/18/08

Lionville Laboratory Incorporated Logbook #: 77

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 0820158
Date/Time Initiated: 4/21/08 1645
Date/Time Completed: 4/21/08 2030
Analyst(s): MW
Matrix: Soil Water Other: TCLP
Instr. Type: AA (ICP)
Parameters: Ag - redyed

Digested / Undigested (circle one)
Balance #: N/A
Balance Cal Verif: Y (NA)
Hot Plate Temp: 92°C

TMW

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

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
08042-890-004		100 ml	100 ml	<2	TC	N/A	clear/colorless	N/A	PAM
005									
005R									
006									
006S	1.0 ml								
08LT0030-LB1									
0820158-MB1									
LC1	1.0 ml								

MW 4/21/08

Spiking IDs:
MS #: 6072-73-05

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#: IC015801
LIMS Transfer: (Y) N Uploaded
Data Review By/Date: PMP, 04/22/08

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MERCURY PREPARATION

Logbook # 422

nalyst: TEB
ate 4/16/08
art Time/Temp: 1515 / 98°
nd Time/Temp: 1715 / 93°

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

Prep Batch: 08L0071
Worksheet: HG041701
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	E7			33mL	33mL	
0.2 µg/L	BLV	0.0667				
1.0	JC	0.334				
2.0	A4	0.667				
5.0	711	1.667				
10.0	A94	3.334				
ICV	AB	0.0834	2.5			
CCV	1/A	0.167	5.0			
ICB/CCB	N4					
MB1	411					PBW171
LCI	3VG	0.167	5.0			LCSW171
0804L918-004	C48					
004R	WN					
004S	871	0.334	1.0			
0803L815-006	H					
006S	700	0.667				
006T	503	0.667				
007	2B			3.3mL		dil. due to matrix
008	DK					
009	71L					
010	5T					
0804L890-004	C15			33mL		R
004R	LV					
004S	HW	0.667				
005	297					
006	SE					
0804L885-003	55					

Standard:	ID	Prep Date/Time
CAL/MS	R16072-75-07AB	4/16/08 1125
CV/CCV/LCS	US16072-75-09A	

Reviewed By/Date: [signature] 4/22/08

see book # 9368 for std traceability information

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

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

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MERCURY PREPARATION

Logbook # 422

ınalyst: Ten
ıate 4/16/08
ıtart Time/Temp:
ınd Time/Temp: see page 078

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

Prep Batch: 08C071
Worksheet: HG041701
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.
08041885-0035	JS	0.667		33mL	33mL	
003T	WK	0.667		↓	↓	
08LT0030-LB1	CM			↓	↓	

4/16/08

Standard:	ID	Prep Date/Time
ICAL/MS		
ICV/CCV/LCS	see page 078	

Reviewed By/Date: [illegible] 4/22/08

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 Use Only

804L890

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

nt TNU Hanford RC-087

Final Proj. Sampling Date

ect# 11343-606-001-9999-00

ect Contact/Phone#

ville Laboratory Project Manager Orlette Johnson

SW846 Del STD TAT 7 Days

e Rec'd 4-9-08 Date Due 4-16-08

Refrigerator #													A 3						
#/Type Container	Liquid																		
	Solid												1pl						
Volume	Solid												500						
Preservatives													—						
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	J16DY8			S	3-28-08	1005							X						
002	J16DY9			↓	↓	1010							X						
003	J16J82			↓	4-3-08	1500							X						
004	Y8 TCLP of 001			L	*											X			
005	Y9 002			↓	↓											X			
006	J82 003			↓	↓											X			

RIX ES: 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.

elinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
Fed Ex	[signature]	4-9-08	1025					ORIGINAL REWRITTEN		COMPOSITE WASTE	

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