0079246

SAF-RC-110
100-H Burial Grounds Remaining Sites – Soil Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 10/31/08
NITIAL/DATE

COMMENTS:

SDG K1365 **SAF-RC-110**

Rad only X Chem only Rad & Chem

X Complete Partial

Waste Site: 600-152

RECEIVED
NOV 07 2008
EDMC

LIONVILLE LABORATORY INC.

27 October 2008

RECEIVED OCT 2008

Joan Kessner
WC-Hanford, Inc.
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 #	0810L008
SDG #	K1365
SAF #	RC-110
Date Received	10/01/08
# Samples	3
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	X
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\hanford\data\b_ltrs.doc

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

RECEIVED
OCT 2008

Lionville Laboratory, Inc.
PEST/PCB ANALYTICAL DATA PACKAGE FOR
WC-HANFORD RC-110 K1365

DATE RECEIVED: 10/01/08 LVL LOT # :0810L008

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J17JJ9	001	S	08LE0484	09/29/08	10/03/08	10/07/08
J17JJ9	001 MS	S	08LE0484	09/29/08	10/03/08	10/07/08
J17JJ9	001 MSD	S	08LE0484	09/29/08	10/03/08	10/07/08
J17JK0	002	S	08LE0484	09/29/08	10/03/08	10/07/08
J17JK1	003	S	08LE0484	09/29/08	10/03/08	10/08/08
LAB QC:						
PBLKVS	MB1	S	08LE0484	N/A	10/03/08	10/07/08
PBLKVS	MB1 BS	S	08LE0484	N/A	10/03/08	10/07/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: WC-HANFORD RC-110
LVL #: 0810L008
SDG/SAF # K1365 / RC-110

W.O. #: 60049-001-001-0001-00
Date Received: 10-01-2008

CHLORINATED PESTICIDES

Three (3) soil samples were collected on 09-29-2008.

The samples and their associated QC samples were extracted on 10-03-2008 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 10-07-2008. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8081A.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise. The following is a summary of the QC results accompanying the sample results. Lionville Laboratory Inc (LvLI) certifies that all test results meet the requirements of NELAC except as noted below:

1. All required holding times for extraction and analysis have been met.
2. The method blank was below the reporting limits for all target compounds.
3. All surrogate recoveries were within acceptance criteria.
4. All blank spike recoveries were within acceptance criteria.
5. All matrix spike recoveries were within acceptance criteria.
6. All initial calibrations associated with this data set were within acceptance criteria.
7. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

r:\group\data\2008\pest-pcb\wc-hanford\0810-008js2.pest.doc

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 10 pages.

8. LvL 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.

9. 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

10/23/05
Date

LvLI
LIONVILLE LABORATORY INC.

GLOSSARY OF DATA

DATA QUALIFIERS

U	=	Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).
J	=	Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
B	=	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
E	=	Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
I	=	Interference.
.I	=	Indicates an interference on one analytical column only. Result is reported from remaining analytical column.

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	=	Indicates blank spike duplicate.
MS	=	Indicates matrix spike.
MSD	=	Indicates matrix spike duplicate.
DL	=	Indicates that recoveries were not obtained because the extract had to be diluted for analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
NS	=	Not Spiked.
SP	=	Indicates Spiked Compound.
P	=	This flag is used for an PESTICIDE/PCB target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".
D	=	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
C	=	This flag applies to a compound that has been confirmed by GC/MS.
NPM	=	No pattern match for multi-component target analytes.

onville Laboratory Use Only
08108L212 008

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

ent W.C. Hanford SAF# BC-110

Final Proj. Sampling Date

ject# 60049-001-001-0001-00

ject Contact/Phone#

nville Laboratory Project Manager O. JOHNSON

SW846 Del STP TAT 15 DAY

te Rec'd 10-1-08 Date Due 10-16-08

		A					B							
Refrigerator #				3					3					
#/Type Container	Liquid													
	Solid			1G					1G					
Volume				250					250					
Preservatives														
ANALYSES REQUESTED		ORGANIC							INORG					
		VOA	BNA	Pest/PCB	8081 10/16 Herb				Metal	CN				

Lionville Laboratory Use Only: 0608H ACB; MetO

TRIX DES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP, Leachate, Wipe, Other, Fish	001	J17J9			soil	9/29/08	0919			X					X				
	002	K0					0924			X					X				
	003	K1					0928			X					X				

ecial Instructions: Run matrix QC
net ① = HSL + B, K, MG, SI
NOTL

Special Instructions:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[signature]	[signature]	10-1-08	0930

Relinquished by	Received by	Date	Time

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

000000005

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-110-005	Page 1 of 1

Collector: Tony Welch-Koelling	Company Contact: Doug Bowers	Telephone No.: 509 531-0701	Project Coordinator: KESSNER, JH
Price Code: 2E	Data Turnaround: 15 days		
Project Designation: 100-H Burial Grounds Remaining Sites - Soil Quick Turn	Sampling Location: 600-152		SAF No.: RC-110
Ice Chest No.: ~~AFS-06-003~~ FEB 9-30-08 ERC-02-407	Field Logbook No.: EL 1627	COA: R601522600	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A080358		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	Cool 4C									
Type of Container	aG	aG									
No. of Container(s)	1	1									
Volume	250mL	250mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions	Pesticides - 8081									

