0077965

SAF-RC-073
100-D/DR Burial Grounds & Remaining Sites – Other Solid Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 6/17/08
INITIAL/DATE

RECEIVED
JUN 23 2008
EDMC

COMMENTS:

SDG K1217 SAF RC-073

Rad only X Chem only Rad & Chem

X Complete Partial

Waste Site: 126-D-2, black tar anomaly, 100D-AN-08-024

LIONVILLE LABORATORY INC.

RECEIVED JUN 2008

17 June 2008

Joan Kessner
WC-Hanford
2620 Fermi Avenue
MSIN H9-03
Richland, WA 99354

Subject: Analytical Data Package

Dear Ms. Kessner:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	0805L052
SDG #	K1217
SAF #	RC-073
Date Received	5/6/08
# Samples	1
Matrix	OTHER SOLID
Volatiles	X
Semivolatiles	X
Pest/PCB	X
PAH	X
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\tmu-hanford\data\b_ltrs.doc

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

Lionville Laboratory, Inc.
VOA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-073 K1217

RECEIVED JUN 2008

DATE RECEIVED: 05/06/08 LVL LOT #:0805L052

CLIENT ID	LVL #	MTX	PREP #	LEACH DATE	EXTR/PREP	ANALYSIS
J16V88	002	W	08LVG084	05/13/08	N/A	05/15/08
J16V88	002 MS	W	08LVG084	05/13/08	N/A	05/15/08
J16V88	002 MSD	W	08LVG084	05/13/08	N/A	05/15/08

LAB QC:

VBLKZW	MB1	W	08LVG084	N/A	N/A	05/15/08
VBLKZW	MB1 BS	W	08LVG084	N/A	N/A	05/15/08
08LTV042-LB1	LB1	W	08LVG084	N/A	N/A	05/15/08

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-073

DATE RECEIVED: 05/06/08 LVL LOT # :0805L052

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88						
TCLP LEACHATE	001	SO	08LTV042	05/01/08	05/12/08	05/13/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-073
LVL #: 0805L052
SDG/SAF # K1217 /RC-073

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2008

GC/MS VOLATILE – TCLP

One (1) leachate sample was generated on 05-13-08 from a soil collected on 05-01-2008.

The sample and its associated QC samples were analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8260B for TCL volatile target compounds on 05-15-2008.

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. Samples were analyzed within required holding time.
2. Non-target compounds were detected in the sample.
3. Leachate samples were analyzed at 5-fold dilutions due to the leachate matrix; however all TCLP regulatory limits were achieved.
4. All surrogate recoveries were within acceptance criteria.
5. All matrix spike recoveries were within acceptance criteria.
6. All blank spike recoveries were within acceptance criteria.
7. The method blank was below the reporting limit for all target compounds
8. All internal standard area and retention time criteria were met.

r:\group\data\2008\voa\tnu\0805-052k11.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 12 pages.

LvLI
LIONVILLE LABORATORY INC.

9. 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.

10. "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

5/20/08
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.

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 closes 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 resolve 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 - **Co-elution/ Background:** Peak was manually integrated to eliminate contribution from co-eluting compounds, background signal, or other interference.

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

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/20/08 09:13

RFW Batch Number: 0805L052 Client: TNU-HANFORD RC-073 Work Order: 11343606001 Page: 1a

