

0074049

SAF-RC-074
100-D/DR Burial Grounds & Remaining
Sites – Soil Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

RECEIVED
CCT 05 2007

Jeanette Duncan

H4-21

KW 9/25/07
INITIAL/DATE

EDMC

COMMENTS:

SDG K0949

SAF-RC-074

Rad only

Chem only

Rad & Chem

Complete

Partial

Waste Sites: 118-D-3, soils from leaking drum



21 September 2007



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 #	0709L871
SDG #	K0949
SAF #	RC-074
Date Received	9/06/07
# Samples	1
Matrix	SOIL
Volatiles	
Semivolatiles	X
Pest/PCB	
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	X
Inorganics	X

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

Lionville Laboratory, Inc.
 PCB ANALYTICAL DATA PACKAGE FOR
 TNUHANFORD RC-074 K0949



DATE RECEIVED: 09/06/07

LVL LOT # 070918768

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J15HW9	001	S	07LE0519	09/04/07	09/12/07	09/15/07
J15HW9	001 MS	S	07LE0519	09/04/07	09/12/07	09/15/07
J15HW9	001 MSD	S	07LE0519	09/04/07	09/12/07	09/15/07

LAB QC:

PBLKGE	MB1	S	07LE0519	N/A	09/12/07	09/14/07
PBLKGE	MB1 BS	S	07LE0519	N/A	09/12/07	09/14/07



Case Narrative

Client: TNU-HANFORD RC-074
LVL #: 0709L871
SDG/SAF # K0949 / RC-074

W.O. #: 11343-606-001-9999-00
Date Received: 09-06-2007

PCB

One (1) soil sample was collected on 09-04-2007.

The sample and its associated QC samples were extracted on 09-12-2007 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 09-14,15-2007. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8082.

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. The sample was extracted and analyzed within required holding time.
2. The method blank was below the reporting limits for all target compounds.
3. One (1) of ten (10) surrogate recoveries was outside acceptance criteria. However, the surrogate recovery acceptance criteria were met (i.e. no more than outlier per sample).
4. The blank spike recoveries were within acceptance criteria.
5. Three (3) of four (4) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR) has been enclosed.
6. The initial calibrations associated with this data set were within acceptance criteria.
7. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

r:\group\data\pest\mu hanford\0709-871\ks1.pcb.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 9 pages.



8. 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.

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.


for Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

9/21/07
Date



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.

RFW Batch Number: 0709L871

Client: TNUHANFORD RC-074 K0949

Work Order: 11343606001 Page: 1

Sample Information	Cust ID:	J15HW9	J15HW9	J15HW9	PBLKGE	PBLKGE BS
RFW#:	001	001 MS	001 MSD	07LE0519-MB1	07LE0519-MB1	
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
D.F.:	1.00	1.00	1.00	1.00	1.00	
Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
Surrogate:	Tetrachloro-m-xylene	60 %	51 %	54 %	101 %	102 %
	Decachlorobiphenyl	41 %	34 * %	38 %	83 %	82 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====						
Aroclor-1016		14 U	52 * %	47 * %	13 U	91 %
Aroclor-1221		14 U	14 U	14 U	13 U	13 U
Aroclor-1232		14 U	14 U	14 U	13 U	13 U
Aroclor-1242		14 U	14 U	14 U	13 U	13 U
Aroclor-1248		14 U	14 U	14 U	13 U	13 U
Aroclor-1254		17 J	I	I	13 U	13 U
Aroclor-1260		14 U	56 * %	62 %	13 U	98 %

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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Custody Transfer Record/Lab Work Request



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

7709L871

Sent TNU HANFORD SAF# RC-074
 Final Proj. Sampling Date _____
 Subject# 11343-606-001-9999-00
 Subject Contact/Phone# _____
 Lionville Laboratory Project Manager O Johnson
SW846 Del STD TAT 15 days

Date Rec'd 9-6-07 Date Due 9-21-07

Refrigerator #	A		B		C		See SRC
	3	3			3		
#/Type Container	Liquid						
	Solid	1G	1G		1G		
Volume		60	60		60		
Preservatives		-	-		-		
ANALYSES REQUESTED →	ORGANIC				INORG		
	VOA	PAH	BNA	PCB	Herb	Metal	CN

LEACHATE

LEACHATE

FID# DEB#	Lab ID	Client ID/Description	Matrix OC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only													
			MS	MSD				FTCLP	OPCB	06257	ITCLP	RCRA									
Soil	001	J15HW9	✓	✓	Soil	9-4-07	1000	X	X				X								
Sediment	002	" TCLP05 001			L	*								X							
Solid																					
Sludge																					
Water																					
Oil																					
Air																					
Drum																					
Spills																					
Drum																					
Liquids																					
EP/TCLP																					
Leachate																					
Wipes																					
Other																					
Rsh																					