Sample No.	Matrix *	Sample Date	Sample Time										
17JJ9	SOIL	09-29-08	0919	X	X								
17JK0	SOIL	09-29-08	0924	X	X								
17JK1	SOIL	09-29-08	0928	X	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	9/29/08 0845	Doug Bowers / Doug Bowers	09-29-08 0845
Relinquished By/Removed From: Doug Bowers / Doug Bowers	9-29-08 1445	Rick [illegible] 1060 D/dg	9-29-08 1445
Relinquished By/Removed From: 1060 2A / J.E. Bernhard	9-30-08 0830	Received By/Stored In: J.E. Bernhard	9-30-08 0830
Relinquished By/Removed From: J.E. Bernhard	9-30-08 0845	Received By/Stored In: FED EX	
Relinquished By/Removed From: FED EX	10-1-08 0930	Received By/Stored In: [illegible]	10-1-08 0930
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

From non rad area

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7470 - (CV)

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

/CH-EE-011

PE8

000000000

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: W.C. Hanford

Project/SAF/SOW/Release #: RC-110

Date: 10-1-08

LvLI Batch #: J8101212

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7921 1630 4820
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 # ERC-02-407
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

Pesticide/PCBs by GC, CLP List

Report Date: 10/15/08 19:26

RFW Batch Number: **0810L008** Client: **WC-HANFORD RC-110 K1365** Work Order: 60049001001 Page: 1

	Cust ID:	J17JJ9	J17JJ9	J17JJ9	J17JK0	J17JK1	PBLKVS
Sample Information	RFW#:	001	001 MS	001 MSD	002	003	08LE0484-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	4.00	4.00	4.00	4.00	4.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate: Tetrachloro-m-xylene		91 %	101 %	96 %	110 %	106 %	93 %
Decachlorobiphenyl		120 %	124 %	133 %	122 %	132 %	104 %
Alpha-BHC		1.3 U	88 %	93 %	1.3 U	1.3 U	0.33 U
gamma-BHC (Lindane)		1.3 U	87 %	92 %	1.3 U	1.3 U	0.33 U
Beta-BHC		1.3 U	101 %	107 %	1.3 U	1.3 U	0.33 U
Heptachlor		1.3 U	93 %	100 %	1.3 U	1.3 U	0.33 U
Delta-BHC		1.3 U	58 %	62 %	1.3 U	1.3 U	0.33 U
Aldrin		1.3 U	89 %	96 %	1.3 U	1.3 U	0.33 U
Heptachlor epoxide		1.3 U	90 %	98 %	1.3 U	1.3 U	0.33 U
gamma-Chlordane		1.3 U	93 %	100 %	1.3 U	1.3 U	0.33 U
Endosulfan I		1.3 U	90 %	97 %	1.3 U	1.3 U	0.33 U
alpha-Chlordane		1.3 U	93 %	100 %	1.3 U	1.3 U	0.33 U
4,4'-DDE		1.3 U	93 %	102 %	1.3 U	1.3 U	0.33 U
Dieldrin		1.3 U	85 %	94 %	1.3 U	1.3 U	0.33 U
Endrin		1.3 U	92 %	99 %	1.3 U	1.3 U	0.33 U
4,4'-DDD		1.3 U	88 %	97 %	1.3 U	1.3 U	0.33 U
Endosulfan II		1.3 U	89 %	97 %	1.3 U	1.3 U	0.33 U
4,4'-DDT		1.3 U	89 %	97 %	1.3 U	1.3 U	0.33 U
Endrin aldehyde		1.3 U	81 %	91 %	1.3 U	1.3 U	0.33 U
Endosulfan sulfate		1.3 U	80 %	87 %	1.3 U	1.3 U	0.33 U
Methoxychlor		1.3 U	104 %	115 %	1.3 U	1.3 U	0.33 U
Endrin ketone		1.3 U	90 %	99 %	1.3 U	1.3 U	0.33 U
Toxaphene		13 U	13 U	13 U	13 U	13 U	3.3 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

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60000000

Cust ID: **PBLKVS BS**

Sample Information

RFW#: **08LE0484-MB1**
Matrix: SOIL
D.F.: 1.00
Units: UG/KG

Surrogate:	Tetrachloro-m-xylene	79	%
	Decachlorobiphenyl	93	%

==========fl==========fl==========fl==========fl==========fl==========fl

Alpha-BHC	97	%
gamma-BHC (Lindane)	97	%
Beta-BHC	92	%
Heptachlor	92	%
Delta-BHC	67	%
Aldrin	96	%
Heptachlor epoxide	91	%
gamma-Chlordane	94	%
Endosulfan I	99	%
alpha-Chlordane	92	%
4,4'-DDE	91	%
Dieldrin	90	%
Endrin	97	%
4,4'-DDD	94	%
Endosulfan II	88	%
4,4'-DDT	92	%
Endrin aldehyde	73	%
Endosulfan sulfate	77	%
Methoxychlor	86	%
Endrin ketone	86	%
Toxaphene	3.3	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