	Cust ID:	J16V88		J16V88		J16V88		VBLKZW		VBLKZW BS		LCHBLK	
Sample Information	RFW#:	002		002 MS		002 MSD		08LVG084-MB1		08LVG084-MB1		08LTV042-LB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	5.00		5.00		5.00		1.00		1.00		5.00	
	Units:	MG/L		MG/L		MG/L		MG/L		MG/L		MG/L	
Surrogate Recovery	Toluene-d8	99	%	102	%	108	%	105	%	107	%	100	%
	Bromofluorobenzene	105	%	108	%	114	%	115	%	108	%	113	%
	1,2-Dichloroethane-d4	112	%	115	%	114	%	115	%	112	%	110	%
			fl		fl		fl		fl		fl		fl
Vinyl Chloride		0.050	U	77	%	77	%	0.010	U	89	%	0.050	U
1,1-Dichloroethene		0.025	U	108	%	109	%	0.005	U	110	%	0.025	U
Chloroform		0.025	U	109	%	107	%	0.005	U	111	%	0.025	U
1,2-Dichloroethane		0.025	U	114	%	111	%	0.005	U	115	%	0.025	U
2-Butanone		0.050	U	136	%	137	%	0.010	U	124	%	0.050	U
Carbon Tetrachloride		0.025	U	103	%	103	%	0.005	U	105	%	0.025	U
Trichloroethene		0.025	U	99	%	106	%	0.005	U	102	%	0.025	U
Benzene		0.025	U	98	%	99	%	0.005	U	100	%	0.025	U
Tetrachloroethene		0.025	U	99	%	103	%	0.005	U	100	%	0.025	U
Chlorobenzene		0.025	U	102	%	102	%	0.005	U	104	%	0.025	U

*= Outside of EPA CLP QC limits.

000000009

nville Laboratory Use Only

)805C052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

VLI

nt TNU HANFORD SAF# RC-073

. Final Proj. Sampling Date

ject# 11343-606-001-9999-00

ject Contact/Phone#

nville Laboratory Project Manager O Johnson

SW846 Del STD TAT 15 days

e Rec'd 5-6-08 Date Due 5-21-08

		A							B							
Refrigerator #		6							3							
#/Type Container	Liquid / Solid	1G							1G			LEACHATE				
Volume		60							250							
Preservatives																
ANALYSES REQUESTED		ORGANIC: TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	LEACHATE		INORG: TCLP Metal RCG	CN	IGNITABILITY					

TRIX DES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	ITCLV	ITCLP	OPCB		8310 PAH	8260	8260	ITCLP		IIGN	RCRA				
Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, TCLP, Leachate, Wipe, Other, Fish	001	T16V88	✓	✓	SO	5-1-08	1005	X	X	X		X			X		X					
	002	TCLV of 001			L								X									
	003	TCLP of 001			L									X				X				

Lionville Laboratory Use Only

ecial Instructions: * See Lab Chron

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	0940

Relinquished by	Received by	Date	Time

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

000000010

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-073-040

Collector: D.W.Shea D. Eberhart SEC	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 15 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location: 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No.: RC-073
Ice Chest No.: GPR-03-014	Field Logbook No.: EL-1607-3	COA: R126D22600	Method of Shipment: Fed Ex
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: See OPSC A080245		Bill of Lading/Air Bill No:

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

SAMPLE ANALYSIS												
Preservation				None	Cool 4C	None	Cool 4C	Cool 4C				
Type of Container				G	G	G	Gs*	Gs*				
No. of Container(s)				1	1	1	1	1				
Volume				60mL	60mL	60mL	60mL	60mL				
				See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A 4 PAH				
Sample No.	Matrix *	Sample Date	Sample Time									
16V88	OTHER SOLID	5/1/08	1005	✓	✓	✓	✓	✓				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1035	Received By/Stored In	Date/Time
[signature]	5-1-08	DWShea MWsher	5/1/08 1035
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
DWShea DWSHEA	5/1/08 1802	Fridge 3A	5/1/08 1802
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 0925
060/3A	5/5/08 0925	MCH MStankovich	5/5/08
Relinquished By/Removed From WCH	Date/Time 0925	Received By/Stored In	Date/Time
MCH MStankovich	5/5/08		Fed Ex
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	5-6-08 0940	[signature]	5-6-08 0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

KW

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

000000011

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/SAF/SOW/Release #: RC-073

Date: 5-6-08

LvLI Batch #: 08051052

Sample Custodian: V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.1	°C	Cooler # GPR-03-014
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 LIONVILLE LABORATORY INC

