0077284

SAF-RC-088
618-7 Burial Ground – Other Liquids
FINAL DATA PACKAGE

RECEIVED
MAY 21 2008
EDMC

COMPLETE COPY OF DATA PACKAGE TO:

Rick Kerkow	L6-06	KW 5/14/08 Initials/Date
Kathy Wendt	H4-21	KW 5/14/08 Initials/Date

COMMENTS:

SDG K1139 SAF-RC-088

Rad only X Chem only Rad & Chem

X Complete Partial

ADD-ON TCLP METALS AND TCLP SVOA FOR J169N3

WASTE SITE: 618-7 Burial Ground (drums)

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 #	0804L921
SDG #	K1139 ADDON
SAF #	RC-088
Date Received	4/16/08
# Samples	1
Matrix	OTHER LIQUID
Volatiles	
Semivolatiles	X
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

RECEIVED
MAY 2008

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-088 K1139

DATE RECEIVED: 03/11/08 LVL LOT # L0804L923

CLIENT ID	LVL #	MTX	PREP #	LEACH DATE	EXTR/PREP	ANALYSIS
J169N3	002	W	08LE0185	04/19/08	04/21/08	04/22/08
J169N3	002 MS	W	08LE0185	04/19/08	04/21/08	04/22/08
J169N3	002 MSD	W	08LE0185	04/19/08	04/21/08	04/22/08

LAB QC:

SBLKUA	MB1	W	08LE0185	N/A	04/21/08	04/22/08
SBLKUA	MB1 BS	W	08LE0185	N/A	04/21/08	04/22/08
08LT0030-LB1	LB1	W	08LE0185	N/A	04/21/08	04/22/08

ADDENDUM

This report provides Toxicity Characteristics Leaching Procedure (TCLP) information. Listed on the next page, the client identification on the ITCL labchron, "TCLP" represents the non-volatile leachate fraction and "TCLP LEACHATE" represents the Zero Headspace Extraction (ZHE) volatile leachate fraction. The "EXTR/PREP DATE" is the date the leachate preparation was initiated; the "ANALYSIS DATE" is the date the leachates were completed.

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-088 K1139

DATE RECEIVED: 03/11/08 LVL LOT # :0804L921

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J169N3						
TCLP	001	SO	08LT0030	03/04/08	04/18/08	04/19/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-088
LVL #: 0804L921
SDG/SAF # K1139/RC-088

W.O. #: 11343-606-001-9999-00
Date Received: 03-11-2008

SEMIVOLATILE - TCLP

One (1) leachate sample was generated on 04-19-2008 from a solid sample collected on 03-04-2008. This is a relog of batch 0803L731, relogged for semivolatile leachates.

The sample and its associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3510C on 04-21-2008 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for client specified Semivolatile target compounds on 04-22-2008.

The following is a summary of 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 results presented in this report are derived from samples that met LvLI's sample acceptance policy.

2. This is a relog of batch 0803L731, relogged for semivolatile leachates. The samples were leached outside of the recommended hold time. Samples were collected on 03-04-2008 and received on 03-11-2008. Samples were relogged, per client request, for semivolatile leachates on 04-16-08. Samples were leached within hold time of relog date.

3. Non-target compounds were detected but not reported in this package.

4. One (1) of thirty-six (36) surrogate recoveries was outside acceptance criteria. However, surrogate recovery criteria were met (i.e., no more than one outlier per fraction {acid and base neutral} and no recoveries less than 10%)

5. All matrix spike recoveries were within acceptance criteria.

6. One (1) of twelve (12) blank spike recoveries was outside acceptance criteria. It was biased high and has minimal impact on the data.

r:\group\data\2008\bna\tnu\0804-921cl1.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 13 pages.

LIONVILLE LABORATORY INC.

7. All initial calibrations associated with this data set were within acceptance criteria.

8. Internal standard area and retention time criteria were met.

9. Manual integrations are performed according to SOP QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration").

10. 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.

11. 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

4/25/08
Date

GLOSSARY

DATA QUALIFIERS

U = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.

J = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection 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. This flag is also used for a TIC as well as for a positively identified TCL compound.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

D = Identifies all compounds identified in an analysis at a secondary dilution factor.

I = Interference.

NQ = Result qualitatively confirmed but not able to quantify.

A = Indicates that a TIC is a suspected aldol-condensation product.

N = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

X = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).

Y = Additional qualifiers used as required are explained in the case narrative.

GLOSSARY

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike 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	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quan modifications or integrations are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quan modifications:

MP - Missed Peak: manually added peak not found by automatic quan program.

PA - Peak Assignment: quan report was changed to reflect correct peak assignment.

RI - Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene which are poorly resolved on the BNA column.

SP - Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.

CB - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.

PI - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

Semivolatiles by GC/MS, TCLP Leachate Report Date: 04/23/08 13:12

RFW Batch Number: 0804L921 Client: TNU-HANFORD RC-088 K1139 Work Order: 11343606001 Page: 1a

	Cust ID:	J169N3	J169N3	J169N3	SBLKUA	SBLKUA BS	LCHBLK
Sample Information	RFW#:	002	002 MS	002 MSD	08LE0185-MB1	08LE0185-MB1	08LT0030-LB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Surrogate Recovery	Nitrobenzene-d5	76 %	74 %	77 %	97 %	84 %	62 %
	2-Fluorobiphenyl	80 %	78 %	82 %	99 %	94 %	66 %
	p-Terphenyl-d14	84 %	86 %	81 %	94 %	88 %	85 %
	Phenol-d5	19 %	25 %	31 %	25 %	19 %	10 %
	2-Fluorophenol	33 %	39 %	46 %	43 %	35 %	21 %
	2,4,6-Tribromophenol	82 %	87 %	82 %	101 %	126 * %	72 %
Pyridine		0.050 U	25 %	21 %	0.050 U	37 %	0.050 U
1,4-Dichlorobenzene		0.050 U	70 %	74 %	0.050 U	76 %	0.050 U
2-Methylphenol		0.050 U	55 %	62 %	0.050 U	52 %	0.050 U
3/4-Methylphenol		0.050 U	50 %	55 %	0.050 U	43 %	0.050 U
Hexachloroethane		0.050 U	68 %	73 %	0.050 U	75 %	0.050 U
Nitrobenzene		0.050 U	68 %	73 %	0.050 U	79 %	0.050 U
Hexachlorobutadiene		0.050 U	78 %	85 %	0.050 U	92 %	0.050 U
2,4,6-Trichlorophenol		0.050 U	73 %	85 %	0.050 U	98 %	0.050 U
2,4,5-Trichlorophenol		0.12 U	69 %	83 %	0.12 U	92 %	0.12 U
2,4-Dinitrotoluene		0.050 U	80 %	80 %	0.050 U	93 %	0.050 U
Hexachlorobenzene		0.050 U	85 %	93 %	0.050 U	126 %	0.050 U
Pentachlorophenol		0.12 U	94 %	98 %	0.12 U	129 * %	0.12 U

*= Outside of EPA CLP QC limits.

000000009

onville Laboratory Use Only

)804L921

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

VLI Donville Laboratory Inc.

000000010

ent TNU Hanford RC 088

. Final Proj. Sampling Date

ject# 11343-606-001-9999-00

ject Contact/Phone#

nville Laboratory Project Manager Arlette Johnson

SW846 Del STD TAT 7 Days

te Rec'd 3-11-08 Date Due 4-23-08

Refrigerator #									A 3								
#/Type Container	Liquid					LEACHATE			1gl			LEACHATE					
#/Type Container	Solid																
Volume	Solid								250								
Preservatives									1								
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/PCB	Herb				TCLP Metal	CN							

TRIX DES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only												
									ITCLP			8625T			ITCLP #HG TE 4-16-08		RCRA #HG TE 4-16-08			
Soil	001	J169N3	✓	✓	SO	3-4-08	1440		X						X					
Sediment	002	TCLP of 001			L	*						X					X			
Solid																				
Sludge																				
Water																				
Oil																				
Air																				
Drum Solids																				
Drum Liquids																				
EP/TCLP Leachate																				
Wipe																				
Other																				
Fish																				

ecial Instructions:

Special Instructions:

1. Reloq of 0803L731-001
2.
3.
4.
5.
6.

* See Lab chron

Relinquished by	Received by	Date	Time
F	[signature]	4-16-08	0915

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

ville Laboratory Use Only
3031731

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

VLI

000000011

TNU HANFORD RC-088

Final Proj. Sampling Date

ct# 11343-606-001-9999-00

ct Contact/Phone#

lle Laboratory Project Manager O Johnson

SW846 Del STD TAT 15 days

Rec'd 3-11-08 Date Due 3-26-08

Refrigerator #			A 3														
#/Type Container	Liquid		1G														
	Solid																
Volume			250														
Preservatives																	
ANALYSES REQUESTED →			ORGANIC							INORG							
			VOA	BNA	~~Pest~~/PCB	Herb				Metal Hg	CN	TWT					
			Lionville Laboratory Use Only														
				N625H	OPCB					MetC		TIGN					

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
001	J169N3	✓	/	X	3/4/08	1440		X	X					X		X		

Matrix: ix, Br, oil, ediment, olid, ludge, /ater, ol, ir, rum, olids, rum, iquids, P/TOLP, eachate, /pe, ther, sh

ial Instructions: X = ~~other liquid~~ SOLID HW 3-11-08

MetC ① = HSL + Zr, Sn

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	3/11/08	0940

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-088-003 | Page 1 of 1

ctor Kerkow / B. Lawrence / W. Sexsmith	Company Contact Joan Kessner Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 9G Data Turnaround 15 Days
ct Designation 8-7 Burial Ground - Other Liquids	Sampling Location 618-7 Burial Ground (drums)	SAF No. RC-088	
hest No. ERC-02-003	Field Logbook No. EL-1395-12 COA RG61872000	Method of Shipment Fed Ex	
ned To BERLINE SERVICES / LIONVILLE	Offsite Property No. A080195	Bill of Lading/Air Bill No. See OSPC	

SSIBLE SAMPLE HAZARDS/REMARKS

ential Radioactive contamination, potential beryllium tamination

cial Handling and/or Storage

e

Preservation	Cool 4C	Cool 4C	None	None	None						
Type of Container	aG	aG	P	P	P						
No. of Container(s)	1	0	0	0	1						
Volume	~~125mL~~ 250	125mL	125mL	60mL	500mL						
SAMPLE ANALYSIS	Semi-VOA - 8270A (TCL)	PCBs - 8082	See item (1) in Special Instructions.	Ignitability - 1010	See item (2) in Special Instructions.	RTC 3/4/08					

Sample No.	Matrix *	Sample Date	Sample Time										
9N3	OTHER LIQUID	3/4/08	1440	X	X	X	X						
~~9N4~~	~~OTHER LIQUID~~									DL 3/3/08			

CHAIN OF POSSESSION		Sign/Print Names	
quished By/Removed From wrence [signature]	Date/Time 1500 3-4-08	Received By/Stored In RTCoffman / RTCoffman	Date/Time 1500 3/4/08
quished By/Removed From Coffman / RTCoffman	Date/Time 1615 3/4/08	Received By/Stored In [signature] mstankovich	Date/Time 1615 3/4/08
quished By/Removed From [signature] mstankovich	Date/Time 1800 3/10/08	Received By/Stored In	Date/Time Fed Ex
quished By/Removed From Fed Ex	Date/Time 3-11-08 0940	Received By/Stored In [signature]	Date/Time 3-11-08 0940
quished By/Removed From	Date/Time	Received By/Stored In	Date/Time
quished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010A (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc, Zirconium}; ICP Metals - 6010A (Add-on) {Arsenic, Beryllium, Lead, Selenium, Thallium, Tin}; Mercury - 7471 - (CV)

(2) Gross Alpha; Gross Beta; Gamma Spectroscopy (TCL List) {Cobalt-60, Europium-152, Europium-154, Europium-155}; Isotopic Uranium; Isotopic Thorium; Americium-241; Isotopic Plutonium; Strontium-89,90 -- Total Sr

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

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

H-EE-011

000000012

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD
Project/SAF/SOW/Release #: RC-088

Date: 3/11/08

LvLI Batch #: 0803L731

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 8409 4572 1070
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 3.4°	°C	Cooler # ERC-02-003
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~~ N: 3/11/08	☑ No COC Indicates other liquid but sees Tr Solid	
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 3-11-08

Person Contacted _____ Date _____

LvLI LIONVILLE LABORATORY INC.