Special Instructions:

Special Instructions:

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

* See Lab Chron

Relinquished by	Received by	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	9/6/07	0740

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL			
REWRITTEN			

COMPOSITE WASTE

000000007

Collector D.W. Shea/Sub-contractor John Caldwell	Company Contact D.W. Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH	Price Code 8K	Data Turnaround 15 days
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Quick T	Sampling Location 118-D-3, soils from leaking drum	SAF No. RC-074			
Chest No. ERC-01-D41	Field Logbook No. EL-1607-2	COA R118D32600	Method of Shipment Fed EX		
Shipped To EBERLINE SERVICES / LIONVILLE		Offsite Property No. See OSPC	Bill of Lading/Air Bill No. See OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS Potentially radioactive Special Handling and/or Storage	Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
	Type of Container	G	uG	G/P	G	G	G/P			
	No. of Container(s)	1	1	1		1	1			
	Volume	60mL	60mL	60mL	60mL	60mL	500mL			

SAMPLE ANALYSIS				See item (1) in Special Instructions.	PCBs - 8082	IC Anions - 300.0; pH (Soil) - 9045	Total Cyanide - 9010; Sulfides - 9030	TCLP Sem-VOA - 1311/8270A	See item (2) in Special Instructions.				
Sample No.	Matrix *	Sample Date	Sample Time										
15HW9	SOIL	9/4/07	1000	✓	✓			✓					
6HX0	SOIL	9/4/07											

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Received By/Removed From John Caldwell (SEC)	Date/Time 9/4/07 1039	Received By/Stored In Dushen Dushen A	Date/Time 9/4/07 1039	(1) Metals by ICP (TCLP) - 1311/6010 (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Mercury (TCLP) - 1311/7470 (Mercury) (2) Gamma Spec - Add-on (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Silver-109 metastable, Sodium-22) - Dushen 9/4/07 samples analyzed to determine samples from 3728 Ref # 3A . 3728 Custodian removed samples for shipping on 9/5/07 .				S=Soil SE=Sediment SO=Solid SL=Sludge W = Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tram Wl=Wipe L=Liquid V=Vegetation X=Other	
Received By/Removed From Dushen Dushen	Date/Time 9/4/07 1552	Received By/Stored In Prisha 3A	Date/Time 9/4/07 1552						
Received By/Removed From Prisha 3A	Date/Time 9-5-07 0900	Received By/Stored In KMSingleby	Date/Time 9-5-07						
Received By/Removed From KMSingleby	Date/Time 9-5-07 1500	Received By/Stored In FED EX	Date/Time						
Received By/Removed From FED EX	Date/Time 9-6-07 0940	Received By/Stored In Thom Heavens	Date/Time 9-6-07 0940						
Received By/Removed From	Date/Time	Received By/Stored In	Date/Time						

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

0000000000

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNLI HANFORD
 Project: SAFSOW/Release 5: RC-074

Date: 9/6/07

LvLI Batch #: 0709L871

Sample Custodian: Vicki Hummer

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or <u>Shipped?</u>	Carrier: <u>Fed Ex</u>	Airbill #: <u>7913 8122 0448</u>
2. Custody Seals on coolers or shipping containers intact, signed & dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No Seals
3. Outside of coolers or shipping containers are free from damage?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Comments:
4. All expected paperwork received (COC & other client specific information) sealed in plastic bag and easily accessible?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5. Samples received cooled or ambient?	Temp: _____ °C	Cooler #: <u>ERC-01-044</u>
How was the temperature taken?	<input checked="" type="checkbox"/> IR	<input type="checkbox"/> Temp. Blank <input type="checkbox"/> Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
6. Custody seals on sample containers intact, signed and dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No Seals
7. COC (Client & LvLI) signed & dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8. Sample containers are intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
9. All samples on COC received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
All samples received on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10. All sample label information matches COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
11. Samples properly preserved? (If #5 is no, then this is no.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
12. Samples received within hold times?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Short holds taken to wet lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
13. VOA, TOC, TOX free of headspace?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
14. QC stickers placed on bottles designated by client?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> 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.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
16. Project Manager contacted concerning any discrepancies?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Person Contacted _____	Date _____	



Lionville Laboratory, Inc.
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNUHANFORD RC-074 K0949