SAMPLE EXTRACTION RECORD

Sheet no.: 1

Extract. Date: 10/03/08 Extraction Batch No: 08LE0484 Analyst: MF Method: **** SOX 3540

Test: O608 Cleanup Date: Analyst: Client: WC-HANFORD RC-029 K1360

LIMS Report Date: 10/07/08 Solvent: DCM/ACETONE,HEXANE Adsorbent:

Sample No:	Client Name / Client ID	pH	Initial WT/VOL	Surr. Mult.	Spike Mult.	Final VOL	Final VOL	Split Mult.	GPC Y/N	% Solids	C/D FACTOR
0810L001-	WC-HANFORD RC-029 K1360										
001 H	J17HJ7		30.0	1.0		10		1.0	N	97.77	340.9
001 HS	J17HJ7		30.0	1.0	1.0	10		1.0	N	97.77	340.9
001 HT	J17HJ7		30.0	1.0	1.0	10		1.0	N	97.77	340.9
003 H	J17HJ9		30.0	1.0		10		1.0	N	97.56	341.7
004 H	J17HK0		30.0	1.0		10		1.0	N	97.69	341.2
005 H	J17HK1		30.0	1.0		10		1.0	N	97.16	343.1
0810L002-	WC-HANFORD RC-030 K1361										
001 H	J17FR5		20.0	1.0		10		1.0	N	0.0	500.0
001 HS	J17FR5		20.0	1.0	1.0	10		1.0	N	0.0	500.0
001 HT	J17FR5		20.0	1.0	1.0	10		1.0	N	0.0	500.0
002 H	J17FR6		30.0	1.0		10		1.0	N	0.0	333.3
0810L008-	WC-HANFORD RC-110 K1365										
001 H	J17JJ9		30.0	1.0		10		1.0	N	99.40	335.3
001 HS	J17JJ9		30.0	1.0	1.0	10		1.0	N	99.40	335.3
001 HT	J17JJ9		30.0	1.0	1.0	10		1.0	N	99.40	335.3
002 H	J17JK0		30.0	1.0		10		1.0	N	99.41	335.3
003 H	J17JK1		30.0	1.0		10		1.0	N	99.18	336.1
08LE0484-MB1 H	PBLKVS		30.0	1.0		10		1.0	N	100.00	333.3
08LE0484-MB1 HS	PBLKVS		30.0	1.0	1.0	10		1.0	N	100.00	333.3

Comments:
Surrogate: 250 UL OLM PSURR 89916408
Spike: 250 UL FULL LIST PEST SPIKE 89915510

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
all	[illegible]	10/7/08 1445	SZ	10/7/08 14:45	GC

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RECEIVED
OCT 2008

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
WC-HANFORD RC-110 K1365

DATE RECEIVED: 10/01/08 LVL LOT # :0810L008

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J17JJ9						
SILVER, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
SILVER, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
SILVER, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
ALUMINUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
ALUMINUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
ALUMINUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
ARSENIC, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
ARSENIC, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
ARSENIC, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
BORON, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
BORON, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
BORON, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
BARIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
BARIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
BARIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
BERYLLIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
BERYLLIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
BERYLLIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
CALCIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
CALCIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
CALCIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
CADMIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
CADMIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
CADMIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
COBALT, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
COBALT, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
COBALT, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
CHROMIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
CHROMIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
CHROMIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
COPPER, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
COPPER, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
COPPER, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
IRON, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
IRON, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
WC-HANFORD RC-110 K1365

DATE RECEIVED: 10/01/08 LVL LOT # :0810L008

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
IRON, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
MERCURY, TOTAL	001	S	08C0176	09/29/08	10/03/08	10/06/08
MERCURY, TOTAL	001 REP	S	08C0176	09/29/08	10/03/08	10/06/08
MERCURY, TOTAL	001 MS	S	08C0176	09/29/08	10/03/08	10/06/08
POTASSIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
POTASSIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
POTASSIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
MAGNESIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
MAGNESIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
MAGNESIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
MANGANESE, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
MANGANESE, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
MANGANESE, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
MOLYBDENUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
MOLYBDENUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
MOLYBDENUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
SODIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/20/08
SODIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/20/08
SODIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/20/08
NICKEL, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
NICKEL, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
NICKEL, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
LEAD, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
LEAD, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
LEAD, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
ANTIMONY, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
ANTIMONY, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
ANTIMONY, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
SELENIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
SELENIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
SELENIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
SILICON, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
SILICON, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
SILICON, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
VANADIUM, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08
VANADIUM, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
VANADIUM, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
ZINC, TOTAL	001	S	08L0375	09/29/08	10/14/08	10/17/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
WC-HANFORD RC-110 K1365