SR-002-B.doc

RECEIVED
MAY 2008

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-088 K1139

DATE RECEIVED: 03/11/08 LVL LOT # :0804L921

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J169N3						
TCLP	001	SO	08LT0030	03/04/08	04/18/08	04/19/08
SILVER, TCLP LEACHAT	002	W	08L0160	04/19/08	04/22/08	04/23/08
SILVER, TCLP LEACHAT	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
SILVER, TCLP LEACHAT	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	002	W	08L0160	04/19/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	002	W	08L0160	04/19/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	002	W	08L0160	04/19/08	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	002	W	08L0160	04/19/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	002	W	08C0073	04/19/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	002 REP	W	08C0073	04/19/08	04/22/08	04/23/08
MERCURY, TCLP LEACHA	002 MS	W	08C0073	04/19/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	002	W	08L0160	04/19/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
LEAD, TCLP LEACHATE	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	002	W	08L0160	04/19/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	002 REP	W	08L0160	04/19/08	04/22/08	04/23/08
SELENIUM, TCLP LEACH	002 MS	W	08L0160	04/19/08	04/22/08	04/23/08

LAB QC:

SILVER LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
SILVER, TCLP LEACHAT	MB1	W	08L0160	N/A	04/22/08	04/23/08
SILVER, TCLP LEACHAT	MB2	W	08L0160	N/A	04/22/08	04/23/08
ARSENIC LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	MB1	W	08L0160	N/A	04/22/08	04/23/08
ARSENIC, TCLP LEACHA	MB2	W	08L0160	N/A	04/22/08	04/23/08
BARIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-088 K1139

DATE RECEIVED: 03/11/08 LVL LOT # :0804L921

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BARIUM, TCLP LEACHAT	MB1	W	08L0160	N/A	04/22/08	04/23/08
BARIUM, TCLP LEACHAT	MB2	W	08L0160	N/A	04/22/08	04/23/08
CADMIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	MB1	W	08L0160	N/A	04/22/08	04/23/08
CADMIUM, TCLP LEACHA	MB2	W	08L0160	N/A	04/22/08	04/23/08
CHROMIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	MB1	W	08L0160	N/A	04/22/08	04/23/08
CHROMIUM, TCLP LEACH	MB2	W	08L0160	N/A	04/22/08	04/23/08
MERCURY LABORATORY	LC1 BS	W	08C0073	N/A	04/22/08	04/23/08
MERCURY, TOTAL	MB1	W	08C0073	N/A	04/22/08	04/23/08
MERCURY, TCLP LEACHA	MB2	W	08C0073	N/A	04/22/08	04/23/08
MERCURY, TCLP LEACHA	MB3	W	08C0073	N/A	04/22/08	04/23/08
LEAD LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
LEAD, TCLP LEACHATE	MB1	W	08L0160	N/A	04/22/08	04/23/08
LEAD, TCLP LEACHATE	MB2	W	08L0160	N/A	04/22/08	04/23/08
SELENIUM LABORATORY	LC1 BS	W	08L0160	N/A	04/22/08	04/23/08
SELENIUM, TCLP LEACH	MB1	W	08L0160	N/A	04/22/08	04/23/08
SELENIUM, TCLP LEACH	MB2	W	08L0160	N/A	04/22/08	04/23/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-088
LVL#: 0804L921
SDG/SAF#: K1139/RC-088

W.O.#: 11343-606-001-9999-00
Date Received: 03-11-08

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 analysis of 1 TCLP leachate.

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

   The sample is a relog of LvLI#: 0803L731-001

   Samples J169N3 and J169N3 duplicate for ICP metals were run at a 3-fold dilution, sample J169N3 spike was run with a 6-fold dilution due to sample matrix.

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

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

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

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

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

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

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

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.

10. The TCLP extract from samples J169N3 was selected for the matrix spike (MS) for this analytical batch.

11. The MS recoveries for all analytes in the TCLP extract were above 50% except for Silver (18.9%). 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

5/2/08
Date

alm/m04-921

METALS METHOD GLOSSARY

'he following methods are used as reference for the digestion and analysis of samples contained within tl
.ot#: 0804L921

.eaching Procedure: __1310 __1311 __1312 __Other:_____

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

Metals Digestion Methods: __3005A ✓3010A __3015 __3020A __3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
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 04/28/08