DATE RECEIVED: 09/06/07

LVL LOT # :07091871

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J15HW9						
TCLP	001	S	07LTO118	09/04/07	09/11/07	09/12/07
SILVER, TCLP LEACHAT	002	W	07L0469	09/12/07	09/18/07	09/18/07
SILVER, TCLP LEACHAT	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
SILVER, TCLP LEACHAT	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07
ARSENIC, TCLP LEACHA	002	W	07L0469	09/12/07	09/18/07	09/18/07
ARSENIC, TCLP LEACHA	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
ARSENIC, TCLP LEACHA	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07
BARIUM, TCLP LEACHAT	002	W	07L0469	09/12/07	09/18/07	09/18/07
BARIUM, TCLP LEACHAT	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
BARIUM, TCLP LEACHAT	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07
CADMIUM, TCLP LEACHA	002	W	07L0469	09/12/07	09/18/07	09/18/07
CADMIUM, TCLP LEACHA	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
CADMIUM, TCLP LEACHA	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07
CHROMIUM, TCLP LEACH	002	W	07L0469	09/12/07	09/18/07	09/18/07
CHROMIUM, TCLP LEACH	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
CHROMIUM, TCLP LEACH	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07
MERCURY, TCLP LEACHA	002	W	07C0177	09/12/07	09/17/07	09/18/07
MERCURY, TCLP LEACHA	002 REP	W	07C0177	09/12/07	09/17/07	09/18/07
MERCURY, TCLP LEACHA	002 MS	W	07C0177	09/12/07	09/17/07	09/18/07
LEAD, TCLP LEACHATE	002	W	07L0469	09/12/07	09/18/07	09/18/07
LEAD, TCLP LEACHATE	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
LEAD, TCLP LEACHATE	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07
SELENIUM, TCLP LEACH	002	W	07L0469	09/12/07	09/18/07	09/18/07
SELENIUM, TCLP LEACH	002 REP	W	07L0469	09/12/07	09/18/07	09/18/07
SELENIUM, TCLP LEACH	002 MS	W	07L0469	09/12/07	09/18/07	09/18/07

LAB QC:

SILVER LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07
SILVER, TCLP LEACHAT	MB1	W	07L0469	N/A	09/18/07	09/18/07
SILVER, TCLP LEACHAT	MB2	W	07L0469	N/A	09/18/07	09/18/07
ARSENIC LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07
ARSENIC, TCLP LEACHA	MB1	W	07L0469	N/A	09/18/07	09/18/07
ARSENIC, TCLP LEACHA	MB2	W	07L0469	N/A	09/18/07	09/18/07
BARIUM LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07

Lionville Laboratory, Inc.
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNUHANFORD RC-074 K0949

DATE RECEIVED: 09/06/07

LVL LOT # :0709L871

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BARIUM, TCLP LEACHAT	MB1	W	07L0469	N/A	09/18/07	09/18/07
BARIUM, TCLP LEACHAT	MB2	W	07L0469	N/A	09/18/07	09/18/07
CADMIUM LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07
CADMIUM, TCLP LEACHA	MB1	W	07L0469	N/A	09/18/07	09/18/07
CADMIUM, TCLP LEACHA	MB2	W	07L0469	N/A	09/18/07	09/18/07
CHROMIUM LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07
CHROMIUM, TCLP LEACH	MB1	W	07L0469	N/A	09/18/07	09/18/07
CHROMIUM, TCLP LEACH	MB2	W	07L0459	N/A	09/18/07	09/18/07
MERCURY LABORATORY	LC1 BS	W	07C0177	N/A	09/17/07	09/18/07
MERCURY, TOTAL	MB1	W	07C0177	N/A	09/17/07	09/18/07
MERCURY, TCLP LEACHA	MB2	W	07C0177	N/A	09/17/07	09/18/07
LEAD LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07
LEAD, TCLP LEACHATE	MB1	W	07L0469	N/A	09/18/07	09/18/07
LEAD, TCLP LEACHATE	MB2	W	07L0469	N/A	09/18/07	09/18/07
SELENIUM LABORATORY	LC1 BS	W	07L0469	N/A	09/18/07	09/18/07
SELENIUM, TCLP LEACH	MB1	W	07L0469	N/A	09/18/07	09/18/07
SELENIUM, TCLP LEACH	MB2	W	07L0469	N/A	09/18/07	09/18/07