DATE RECEIVED: 10/01/08 LVL LOT # :0810L008

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ZINC, TOTAL	001 REP	S	08L0375	09/29/08	10/14/08	10/17/08
ZINC, TOTAL	001 MS	S	08L0375	09/29/08	10/14/08	10/17/08
J17JK0						
SILVER, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
ALUMINUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
ARSENIC, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
BORON, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
BARIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
BERYLLIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
CALCIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
CADMIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
COBALT, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
CHROMIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
COPPER, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
IRON, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
MERCURY, TOTAL	002	S	08C0176	09/29/08	10/03/08	10/06/08
POTASSIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
MAGNESIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
MANGANESE, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
MOLYBDENUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
SODIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/20/08
NICKEL, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
LEAD, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
ANTIMONY, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
SELENIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
SILICON, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
VANADIUM, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
ZINC, TOTAL	002	S	08L0375	09/29/08	10/14/08	10/17/08
J17JK1						
SILVER, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
ALUMINUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
ARSENIC, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
BORON, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
BARIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
WC-HANFORD RC-110 K1365

DATE RECEIVED: 10/01/08 LVL LOT # :0810L008

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BERYLLIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
CALCIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
CADMIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
COBALT, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
CHROMIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
COPPER, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
IRON, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
MERCURY, TOTAL	003	S	08C0176	09/29/08	10/03/08	10/06/08
POTASSIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
MAGNESIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
MANGANESE, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
MOLYBDENUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
SODIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/20/08
NICKEL, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
LEAD, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
ANTIMONY, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
SELENIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
SILICON, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
VANADIUM, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08
ZINC, TOTAL	003	S	08L0375	09/29/08	10/14/08	10/17/08

LAB QC:

SILVER LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
SILVER, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
ALUMINUM LABORTORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
ALUMINUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
ARSENIC LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
ARSENIC, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
BORON LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
BORON, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
BARIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
BARIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
BERYLLIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
BERYLLIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
CALCIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
CALCIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
CADMIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
WC-HANFORD RC-110 K1365

DATE RECEIVED: 10/01/08 LVL LOT # :0810L008

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
COBALT LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
COBALT, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
CHROMIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
CHROMIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
COPPER LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
COPPER, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
IRON LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
IRON, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
MERCURY LABORATORY	LC1 BS	S	08C0176	N/A	10/03/08	10/06/08
MERCURY, TOTAL	MB1	S	08C0176	N/A	10/03/08	10/06/08
POTASSIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
POTASSIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
MAGNESIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
MAGNESIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
MANGANESE LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
MANGANESE, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
MOLYBDENUM LABORATOR	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
MOLYBDENUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
SODIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/20/08
SODIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/20/08
NICKEL LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
NICKEL, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
LEAD LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
LEAD, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
ANTIMONY LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
ANTIMONY, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
SELENIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
SELENIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
SILICON LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
SILICON, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
VANADIUM LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
VANADIUM, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08
ZINC LABORATORY	LC1 BS	S	08L0375	N/A	10/14/08	10/16/08
ZINC, TOTAL	MB1	S	08L0375	N/A	10/14/08	10/16/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: WC-HANFORD RC-110
LVL#: 0810L008
SDG/SAF#: K1365/RC-110

W.O.#: 60049-001-001-0001-00
Date Received: 10-01-08

METALS CASE NARRATIVE

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

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise.

1. This narrative covers the analyses of 3 soil samples.

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. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury) with the exception of Sodium in file TA1017B. The samples were rerun and reported from file PS1020A for Sodium.

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

6. The preparation/method blank for 1 analyte was outside 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.

   a). The MB result for Sodium was greater than the Limit of Quantitation (LOQ) {3-10x the (LOD) Limit of Detection} and all samples read less than 20 times the MB concentration. However, no corrective action criteria for MBs were provided in SW846 method 6010B. The sample results were reported herein "uncorrected" for the levels found in the MB.

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

8. All laboratory control samples (LCS) were within the 80-120% control limits with the exception of Silicon at 40.2%. Refer to the Inorganics Laboratory Control Standards Report. Associated sample results may be biased low.

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 23 pages.

9. The matrix spike (MS) recoveries for 4 analytes were outside the 75-125% control limits. Refer to the Inorganics Accuracy Report.

10. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial dilution are performed. A serial dilution is performed for Mercury. A PDS was prepared at meaningful concentration level for the following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J17H37	Antimony	100	96.6
	Silicon	2,100	101.8
	Aluminum	22,000	113.2
	Iron	22,000	118.6

11. The duplicate analyses for 2 analytes were outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

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. LvL 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