CLIENT: TNU-HANFORD RC-088 K1139

LVL LOT #: 0804L921

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J169N3	Silver, TCLP Leachate	17.1	UG/L	6.0	3.0
		Arsenic, TCLP Leachate	30.0 u	UG/L	30.0	3.0
		Barium, TCLP Leachate	712	UG/L	6.0	3.0
		Cadmium, TCLP Leachate	17.0	UG/L	3.0	3.0
		Chromium, TCLP Leachate	34.1	UG/L	12.0	3.0
		Mercury, TCLP Leachate	0.06 u	UG/L	0.06	1.0
		Lead, TCLP Leachate	10700	UG/L	18.0	3.0
		Selenium, TCLP Leachate	36.0 u	UG/L	36.0	3.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/28/08

CLIENT: TNU-HANFORD RC-088 K1139

LVL LOT #: 0804L921

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

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

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/28/08

CLIENT: TNU-HANFORD RC-088 K1139

LVL LOT #: 0804L921

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	J169N3	Silver, TCLP Leachate	963	17.1	5000	18.9	6.0
		Arsenic, TCLP Leachate	4870	30.0 u	5000	97.4	6.0
		Barium, TCLP Leachate	96500	712	100000	95.8	6.0
		Cadmium, TCLP Leachate	1020	17.0	1000	100.0	6.0
		Chromium, TCLP Leachat	4960	34.1	5000	98.6	6.0
		Mercury, TCLP Leachate	193	0.06u	200	96.5	50.0
		Lead, TCLP Leachate	15700	10700	5000	99.9	6.0
		Selenium, TCLP Leachat	985	36.0 u	1000	98.5	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/28/08

CLIENT: TNU-HANFORD RC-088 K1139

LVL LOT #: 0804L921

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	J169N3	Silver, TCLP Leachate	17.1	20.8	19.5	3.0
		Arsenic, TCLP Leachate	30.0 u	30.0 u	NC	3.0
		Barium, TCLP Leachate	712	754	5.8	3.0
		Cadmium, TCLP Leachate	17.0	17.6	3.5	3.0
		Chromium, TCLP Leachate	34.1	43.6	24.5	3.0
		Mercury, TCLP Leachate	0.06u	0.06u	NC	1.0
		Lead, TCLP Leachate	10700	11100	3.0	3.0
		Selenium, TCLP Leachate	36.0 u	36.0 u	NC	3.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/28/08

CLIENT: TNU-HANFORD RC-088 K1139 LVL LOT #: 0804L921

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

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

Lionville Laboratory Incorporated Logbook #: 440

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

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

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

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

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

TMW

COC Batch #	Spike Vol(s) (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/So/TC	Texture	Color/Appearance	Artifact	Turb
0804L914-003		100ml	100ml	<2	TC	N/A	clear/colorless		PAD
003s	1.0ml								
004									
004R									
0804L921-002		50ml							
002R									
002s	1.0ml	100ml							
08LT0038-LB1									
08L0160-MB1									
LCS1	1.0ml								
W.E. MW 4/22/08									

MW 4/22/08

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

LCS #: 6072-78-08
09
10
11

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

File ID#: I C016001
LIMS Transfer: (Y) N Updated
Data Review By/Date: PMP, 04/23/08

onville Laboratory
corporated

MERCURY PREPARATION

Logbook # 422

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

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

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

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

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

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

Standard:	ID	Prep Date/Time
ICAL/MS	R16072-78-14B	4/22/08 1020
ICV/CCV/LCS	U16072-78-015A	

Reviewed By/Date [signature] 5/6/08

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

ME-HgCVAA-Prep1007

Page #:

000000013

nville Laboratory
orporated

MERCURY PREPARATION

Logbook # 422

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

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

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

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

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

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

CB 4/22/08

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

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

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

ME-HgCVAA-Prep1007

Page #:

000000014

onville Laboratory Use Only

)804L921

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000015

ent TNU Hanford RC 088

t. Final Proj. Sampling Date

oject# 11343-606-001-9999-00

oject Contact/Phone#

nville Laboratory Project Manager Orlitha Johnson

SW846 Del STD TAT 7 Days

te Rec'd 3-11-08 Date Due 4-23-08

Refrigerator #									A 3							
#/Type Container	Liquid						LEACHATE			1gl			LEACHATE			
	Solid															
Volume	Solid									850						
Preservatives																
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb				TCLP Metal	CN						
									Lionville Laboratory Use Only							
			TCLP			06257		TCLP ~~HHHOTE~~ 4-16-08			RCRA ~~HHHOTE~~ we 4-16-08					