METALS METHOD GLOSSARY

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

Lot#: 0709L871

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 ^s	200.7 204.2			99
Arsenic	6010B 7060A ^s	200.7 206.2	3113B		99
Barium	6010B	200.7			99
Beryllium	6010B	200.7		1620	99
Bismuth	6010B ¹	200.7 ¹			99
Boron	6010B	200.7			99
Cadmium	6010B 7131A ^s	200.7 213.2			99
Calcium	6010B	200.7			SS17
Chromium	6010B 7191 ^s	200.7 218.2			99
Cobalt	6010B	200.7			99
Copper	6010B 7211 ^s	200.7 220.2			99
Iron	6010B	200.7			99
Lead	6010B 7421 ^s	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	6010B 7470A ³ 7471A ³	200.7 245.1 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 ^s	200.7 270.2	3113B		99
Silicon	6010B ¹	200.7		1620	99
Silica	6010B	200.7		1620	99
Silver	6010B 7761 ^s	200.7 272.2			99
Sodium	6010B 7770 ⁴	200.7 273.1 ⁴			99
Strontium	6010B	200.7			99
Thallium	6010B 7841 ^s	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 09/19/07

CLIENT: TNUHANFORD RC-074 K0949

LVL LOT #: 0709L871

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J15HW9	Silver, TCLP Leachate	5.4	u UG/L	5.4	6.0
		Arsenic, TCLP Leachate	24.6	u UG/L	24.6	6.0
		Barium, TCLP Leachate	562	UG/L	1.2	6.0
		Cadmium, TCLP Leachate	7.6	UG/L	3.0	6.0
		Chromium, TCLP Leachate	6.0	u UG/L	6.0	6.0
		Mercury, TCLP Leachate	0.10	u UG/L	0.10	1.0
		Lead, TCLP Leachate	75.4	UG/L	19.8	6.0
		Selenium, TCLP Leachate	25.8	u UG/L	25.8	6.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 09/19/07

CLIENT: TNUHANFORD RC-074 K0949
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0709L871

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	07L0469-MB1	Silver, TCLP Leachate	0.90 u	UG/L	0.90	1.0
		Arsenic, TCLP Leachate	4.1 u	UG/L	4.1	1.0
		Barium, TCLP Leachate	0.20 u	UG/L	0.20	1.0
		Cadmium, TCLP Leachate	0.50 u	UG/L	0.50	1.0
		Chromium, TCLP Leachate	1.0 u	UG/L	1.0	1.0
		Lead, TCLP Leachate	3.3 u	UG/L	3.3	1.0
		Selenium, TCLP Leachate	4.3 u	UG/L	4.3	1.0
BLANK2	07L0469-MB2	Silver, TCLP Leachate	8.7	UG/L	5.4	6.0
		Arsenic, TCLP Leachate	24.6 u	UG/L	24.6	6.0
		Barium, TCLP Leachate	1.2 u	UG/L	1.2	6.0
		Cadmium, TCLP Leachate	3.0 u	UG/L	3.0	6.0
		Chromium, TCLP Leachate	6.0 u	UG/L	6.0	6.0
		Lead, TCLP Leachate	19.8 u	UG/L	19.8	6.0
		Selenium, TCLP Leachate	25.8 u	UG/L	25.8	6.0
BLANK1	07C0177-MB1	Mercury, Total	0.10 u	UG/L	0.10	1.0
BLANK2	07C0177-MB2	Mercury, TCLP Leachate	0.19	UG/L	0.10	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 09/19/07

CLIENT: TNUHANFORD RC-074 K0949

LVL LOT #: 0709L871

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-002	J15HW9	Silver, TCLP Leachate	5090	5.4 u	5000	101.7	6.0
		Arsenic, TCLP Leachate	5110	24.6 u	5000	102.2	6.0
		Barium, TCLP Leachate	96200	562	100000	95.7	6.0
		Cadmium, TCLP Leachate	1080	7.6	1000	106.8	6.0
		Chromium, TCLP Leachat	5240	6.0 u	5000	104.9	6.0
		Mercury, TCLP Leachate	212	0.10u	200	105.8	50.0
		Lead, TCLP Leachate	5360	75.4	5000	105.7	6.0
		Selenium, TCLP Leachat	1010	25.8 u	1000	101.0	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 09/19/07

CLIENT: TNUHANFORD RC-074 K0949
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0709L871