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-073 K1217

RECEIVED
JUN 2008

DATE RECEIVED: 05/06/08 LVL LOT # :0805L052

CLIENT ID	LVL #	MTX	PREP #	LEACH DATE	EXTR/PREP	ANALYSIS
J16V88	003	W	08LE0236	05/13/08	05/15/08	05/16/08
J16V88	003 MS	W	08LE0236	05/13/08	05/15/08	05/16/08
J16V88	003 MSD	W	08LE0236	05/13/08	05/15/08	05/16/08
LAB QC:						
SBLKUU	MB1	W	08LE0236	N/A	05/15/08	05/16/08
SBLKUU	MB1 BS	W	08LE0236	N/A	05/15/08	05/16/08
08LT0041-LB1	LB1	W	08LE0236	N/A	05/15/08	05/16/08

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-073

DATE RECEIVED: 05/06/08 LVL LOT # :0805L052

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88						
TCLP	001	SO	08LT0041	05/01/08	05/12/08	05/13/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-073
LVL #: 0805L052
SDG/SAF # K1217 / RC-073

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2008

SEMIVOLATILE - TCLP

One (1) leachate sample was generated on 05-13-2008 from a solid sample collected on 05-01-2008.

The sample and its associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3510C on 05-15-2008 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for Client Specified Semivolatile target compounds on 05-16-2008.

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. Samples were extracted and analyzed within holding times.

2. Non-target compounds were detected, but not reported with these samples.

3. All surrogate recoveries were within acceptance criteria.

4. Three (3) of twenty-four (24) matrix spike recoveries were within acceptance criteria. This was biased high, minimal impact on data.

5. One (1) of twelve (12) blank spike recoveries was outside acceptance criteria. This was biased high, minimal impact on data

6. The method blank was below the reporting limit for all target compounds.

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

8. All continuing calibration standard analyzed prior to sample extracts were within acceptance criteria.

f:\group\data\bna\tnuhanford\0805-052kl1.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 12 pages.

LvLI
LIONVILLE LABORATORY INC.

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

5/21/08
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.

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, TCLP Leachate

Report Date: 05/19/08 13:52

RFW Batch Number: 0805L052 Client: TNU-HANFORD RC-073 Work Order: 11343606001 Page: 1a

	Cust ID:	J16V88		J16V88		J16V88		SBLKUU		SBLKUU BS		LCHBLK	
Sample Information	RFW#:	003		003 MS		003 MSD		08LE0236-MB1		08LE0236-MB1		08LT0041-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	83	%	80	%	71	%	103	%	92	%	71	%
	2-Fluorobiphenyl	87	%	72	%	77	%	88	%	101	%	71	%
	p-Terphenyl-d14	93	%	84	%	75	%	94	%	82	%	82	%
	Phenol-d5	18	%	20	%	22	%	29	%	23	%	14	%
	2-Fluorophenol	30	%	31	%	33	%	41	%	36	%	24	%
	2,4,6-Tribromophenol	90	%	78	%	81	%	90	%	101	%	73	%
			fl		fl		fl		fl		fl		fl
Pyridine		0.050	U	32	%	21	%	0.050	U	41	%	0.050	U
1,4-Dichlorobenzene		0.050	U	74	%	71	%	0.050	U	84	%	0.050	U
2-Methylphenol		0.050	U	52	%	56	%	0.050	U	63	%	0.050	U
3/4-Methylphenol		0.050	U	48	%	50	%	0.050	U	57	%	0.050	U
Hexachloroethane		0.050	U	96	%	88	%	0.050	U	88	%	0.050	U
Nitrobenzene		0.050	U	74	%	72	%	0.050	U	89	%	0.050	U
Hexachlorobutadiene		0.050	U	76	%	71	%	0.050	U	95	%	0.050	U
2,4,6-Trichlorophenol		0.050	U	76	%	75	%	0.050	U	96	%	0.050	U
2,4,5-Trichlorophenol		0.12	U	80	%	85	%	0.12	U	102	%	0.12	U
2,4-Dinitrotoluene		0.050	U	98 *	%	94	%	0.050	U	92	%	0.050	U
Hexachlorobenzene		0.050	U	82	%	80	%	0.050	U	90	%	0.050	U
Pentachlorophenol		0.12	U	111 *	%	110 *	%	0.12	U	114 *	%	0.12	U