10/23/08
Date

alm/m10-008

LVLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within t

Lot#: 0810L008

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:_____

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 10/21/08

CLIENT: WC-HANFORD RC-110 K1365 LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J17JJ9	Silver, Total	0.07 u	MG/KG	0.07	1.0
		Aluminum, Total	9910	MG/KG	2.6	1.0
		Arsenic, Total	6.7	MG/KG	0.33	1.0
		Boron, Total	2.1	MG/KG	0.33	1.0
		Barium, Total	90.6	MG/KG	0.07	1.0
		Beryllium, Total	0.30	MG/KG	0.03	1.0
		Calcium, Total	3490	MG/KG	2.6	1.0
		Cadmium, Total	0.15	MG/KG	0.03	1.0
		Cobalt, Total	7.3	MG/KG	0.13	1.0
		Chromium, Total	14.4	MG/KG	0.13	1.0
		Copper, Total	13.6	MG/KG	0.13	1.0
		Iron, Total	20800	MG/KG	3.0	1.0
		Mercury, Total	0.009u	MG/KG	0.009	1.0
		Potassium, Total	1790	MG/KG	2.6	1.0
		Magnesium, Total	4100	MG/KG	1.7	1.0
		Manganese, Total	351	MG/KG	0.03	1.0
		Molybdenum, Total	0.39	MG/KG	0.20	1.0
		Sodium, Total	155	MG/KG	1.3	1.0
		Nickel, Total	12.1	MG/KG	0.13	1.0
		Lead, Total	7.6	MG/KG	0.20	1.0
		Antimony, Total	0.39	MG/KG	0.20	1.0
		Selenium, Total	0.40 u	MG/KG	0.40	1.0
		Silicon, Total	274	MG/KG	2.6	1.0
		Vanadium, Total	43.9	MG/KG	0.09	1.0
		Zinc, Total	44.1	MG/KG	0.40	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 10/21/08

CLIENT: WC-HANFORD RC-110 K1365

LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J17JK0	Silver, Total	0.07 u	MG/KG	0.07	1.0
		Aluminum, Total	9940	MG/KG	2.6	1.0
		Arsenic, Total	11.0	MG/KG	0.33	1.0
		Boron, Total	2.4	MG/KG	0.33	1.0
		Barium, Total	89.3	MG/KG	0.07	1.0
		Beryllium, Total	0.32	MG/KG	0.03	1.0
		Calcium, Total	3590	MG/KG	2.6	1.0
		Cadmium, Total	0.22	MG/KG	0.03	1.0
		Cobalt, Total	7.8	MG/KG	0.13	1.0
		Chromium, Total	14.3	MG/KG	0.13	1.0
		Copper, Total	14.0	MG/KG	0.13	1.0
		Iron, Total	21200	MG/KG	2.9	1.0
		Mercury, Total	0.01	MG/KG	0.009	1.0
		Potassium, Total	2020	MG/KG	2.6	1.0
		Magnesium, Total	4290	MG/KG	1.6	1.0
		Manganese, Total	362	MG/KG	0.03	1.0
		Molybdenum, Total	0.34	MG/KG	0.20	1.0
		Sodium, Total	153	MG/KG	1.3	1.0
		Nickel, Total	12.0	MG/KG	0.13	1.0
		Lead, Total	22.4	MG/KG	0.20	1.0
		Antimony, Total	0.39	MG/KG	0.20	1.0
		Selenium, Total	0.39 u	MG/KG	0.39	1.0
		Silicon, Total	244	MG/KG	2.6	1.0
		Vanadium, Total	44.6	MG/KG	0.09	1.0
		Zinc, Total	51.3	MG/KG	0.39	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 10/21/08

CLIENT: WC-HANFORD RC-110 K1365

LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	J17JK1	Silver, Total	0.07 u	MG/KG	0.07	1.0
		Aluminum, Total	10100	MG/KG	2.7	1.0
		Arsenic, Total	7.9	MG/KG	0.33	1.0
		Boron, Total	2.1	MG/KG	0.33	1.0
		Barium, Total	88.7	MG/KG	0.07	1.0
		Beryllium, Total	0.32	MG/KG	0.03	1.0
		Calcium, Total	3540	MG/KG	2.7	1.0
		Cadmium, Total	0.16	MG/KG	0.03	1.0
		Cobalt, Total	7.4	MG/KG	0.13	1.0
		Chromium, Total	14.2	MG/KG	0.13	1.0
		Copper, Total	13.8	MG/KG	0.13	1.0
		Iron, Total	21100	MG/KG	3.0	1.0
		Mercury, Total	0.01	MG/KG	0.009	1.0
		Potassium, Total	2150	MG/KG	2.7	1.0
		Magnesium, Total	4240	MG/KG	1.7	1.0
		Manganese, Total	359	MG/KG	0.03	1.0
		Molybdenum, Total	0.25	MG/KG	0.20	1.0
		Sodium, Total	150	MG/KG	1.3	1.0
		Nickel, Total	12.0	MG/KG	0.13	1.0
		Lead, Total	14.9	MG/KG	0.20	1.0
		Antimony, Total	0.34	MG/KG	0.20	1.0
		Selenium, Total	0.40 u	MG/KG	0.40	1.0
		Silicon, Total	249	MG/KG	2.7	1.0
		Vanadium, Total	44.0	MG/KG	0.09	1.0
		Zinc, Total	46.8	MG/KG	0.40	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 10/21/08