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION FACTOR(REP)
			RESULT	REPLICATE RPD		
-002REP	J15HW9	Silver, TCLP Leachate	5.4 u	5.4 u	NC	6.0
		Arsenic, TCLP Leachate	24.6 u	24.6 u	NC	6.0
		Barium, TCLP Leachate	562	574	2.1	6.0
		Cadmium, TCLP Leachate	7.6	6.7	12.6	6.0
		Chromium, TCLP Leachate	6.0 u	6.0 u	NC	6.0
		Mercury, TCLP Leachate	0.10u	0.10u	NC	1.0
		Lead, TCLP Leachate	75.4	72.1	4.5	6.0
		Selenium, TCLP Leachate	25.8 u	25.8 u	NC	6.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 09/19/07

CLIENT: TNUHANFORD RC-074 K0949
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0709L871

SAMPLE	SITE ID	ANALYTE	SPIKED		UNITS	%RECOV
			SAMPLE	AMOUNT		
LCS1	07L0469-LC1	Silver, LCS	496	500	UG/L	99.1
		Arsenic, LCS	9710	10000	UG/L	97.1
		Barium, LCS	4850	5000	UG/L	97.0
		Cadmium, LCS	252	250	UG/L	100.9
		Chromium, LCS	501	500	UG/L	100.3
		Lead, LCS	2510	2500	UG/L	100.6
		Selenium, LCS	9440	10000	UG/L	94.4
LCS1	07C0177-LC1	Mercury, LCS	5.3	5.0	UG/L	105.9



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

77096871

Sent TNU HANFORD SAF# RC-074
 Final Proj. Sampling Date _____
 Project # 11343-606-001-9999-00
 Project Contact/Phone# _____
 Lionville Laboratory Project Manager O Johnson
SWR46 Del STD TAT 15 days
 Rec'd 9-6-07 Date Due 9-21-07

Refrigerator #	A B		C See SRC		
	3	3		3	
#/Type Container	Liquid				
	Solid	1G	1G	1G	
Volume		60	60	60	
Preservatives		1	1	1	
ANALYSES REQUESTED →	ORGANIC			INORG	
	VOA	BNA	POB	Metal #	CN

RISK RES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only															
			MS	MSD				ITCLP	OPCB	06257	ITCLP	REPA											
Soil	001	J15HW9	✓	1	Soil	9-4-07	1000	X	X				X										
Sediment	002	" TCLP05 001			L	*								X									
Solid																							
Sludge																							
Water																							
Oil																							
Air																							
Drum																							
Solids																							
Drum																							
Liquids																							
EP/TCLP																							
Leachate																							
Wipe																							
Other																							
Fish																							

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

* See Lab Chron

Relinquished by	Received by	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	9/6/07	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGIN REWRITTEN			

COMPOSITE WASTE

000000012

Collector D.W. Shea/Sub-contractor <i>John Caldwell</i>	Company Contact D.W. Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH	Price Code 8K	Data Turnaround 15 days
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Quick T	Sampling Location 118-D-3, soils from leaking drum	SAF No. RC-074			

Case Chest No. <i>ERC-01-D41</i>	Field Logbook No. EL-1607-2	COA R118D32600	Method of Shipment Fed EX		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. See OSPC	<i>9-507</i>	<i>4070374</i>	<i>9070407</i>	Bill of Lading/Air Bill No. <i>See OSPC</i>

POSSIBLE SAMPLE HAZARDS/REMARKS <i>Potentially radioactive</i>	Special Handling and/or Storage	Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None
		Type of Container	G	aG	G/P	G	G	G/P
		No. of Container(s)	1	1	1	1	1	1
		Volume	60mL	60mL	60mL	60mL	60mL	500mL

SAMPLE ANALYSIS	See item (1) in Special Instructions.	PCBs - 8082	IC Anions - 300.0; pH (Soil) - 9045	Total Cyanide - 9010; Sulfides - 9030	TCLP Semi-VOA - 1311/8270A	See item (2) in Special Instructions.
-----------------	---------------------------------------	-------------	-------------------------------------	---------------------------------------	----------------------------	---------------------------------------

Sample No.	Matrix *	Sample Date	Sample Time					
15HW9	SOIL	<i>9/4/07</i>	<i>1000</i>	✓	✓	✓		
16HX0	SOIL	<i>MS 9/4/07</i>						