*= Outside of EPA CLP QC limits.

000000000

nville Laboratory Use Only

)805C052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

nt TNU HANFORD SAF# RC-073

Final Proj. Sampling Date

ect# 11343-606-001-9999-00

ect Contact/Phone#

vville Laboratory Project Manager O Johnson

SW846 Del STD TAT 15 days

e Rec'd 5-6-08 Date Due 5-21-08

		A							B							
Refrigerator #		6							3							
#/Type Container	Liquid															
	Solid	1G							1G							
Volume		60							250							
Preservatives																
ANALYSES REQUESTED →		ORGANIC							INORG							
		TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	LEACHATE		TCLP Metal RCRA	CN	Ignitability	LEACHATE				

RIX ES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only: ITCLV	ITCLP	OPCB	8310	8270	0624T	0625T	ITCLP		IIGN	RCRATCLP			
Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP Leachate, Wipe, Other, Fish	001	T16V88	✓	✓	SO	5-1-08	1005	X	X	X	X	X			X		X				
	002	TCLV0F001			L	*							X								
	003	TCLP0F001			L	*								X				X			

cial Instructions: * See Lab Chron

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	0940

Relinquished by	Received by	Date	Time

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

0100000010

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-073-040	Page 1 of 1

Collector: D.W.Shea D. Eberhart SEC	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 15 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location: 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No.: RC-073
Ice Chest No.: GPR-03-014	Field Logbook No.: EL-1607-3	COA: R126D22600	Method of Shipment: Fed Ex
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: See OPSC A080245		Bill of Lading/Air Bill No:

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

Preservation	None	Cool 4C	None	Cool 4C	Cool 4C						
Type of Container	G	G Silica Bags	G Silica Bags	Gs*	Gs* Silica Bags						
No. of Container(s)	1	1	1	1	1						
Volume	60mL 250 Silica Bags	60mL	60mL	60mL	60mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A 4 PAH						
Sample No.	Matrix *	Sample Date	Sample Time								
16V88	OTHER SOLID	5/1/08	1005	✓	✓	✓	✓	✓			

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: [signature] Date/Time: 1035 5-1-08	Received By/Stored In: DWShea DWShea Date/Time: 5/1/08 1035	
Relinquished By/Removed From: DWShea DWSHEA Date/Time: 5/1/08 1802	Received By/Stored In: Fridge 3A Date/Time: 5/1/08 1802	
Relinquished By/Removed From: 060/3A Date/Time: 5/5/08 0925	Received By/Stored In: MStankovich Date/Time: 0925 5/5/08	
Relinquished By/Removed From: WCH MStankovich Date/Time: 0925 5/5/08	Received By/Stored In: FedEx Date/Time:	
Relinquished By/Removed From: FedEx Date/Time: 5-6-08 0940	Received By/Stored In: [signature] Date/Time: 5-6-08 0940	
Relinquished By/Removed From: Date/Time:	Received By/Stored In: Date/Time:	

SPECIAL INSTRUCTIONS

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

KW

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

000000011

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/SAF/SOW/Release #: RC-073

Date: 5-6-08

LvLI Batch #: 08051052

Sample Custodian: V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.1	°C	Cooler # GPR-03-014
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 LIONVILLE LABORATORY INC.