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	J169N3	✓	✓	SO	3.4.08	1440		X					X			X			
	002	TCLP of 001			L	*						X					X			

Special Instructions:

Special Instructions:

1. Belog of 0803L731-001
2.
3.
4.
5.
6.

* See Lab chron

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
-F	[illegible]	4.16.08	0915								

nville Laboratory Use Only

803L731

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000016

nt TNU HANFORD RC-088

Final Proj. Sampling Date

ect# 11343-606-001-9999-00

ect Contact/Phone#

ville Laboratory Project Manager O Johnson

SW846 Del STD TAT ~~15~~ days

Rec'd 3-11-08 Date Due ~~3-26-08~~ 3-11-08 3-18-08

Refrigerator #			A																
#/Type Container	Liquid		3																
	Solid		1G																
Volume			250																
Preservatives																			
ANALYSES REQUESTED →			ORGANIC								INORG								
			VOA	BNA	~~Pest~~/PCB	Herb					Metal Hg	CN	Tonit						
			Lionville Laboratory Use Only																
				0625H	OPCB						Met (1)		IIGN						
Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
001	J169N3	✓	/	X	3/4/08	1440		X	X					X		X				

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

cial Instructions: X = ~~other liquid~~ SOLID. 3-11-08

met (1) = HSL + Zr, Sn

Special Instructions:

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

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
[signature]	[signature]	3/11/08	0940					ORIGINAL REWRITTEN		"COMPOSITE WASTE"	

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-088-003 Page 1 of 1

ector . Kerkow / B. Lawrence / W. Sexsmith	Company Contact Joan Kessner Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 9G Data Turnaround 15 Days
ect Designation 18-7 Burial Ground - Other Liquids	Sampling Location 618-7 Burial Ground (drums)	SAF No. RC-088	
Chest No. ERC-02-003	Field Logbook No. EL-1395-12 COA RG61872000	Method of Shipment Fed Ex	
oned To BERLINE SERVICES / LIONVILLE	Offsite Property No. A080195	Bill of Lading/Air Bill No. See OSPC	

SSIBLE SAMPLE HAZARDS/REMARKS

tential Radioactive contamination, potential beryllium tamination

ecial Handling and/or Storage

ne

Preservation	Cool 4C	Cool 4C	None	None	None					
Type of Container	aG	aG	P	P	P					
No. of Container(s)	1	~~1~~ 0	~~1~~ 0	~~1~~ 0	1					
Volume	~~125mL~~ 250	125mL	125mL	60mL	500mL					
SAMPLE ANALYSIS	Semi-VOA - 8270A (TCL)	PCBs - 8082	See item (1) in Special Instructions.	Ignitability - 1010	See item (2) in Special Instructions.	RTC 3/4/08				

Sample No.	Matrix *	Sample Date	Sample Time										
9N3	OTHER LIQUID	3/4/08	1440	X	X	X	X						
~~9N4~~	~~OTHER LIQUID~~									DL 3/3/08			

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Lawrence [signature]	1500 3-4-08	RTCoffman / RTCoffman	1500 3/4/08
RTCoffman / RTCoffman	1615 3/4/08	[signature] mstankovich	1615 3/4/08
[signature] mstankovich well	1800 3/10/08		Fed Ex
[signature]	3-11-08 0940	[signature]	3-11-08 0940

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010A (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc, Zirconium}; ICP Metals - 6010A (Add-on) {Arsenic, Beryllium, Lead, Selenium, Thallium, Tin}; Mercury - 7471 - (CV)

(2) Gross Alpha; Gross Beta; Gamma Spectroscopy (TCL List) {Cobalt-60, Europium-152, Europium-154, Europium-155}; Isotopic Uranium; Isotopic Thorium; Americium-241; Isotopic Plutonium; Strontium-89,90 -- Total Sr

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

ABORATORY SECTION	Received By	Title	Date/Time
NAL SAMPLE ISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

000000017

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD
Project/SAF/SOW/Release #: RC-088

Date: 3/11/08

LvLI Batch #: 0803L731

Sample Custodian: [signature]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FED EX		Airbill # 840945721070
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 3.4°	°C	Cooler # ERC-02-003
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	COC Indicates other liquid but seems to Solid
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 3-11-08

Person Contacted _____ Date _____

LvLI
LIONVILLE LABORATORY INC.

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