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>John Caldwell (SEC)</i>	Date/Time <i>9/4/07 1039</i>	Received By/Stored In <i>Dushen Dushen</i>	Date/Time <i>9/4/07 1039</i>	(1) Metals by ICP (TCLP) - 1311/6010 (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Mercury (TCLP) - 1311/7470 (Mercury) (2) Gamma Spec - Add-on (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Silver-108 metastable, Sodium-22) <i>Dushen 9/4/07</i> samples unavailable to relinquish samples from 3728 Ref# <i>3A</i> . 3728 Custodian removed samples for shipping on <i>9/15/07</i> .	S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Timber WI=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From <i>Dushen Dushen</i>	Date/Time <i>9/4/07 1552</i>	Received By/Stored In <i>PRIDE 3A</i>	Date/Time <i>9/4/07 1552</i>			
Relinquished By/Removed From <i>PRIDE 3A</i>	Date/Time <i>9-5-07 0900</i>	Received By/Stored In <i>KWSingleby</i>	Date/Time <i>9-5-07 0900</i>			
Relinquished By/Removed From <i>KWSingleby</i>	Date/Time <i>9-5-07 1500</i>	Received By/Stored In <i>FED EX</i>	Date/Time			
Relinquished By/Removed From <i>FED EX</i>	Date/Time <i>9-6-07 0940</i>	Received By/Stored In <i>John Hanford</i>	Date/Time <i>9-6-07 0940</i>			

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

0000000013

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNUX HANFORD
 Project: SAF/SOW/Release #: RC-074

Date: 9/6/07

LvLI Batch #: 0709L871

Sample Custodian: Vicki Hummer

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|---|---|---|
| 1. Samples Hand Delivered or <u>Shipped?</u> | Carrier <u>Fed Ex</u> | Airbill # <u>7913 8122 0448</u> |
| 2. Custody Seals on coolers or shipping containers intact, signed & dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 3. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Comments: |
| 4. All expected paperwork received (COC & other client specific information) sealed in plastic bag and easily accessible? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 5. Samples received cooled or ambient? | Temp _____ °C | Cooler # <u>ERC-01-041</u> |
| How was the temperature taken? | <input checked="" type="checkbox"/> IR <input type="checkbox"/> Temp. Blank | <input type="checkbox"/> Other (Specify): _____ |
| Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 6. Custody seals on sample containers intact, signed and dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 7. COC (Client & LvLI) signed & dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 8. Sample containers are intact? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 9. All samples on COC received? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| All samples received on COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 10. All sample label information matches COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 11. Samples properly preserved? (If #5 is no, then this is no.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 12. Samples received within hold times? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| Short holds taken to wet lab? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 13. VOA, TOC, TOX free of headspace? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 14. QC stickers placed on bottles designated by client? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> 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.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 16. Project Manager contacted concerning any discrepancies? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| Person Contacted _____ | Date _____ | |



Lionville Laboratory, Inc.
 BNA ANALYTICAL DATA PACKAGE FOR
 TNUHANFORD RC-074 K0949



DATE RECEIVED: 09/06/07

LVL LOT # 00209L871

CLIENT ID	LVL #	MTX	PREP #	LEACH DATE	EXTR/PREP	ANALYSIS
J15HW9	002	W	07LE0521	09/12/07	09/12/07	09/18/07
J15HW9	002 MS	W	07LE0521	09/12/07	09/12/07	09/20/07
J15HW9	002 MSD	W	07LE0521	09/12/07	09/12/07	09/20/07

LAB QC:

SBLKON	MB1	W	07LE0521	N/A	09/12/07	09/18/07
SBLKON	MB1 BS	W	07LE0521	N/A	09/12/07	09/18/07
SBLKON	MB1 BSD	W	07LE0521	N/A	09/12/07	09/18/07
07LTO118-LB1	LB1	W	07LE0521	N/A	09/12/07	09/18/07

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
TNUHANFORD RC-074 K0949

DATE RECEIVED: 09/06/07

LVL LOT # :0709L871

<u>CLIENT ID /ANALYSIS</u>	<u>LVL #</u>	<u>MTX</u>	<u>PREP #</u>	<u>COLLECTION</u>	<u>EXTR/PREP</u>	<u>ANALYSIS</u>
J15HW9						
TCLP	001	S	07LTO118	09/04/07	09/11/07	09/12/07



Case Narrative

Client: TNU-HANFORD RC-074
LVL #: 0709L871
SDG/SAF # K0949/RC-074

W.O. #: 11343-606-001-9999-00
Date Received: 09-06-2007

SEMIVOLATILE - TCLP

One (1) leachate sample was generated on 09-12-2007 from a soil sample collected on 09-04-2007.

The sample and its associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3520C on 09-06-2007 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for client specified Semivolatile target compounds on 09-18,20-2007.