Lionville Laboratory, Inc.
PCB ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-073 K1217

RECEIVED
JUN 2008

DATE RECEIVED: 05/06/08 LVL LOT # :0805E052

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88	001	SO	08LE0227	05/01/08	05/09/08	05/16/08
J16V88	001 MS	SO	08LE0227	05/01/08	05/09/08	05/16/08
J16V88	001 MSD	SO	08LE0227	05/01/08	05/09/08	05/16/08

LAB QC:

PBLKQF	MB1	S	08LE0227	N/A	05/09/08	05/15/08
PBLKQF	MB1 BS	S	08LE0227	N/A	05/09/08	05/15/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-073
LVL #: 0805L052
SDG/SAF # K1217 / RC-073

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2008

PCB

One (1) solid sample was collected on 05-06-2008.

The sample and its associated QC samples were extracted on 05-09-2008 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 05-15,16-2008. 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. All results presented in this report are derived from a sample that met LvLI's sample acceptance policy.

2. Samples were extracted and analyzed within required holding time

3. The samples and their associated QC samples received Copper-Sulfur and Sulfuric Acid cleanups according to Lionville Laboratory SOPs based on SW846 methods 3660A and 3665A respectively.

4. The method blank was below the reporting limits for all target compounds.

5. All surrogate recoveries were within acceptance criteria.

6. All blank spike recoveries were within acceptance criteria.

7. All matrix spike recoveries were within acceptance criteria.

8. The initial calibrations associated with this data set were within acceptance criteria.

9. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

f:\group\data\pest\tnu\0805-052ksol1.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 4 pages.

LvLI
LIONVILLE LABORATORY INC.

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

5/22/08
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.

Lionville Laboratory, Inc.

PCBs by GC

Report Date: 05/16/08 12:01

RFW Batch Number: 0805L052 Client: TNU-HANFORD RC-073 Work Order: 11343606001 Page: 1

000000005

	Cust ID:	J16V88	J16V88	J16V88	PBLKQF	PBLKQF BS
Sample Information	RFW#:	001	001 MS	001 MSD	08LE0227-MB1	08LE0227-MB1
	Matrix:	SOLID	SOLID	SOLID	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	103 %	80 %	79 %	94 %	82 %
	Decachlorobiphenyl	71 %	48 %	50 %	96 %	98 %
		fl	fl	fl	fl	fl fl
Aroclor-1016		800 U	56 %	51 %	13 U	75 %
Aroclor-1221		800 U	800 U	800 U	13 U	13 U
Aroclor-1232		800 U	800 U	800 U	13 U	13 U
Aroclor-1242		800 U	800 U	800 U	13 U	13 U
Aroclor-1248		800 U	800 U	800 U	13 U	13 U
Aroclor-1254		800 U	800 U	800 U	13 U	13 U
Aroclor-1260		800 U	54 %	52 %	13 U	76 %

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: 05/09/08 Extraction Batch No: 08LE0227 Analyst: MF Method: **** SOX3540

Test: OPCB Cleanup Date: 05/14/08 Analyst: MF Client: TNU-HANFORD RC-073

LIMS Report Date: 05/15/08 Solvent: DCM/ACETONE,HEXANE Adsorbent: H2SO4

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
0805L052-	TNU-HANFORD RC-073										
001	J16V88		0.5	1.0		10		1.0	N	0.0	20000
001 -S	J16V88		0.5	1.0	1.0	10		1.0	N	0.0	20000
001 -T	J16V88		0.5	1.0	1.0	10		1.0	N	0.0	20000
0805L054-	TNUHANFORD RC-088 K1214										
001	J16M69		10.0	1.0		10		1.0	N	0.0	1000.0
0805L072-	VISTA ENGINEERING										
001	B109		30.0	1.0		10		1.0	N	97.00	343.6
0805L087-	VISTA ENGINEERING										
001	B110		30.0	1.0		10		1.0	N	84.00	396.8
002	B111		30.0	1.0		10		1.0	N	95.15	350.3
002 -S	B111		30.0	1.0	1.0	10		1.0	N	95.15	350.3
002 -T	B111		30.0	1.0	1.0	10		1.0	N	95.15	350.3
003	B112		30.0	1.0		10		1.0	N	95.85	347.8
08LE0227-MB1	PBLKQF		30.0	1.0		10		1.0	N	100.00	333.3
08LE0227-MB1 -S	PBLKQF		30.0	1.0	1.0	10		1.0	N	100.00	333.3