CLIENT: WC-HANFORD RC-110 K1365

LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0375-MB1	Silver, Total	0.10 u	MG/KG	0.10	1.0
		Aluminum, Total	4.7	MG/KG	4.0	1.0
		Arsenic, Total	0.50 u	MG/KG	0.50	1.0
		Boron, Total	0.50 u	MG/KG	0.50	1.0
		Barium, Total	0.19	MG/KG	0.10	1.0
		Beryllium, Total	0.05 u	MG/KG	0.05	1.0
		Calcium, Total	15.8	MG/KG	4.0	1.0
		Cadmium, Total	0.05 u	MG/KG	0.05	1.0
		Cobalt, Total	0.20 u	MG/KG	0.20	1.0
		Chromium, Total	0.20	MG/KG	0.20	1.0
		Copper, Total	0.20 u	MG/KG	0.20	1.0
		Iron, Total	19.0	MG/KG	4.5	1.0
		Potassium, Total	5.1	MG/KG	4.0	1.0
		Magnesium, Total	7.8	MG/KG	2.5	1.0
		Manganese, Total	0.23	MG/KG	0.04	1.0
		Molybdenum, Total	0.30 u	MG/KG	0.30	1.0
		Sodium, Total	20.7	MG/KG	2.0	1.0
		Nickel, Total	0.20 u	MG/KG	0.20	1.0
		Lead, Total	0.30 u	MG/KG	0.30	1.0
		Antimony, Total	0.30 u	MG/KG	0.30	1.0
		Selenium, Total	0.60 u	MG/KG	0.60	1.0
		Silicon, Total	4.0 u	MG/KG	4.0	1.0
		Vanadium, Total	0.14 u	MG/KG	0.14	1.0
		Zinc, Total	0.60 u	MG/KG	0.60	1.0
BLANK1	08C0176-MB1	Mercury, Total	0.01 u	MG/KG	0.01	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 10/21/08

CLIENT: WC-HANFORD RC-110 K1365 LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	J17JJ9	Silver, Total	33.5	0.07u	32.6	102.7	1.0
		Aluminum, Total	11400	9910	131	1137 *	1.0
		Arsenic, Total	123	6.7	131	88.9	1.0
		Boron, Total	59.0	2.1	65.3	87.1	1.0
		Barium, Total	216	90.6	131	96.2	1.0
		Beryllium, Total	3.3	0.30	3.3	90.8	1.0
		Calcium, Total	5170	3490	1630	102.9	1.0
		Cadmium, Total	3.0	0.15	3.3	86.3	1.0
		Cobalt, Total	36.3	7.3	32.6	89.0	1.0
		Chromium, Total	26.4	14.4	13.1	91.6	1.0
		Copper, Total	29.1	13.6	16.3	95.1	1.0
		Iron, Total	21500	20800	65.3	1072 *	1.0
		Mercury, Total	0.17	0.00u	0.15	113.2	1.0
		Potassium, Total	3410	1790	1630	99.2	1.0
		Magnesium, Total	5710	4100	1630	98.5	1.0
		Manganese, Total	386	351	32.6	105.2*	1.0
		Molybdenum, Total	57.8	0.39	65.3	87.9	1.0
		Sodium, Total	1670	155	1630	92.9	1.0
		Nickel, Total	41.2	12.1	32.6	89.3	1.0
		Lead, Total	35.6	7.6	32.6	85.9	1.0
		Antimony, Total	16.9	0.39	32.6	50.7	1.0
		Selenium, Total	113	0.40u	131	86.3	1.0
		Silicon, Total	552	274	65.3	425.0*	1.0
		Vanadium, Total	75.7	43.9	32.6	97.5	1.0
		Zinc, Total	73.7	44.1	32.6	90.8	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 10/21/08

CLIENT: WC-HANFORD RC-110 K1365

LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	J17JJ9	Silver, Total	0.07u	0.07u	NC	1.0
		Aluminum, Total	9910	9510	4.1	1.0
		Arsenic, Total	6.7	7.1	5.8	1.0
		Boron, Total	2.1	2.0	4.9	1.0
		Barium, Total	90.6	90.7	0.11	1.0
		Beryllium, Total	0.30	0.30	1.1	1.0
		Calcium, Total	3490	3480	0.12	1.0
		Cadmium, Total	0.15	0.15	4.3	1.0
		Cobalt, Total	7.3	7.2	1.4	1.0
		Chromium, Total	14.4	13.4	7.2	1.0
		Copper, Total	13.6	13.2	3.0	1.0
		Iron, Total	20800	20200	2.6	1.0
		Mercury, Total	0.00u	0.02	NC	1.0
		Potassium, Total	1790	1710	4.5	1.0
		Magnesium, Total	4100	4110	0.36	1.0
		Manganese, Total	351	351	0.028	1.0
		Molybdenum, Total	0.39	0.28	32.6	1.0
		Sodium, Total	155	141	9.2	1.0
		Nickel, Total	12.1	11.6	4.2	1.0
		Lead, Total	7.6	6.8	11.1	1.0
		Antimony, Total	0.39	0.21u	~~NC~~ * 200	1.0
		Selenium, Total	0.40u	0.42u	NC	1.0
		Silicon, Total	274	280	2.0	1.0
		Vanadium, Total	43.9	42.2	3.9	1.0
		Zinc, Total	44.1	43.3	1.8	1.0