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. Samples were extracted and analyzed within required holding time.
2. Non-target compounds were not reported as per client request.
3. All surrogate recoveries were within acceptance criteria.
4. Two (2) of twenty-four (24) matrix spike recoveries were outside acceptance criteria.
5. Two (2) of twenty-four (24) blank spike recoveries were outside acceptance criteria.
6. Internal standard area and retention time criteria were met.
7. 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").
8. 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.

r:\group\data\bna\tmu-hanford\0709-871k11.doc

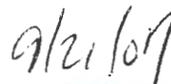
The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of **13** pages.



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.



Jaim Daniels
Laboratory Manager
Lionville Laboratory Incorporated



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.

Sample Information	Cust ID:	J15HW9	J15HW9	J15HW9	SBLKON	SBLKON BS	SBLKON BSD
	RFW#:	002	002 MS	002 MSD	07LE0521-MB1	07LE0521-MB1	07LE0521-MB1
	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	Nitrobenzene-d5	64 %	74 %	71 %	76 %	78 %	63 %
Recovery	2-Fluorobiphenyl	53 %	68 %	65 %	70 %	77 %	65 %
	p-Terphenyl-d14	95 %	93 %	89 %	105 %	99 %	81 %
	Phenol-d5	65 %	77 %	77 %	81 %	77 %	66 %
	2-Fluorophenol	61 %	71 %	68 %	75 %	78 %	65 %
	2,4,6-Tribromophenol	78 %	77 %	80 %	86 %	92 %	81 %
		fl	fl	fl	fl	fl	fl
	Pyridine	0.050 U	86 %	80 %	0.050 U	74 %	59 %
	1,4-Dichlorobenzene	0.050 U	59 %	54 %	0.050 U	61 %	55 %
	2-Methylphenol	0.050 U	82 %	83 %	0.050 U	75 %	69 %
	3/4-Methylphenol	0.050 U	81 %	85 %	0.050 U	81 %	74 %
	Hexachloroethane	0.050 U	58 %	52 %	0.050 U	58 %	53 %
	Nitrobenzene	0.050 U	78 %	73 %	0.050 U	75 %	68 %
	Hexachlorobutadiene	0.050 U	60 %	57 %	0.050 U	65 %	60 %
	2,4,6-Trichlorophenol	0.050 U	86 %	82 %	0.050 U	86 %	80 %
	2,4,5-Trichlorophenol	0.12 U	88 %	87 %	0.12 U	88 %	84 %
	2,4-Dinitrotoluene	0.050 U	88 %	85 %	0.050 U	95 %	89 %
	Hexachlorobenzene	0.050 U	83 %	82 %	0.050 U	89 %	82 %
	Pentachlorophenol	0.12 U	109 * %	107 * %	0.12 U	117 * %	105 * %

*= Outside of EPA CLP QC limits.

0000000009

Cust ID: LCHBLK

Sample Information RFW#: 07LTO118-LB1
 Matrix: WATER
 D.F.: 1.00
 Units: mg/L

Surrogate Recovery	Nitrobenzene-d5	65	%
	2-Fluorobiphenyl	59	%
	p-Terphenyl-d14	90	%
	Phenol-d5	65	%
	2-Fluorophenol	61	%
	2,4,6-Tribromophenol	66	%

-----fl-----fl-----fl-----fl-----fl-----fl-----fl

Pyridine	0.050	U
1,4-Dichlorobenzene	0.050	U
2-Methylphenol	0.050	U
3/4-Methylphenol	0.050	U
Hexachloroethane	0.050	U
Nitrobenzene	0.050	U
Hexachlorobutadiene	0.050	U
2,4,6-Trichlorophenol	0.050	U
2,4,5-Trichlorophenol	0.12	U
2,4-Dinitrotoluene	0.050	U
Hexachlorobenzene	0.050	U
Pentachlorophenol	0.12	U

*= Outside of EPA CLP QC limits.

000000010

Custody Transfer Record/Lab Work Request



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

7709L871

Client: TNU HANFORD SAF# RC-074

Final Proj. Sampling Date: _____

Project#: 11343-606-001-9999-00

Project Contact/Phone#: _____

Lionville Laboratory Project Manager: O Johnson

SWBY6 Del STO TAT 15 days

Refrigerator #	A B		C See SRC		
	3	3	3		
#/Type Container	Liquid	Solid			
Volume	60	60	60		
Preservatives					
ANALYSES REQUESTED →	ORGANIC			INORG	
	VOA	BVA	PCB	Herb	Metal

Rec'd 9-6-07 Date Due 9-21-07

MATRIX DES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only						
			MS	MSD				ITCLP	OPCB	0625T	ITCLP	REPA		
Sol	001	J15HW9	✓	✓	Sol	9/6/07	1000	X	X			X		
Sediment	002	" TCLP09 001			L	*				X			X	
Solid														
Sludge														
Water														
Oil														
Air														
Drum														
Solids														
Drum														
Liquids														
EP/TCLP														
Leachate														
Wipe														
Other														
Fish														