* corrected RPD
aem 10/23/08

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 10/21/08

CLIENT: WC-HANFORD RC-110 K1365 LVL LOT #: 0810L008

WORK ORDER: 60049-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0375-LC1	Silver, LCS	91.9	100	MG/KG	91.9
		Aluminum, LCS	489	500	MG/KG	97.8
		Arsenic, LCS	896	1000	MG/KG	89.6
		Boron, LCS	442	500	MG/KG	88.3
		Barium, LCS	462	500	MG/KG	92.4
		Beryllium, LCS	23.3	25.0	MG/KG	93.2
		Calcium, LCS	2390	2500	MG/KG	95.5
		Cadmium, LCS	22.9	25.0	MG/KG	91.6
		Cobalt, LCS	231	250	MG/KG	92.4
		Chromium, LCS	47.0	50.0	MG/KG	94.0
		Copper, LCS	115	125	MG/KG	92.3
		Iron, LCS	478	500	MG/KG	95.5
		Potassium, LCS	2370	2500	MG/KG	94.7
		Magnesium, LCS	2340	2500	MG/KG	93.7
		Manganese, LCS	71.5	75.0	MG/KG	95.3
		Molybdenum, LCS	459	500	MG/KG	91.9
		Sodium, LCS	2290	2500	MG/KG	91.6
		Nickel, LCS	186	200	MG/KG	92.8
		Lead, LCS	231	250	MG/KG	92.4
		Antimony, LCS	268	300	MG/KG	89.5
		Selenium, LCS	874	1000	MG/KG	87.4
		Silicon, LCS	201	500	MG/KG	40.2
		Vanadium, LCS	237	250	MG/KG	94.8
		Zinc, LCS	92.7	100	MG/KG	92.7
LCS1	08C0176-LC1	Mercury, LCS	4.6	4.7	MG/KG	98.7

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0375
Date/Time Initiated: 10/13/08 1400
Date/Time Completed: 10/14/08 1730
Analyst(s): MW
Matrix: (Soil) Water Other: _____
Instr. Type: AA (ICP)
Parameters: see backlog

(Digested) / Undigested (circle one)
Balance #: B20
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/BSC

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
0810L001-001		1.59gr	100ml	<2	TO	fine	brown soil	roots	
001R		1.55gr							
001S	1.0ml	1.54gr							
002		1.47gr				coarse	Ottawa sand	N/A	
003		1.51gr				fine	brown soil	roots	
004		1.55gr							
005		1.57gr							
0810L002-001		1.56gr					wet, muddy soil	rock/debris	
002		1.31gr				coarse	dry brown soil	rock debris	
002R		1.21gr							
002S	1.0ml	1.31gr							
0810L007-001		1.52gr				fine	light brown soil	roots	
001R		1.55gr							
001S	1.0ml	1.53gr					MW 10/13/08		
0810L008-001		1.52gr				~~coarse~~ fine	brown soil (dry)	roots	
001R		1.45gr							
001S	1.0ml	1.54gr							
002		1.54gr							
003		1.52gr							
0810L019-001		1.45gr				coarse	brown-clay like	N/A	
001R		1.32gr							
001S	1.0ml	1.49gr							
002		1.45gr					reddish brown-clay like		
003		1.44gr					brown-clay like		

Spiking IDs:
MS #: 8100-04-04
05
06
6072-78-07
LCS #: 08
09
10
11

Reagent IDs:
HNO_3 G11022
HCL G26C54
H_2O_2 G15A18
1:1 HNO_3 9789-086-06
1:1 HCL

File ID#: IC037501 IC037502 IC037503 updated
LIMS Transfer: (Y) N
Data Review By/Date: 10/16/08

LCS may be double spiked with ICV-4 (Ag)
MS's inadvertantly spiked with 1ml ICV-4
in addition to MS std's
MW 10/13/08

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0375
Date/Time Initiated:
Date/Time Completed:
Analyst(s):
Matrix: Soil Water Other:
Instr. Type: AA ICP
Parameters:

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

See page 003

Method: SW (circle)

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

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
08101019-004		1.44gr	100ml	<2	TO	coarse	brown-clay like	N/A	
005		1.45gr							
006		1.42gr						matrix/spike	
08L0375-MB1		1.0gr					Bottling chips	N/A	
LCS	1.0 ml	1.0gr							

DMW 10/13/08

Spiking IDs:
MS #:
LCS #: See page 003

Reagent IDs:
HNO_3
HCL
H_2O_2
1:1 HNO_3
1:1 HCL

See page 003

File ID#:
LIMS Transfer: Y N
Data Review By/Date: 10/16/08

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 498

Analyst: JLB
Date: 10/3/08
Start Time/Temp: 1540 / 92°
End Time/Temp: 1610 / 94°

Instrument ID: HG3.1
Balance #: B29 /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0176
Worksheet: HG100601
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA 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	SW			10mL	50mL	
0.2 ug/L	V	0.100				
1.0	RU	0.500				
2.0	EME	1.000				
5.0	NJ	2.500				
10.0	T	5.000				
ICV	886	0.125	2.5			
CCV	NHA	0.250	5.0			
ICB/CCB	95					90.50L
MB1	997			0.30		PBS176 100.00
TE 10 LCS	818	*	*	0.30		LCSS176
0809L007-001	925			0.33		99.83
001R	40			0.30		
TE 10 001S	B2	0.500	1.0	0.34		
0809L008-001	N4			0.33		99.40
001R	35			0.35		
001S	NR	0.500	1.0	0.33		
002	C8			0.34		99.41
003	K			0.35		99.18
0809L150-002	1C			0.35		100.00
002S	K9	0.050	10.0	0.35		
002T	11A	0.050	10.0	0.34		
0809L172-003	C			0.30		
003S	6J	0.050	10.0	0.30		
003T	5H	0.050	10.0	0.32		
0809L198-001	T4			0.37		R
001R	X5			0.34		

Standard:	ID	Prep Date/Time
ICALMS	R16072-78.14B	10/3/08 1130
ICV/CCV/LCS	US 16072-78.15A	

Reviewed By/Date: [signature] 10/7/08

see book # 9368 for std traceability information

*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

Bionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 498

Analyst: TLB
Date: 10/3/08
Start Time/Temp:
End Time/Temp: see pg 49

Instrument ID: HG-3.1
Balance #: B29 ✓ /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 0810176
Worksheet: HG100601
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA 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.
0809498-001S	X3	0.500	1.0	0.37	50 mL	R 100.0
002	401			0.32	↓	↓
0810L002-001	Cd			0.33		
001R	UB			0.40		
001S	224	0.500	1.0	0.33		
002	Z			0.31		
0809499-001	X8			0.32		R 98.61
001R	K17			0.34		↓
001S	2I	0.500	1.0	0.32		↓
002				0.31	↓	R 97.05

TLB 10/3/08

Standard:	ID	Prep Date/Time
CAL/MS		
CV/CCV/LCS	see pg 49	

Reviewed By/Date: 10/7

see book # 9368 for std traceability information

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

Lionville Laboratory Use Only

081OL~~212~~ 088

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI Lionville Laboratory, Inc.

000000021

Client: W.C. Hanford SAF# RC410

Est. Final Proj. Sampling Date

Project#: 60049-001-001-0001-00

Project Contact/Phone#

Lionville Laboratory Project Manager: O. Johnson

SW846 Del STP TAT 15 Day

Date Rec'd: 10-1-08 Date Due: 10-16-08

		A						B							
Refrigerator #				3				3							
#/Type Container	Liquid / Solid			1G				1G							
Volume				250				250							
Preservatives															
ANALYSES REQUESTED →		ORGANIC						INORG							
		VOA	BNA	~~Pest~~ ~~PCB~~	8081	8151 Herb		TCP Total	CN						
Lionville Laboratory Use Only				060811				Met O							

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	J17J9			Soil	9/29/08	0919			X				X					
	002	J K0					0924			X				X					
	003	J K1					0928			X				X					

Special Instructions: Run matrix QC @ 05) 10/1/08.

net O = HSL + B, K, MG, SI

NOTL

Special Instructions:

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

Relinquished by	Received by	Date	Time
[signature]	[signature]	10-1-08	0930

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-110-005	Page 1 of 1

Collector Tony Welch-Koelling	Company Contact Doug Bowers	Telephone No. 509 531-0701	Project Coordinator KESSNER, JH
Project Designation 100-H Burial Grounds Remaining Sites - Soil Quick Turn	Sampling Location 600-152		SAF No. RC-110
Ice Chest No. ~~AFS-06-005~~ FEB 9-30-08 ERC-02-407	Field Logbook No. EL 1627	COA R601522600	Method of Shipment FED EX
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A080358		Bill of Lading/Air Bill No. SEE OSPC

Price Code: 2E

Data Turnaround: 15 days

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	Cool 4C										
Type of Container	aG	aG										
No. of Container(s)	1	1										
Volume	250mL	250mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Pesticides - 8081										

Sample No.	Matrix *	Sample Date	Sample Time										
J17JJ9	SOIL	09-29-08	0919	X	X								
J17JK0	SOIL	09-29-08	0924	X	X								
J17JK1	SOIL	09-29-08	0928	X	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From [signature]	Date/Time 0945 9/29/08	Received By/Stored In Doug Bowers/Doug Bowers	Date/Time 09-29-08/0945
Relinquished By/Removed From Doug Bowers/Doug Bowers	Date/Time 9-29-08/1445	Received By/Stored In [signature] 1060 D/4g	Date/Time 9-29-08/1445
Relinquished By/Removed From 1060 2A/J.E. Bernhard	Date/Time 0830 9-30-08	Received By/Stored In J.E. Bernhard	Date/Time 0830 9-30-08
Relinquished By/Removed From J.E. Bernhard	Date/Time 0845 9-30-08	Received By/Stored In FED EX	Date/Time
Relinquished By/Removed From FED EX	Date/Time 10-1-08 0930	Received By/Stored In [signature]	Date/Time 10-1-08 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

From non rad area

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7470 - (CV)

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

000000022

PE 8

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: W.C. Hanford

Project/SAP/SOW/Release #: RC-110

Date: 10-1-08

LvLI Batch #: 18101212

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7921 1630 4820
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 # ERC-02-407
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