Special Instructions:

- _____
- _____
- _____
- _____
- _____
- _____

* See Lab Chron

Relinquished by	Received by	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	<u>9/6/07</u>	<u>0940</u>

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
<u>Original</u>			
<u>REWRITTEN</u>			

COMPOSITE WASTE

000000011

000000012

Collector D.W. Shea/Sub-contractor John Caldwell	Company Contact D.W. Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH	Price Code 8K	Data Turnaround 15 days
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Quick T		Sampling Location 118-D-3, soils from leaking drum		SAF No. RC-074	
Case Chest No. ERC-01-D41		Field Logbook No. EL-1607-2	COA R118D32600	Method of Shipment Fed EX	
Shipped To EBERLINE SERVICES / LIONVILLE		Offsite Property No. See OSPC		Bill of Lading/Air Bill No. See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS Potentially radioactive Special Handling and/or Storage							
	Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None
	Type of Container	G	aG	G/P	G	G	G/P
	No. of Container(s)	1	1	1	1	1	1
	Volume	60ml.	60mL	60mL	60mL	60mL	500mL

SAMPLE ANALYSIS										
				See item (1) in Special Instructions.	PCBs - 8082	IC Anions - 300.0; pH (Soil) - 9045	Total Cyanide - 9010; Sulfides - 9030	TCLP Semi-VOA - 1311/8270A	See item (2) in Special Instructions.	
Sample No.	Matrix *	Sample Date	Sample Time							
15HW9	SOIL	9/4/07	1000	✓	✓			✓		
15HX0	SOIL	10/5 9/4/07								

CHAIN OF POSSESSION Relinquished By/Removed From: John Caldwell (SEC) 9/4/07 1039 Relinquished By/Removed From: D.W. Shea 9/4/07 1552 Relinquished By/Removed From: Bridge 3A 9-5-07 0900 Relinquished By/Removed From: Singleby 9-5-07 1500 Relinquished By/Removed From: FED EX 9-6-07 0940 Relinquished By/Removed From: _____	Sign/Print Names Received By/Stored In: D.W. Shea 9/4/07 1039 Received By/Stored In: Bridge 3A 9/4/07 1552 Received By/Stored In: Singleby 9-5-07 Received By/Stored In: FED EX Received By/Stored In: John Heavens 9-6-07 0940 Received By/Stored In: _____	SPECIAL INSTRUCTIONS (1) Metals by ICP (TCLP) - 1311/6010 (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Mercury (TCLP) - 1311/7470 (Mercury) (2) Gamma Spec - Add-on (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Silver-108 metastable, Sodium-22) Samples unavailable to relinquish samples from 3728 Ref # 3A. 3728 Custodian removed samples for shipping on 9/5/07.	Matrix * S=Soil SB=Ballment SO=Solid SL=Sludge W = Water O=Oil A=Air DB=Drum Solids DL=Drum Liquids T=Time W=Wipe L=Liquid V=Vegetation X=Other
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LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD
 Project: SAF/SOW/Release #: RC-074

Date: 9/6/07

LvLI Batch #: 0709L871

Sample Custodian: Vicki Humandy

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or <u>Shipped?</u>	Carrier <u>Fed Ex</u>	Airbill # <u>7913 8122 0448</u>
2. Custody Seals on coolers or shipping containers intact, signed & dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No Seals
3. Outside of coolers or shipping containers are free from damage?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Comments:
4. All expected paperwork received (COC & other client specific information) sealed in plastic bag and easily accessible?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5. Samples received cooled or ambient?	Temp _____ °C	Cooler # <u>ERC-01-041</u>
How was the temperature taken?	<input checked="" type="checkbox"/> IR	<input type="checkbox"/> Temp. Blank <input type="checkbox"/> Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
6. Custody seals on sample containers intact, signed and dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No Seals
7. COC (Client & LvLI) signed & dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8. Sample containers are intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
9. All samples on COC received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
All samples received on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10. All sample label information matches COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
11. Samples properly preserved? (If #5 is no, then this is no.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
12. Samples received within hold times? Short holds taken to wet lab?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
13. VOA, TOC, TOX free of headspace?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
14. QC stickers placed on bottles designated by client?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> 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.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
16. Project Manager contacted concerning any discrepancies?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Person Contacted _____	Date _____	