Comments: 054 LIMITED VOLUME
Surrogate: 250 UL OLM PSURR 89916405
Spike: 250 UL AR1660 89916602

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
all	[signature]	5/15/05 12:25	SZ	5/15/08 12:25	GC

000000000

nville Laboratory Use Only

)805C052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

nt TNU HANFORD SAF# RC-073

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

e Rec'd 5-6-08 Date Due 5-21-08

Refrigerator #		A							B							
		6							3							
#/Type Container	Liquid															
	Solid	1G							1G							
Volume		60							250							
Preservatives																
ANALYSES REQUESTED	ORGANIC	TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	LEACHATE		INORG	TCLP Metal RG	CN	Nitrate	LEACHATE			

Lionville Laboratory Use Only

RIX ES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	ITCLV	ITCLP	OPCB	8310	8270	0624T	0625T	ITCLP		IIGN	RCRAT				
Soil	001	T16V88	✓	✓	SO	5-1-08	1005	X	X	X		X			X		X					
Sediment	002	TCLV 05001			L								X									
Solid	003	TCLP 05001			L									X				X				
Sludge																						
Water																						
Oil																						
Air																						
Drum Solids																						
Drum Liquids																						
EP/TCLP Leachate																						
Wipe																						
Other																						
Fish																						

cial Instructions: * See Lab Chron

Special Instructions:

1.
2.
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4.
5.
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

ORIGINAL REWRITTEN

"COMPOSITE MASTER"

00000007

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-073-040	Page 1 of 1

Collector: D.W.Shea D. Eberhart SEC	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 15 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location: 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No.: RC-073
Ice Chest No.: GPR-03-014	Field Logbook No.: EL-1607-3	COA: R126D22600	Method of Shipment: Fed Ex
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: See OPSC A080245		Bill of Lading/Air Bill No.:

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

Preservation	None	Cool 4C	None	Cool 4C	Cool 4C						
Type of Container	G	Slide Box	G Slide Box	Gs*	Gs* Slide Box						
No. of Container(s)	1	10	10	1	10						
Volume	5/1/08 Box 60mL 250	60mL	60mL	60mL	60mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A 4 PAH						
Sample No.	Matrix *	Sample Date	Sample Time								
6V88	OTHER SOLID	5/1/08	1005	✓	✓	✓	✓	✓			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1035	Received By/Stored In	Date/Time
[signature] 5-1-08		DWShea DWShea	5/1/08 1035
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
WShea DWSHEA	5/1/08 1802	Fridge 3A	5/1/08 1802
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 0925
060/3A	5/5/08 0925	MCH MStankouch	5/5/08
Relinquished By/Removed From WCH	Date/Time 0925	Received By/Stored In	Date/Time
MCH MStankouch	5/5/08		FedEx
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	5-6-08 0940	[signature]	5-6-08 0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

KW

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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Date: 5-6-08

Project/SAF/SOW/Release #: RC-073

LvLI Batch #: 08051052

Sample Custodian: V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.1	°C	Cooler # GPR-03-014
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 LIONVILLE LABORATORY INC.

RECEIVED
JUN 2008

Lionville Laboratory, Inc.
8310 ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-073 K1217

DATE RECEIVED: 05/06/08 LVL LOT # :08051052

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88	001	SO	08LE0274	05/01/08	06/05/08	06/06/08
J16V88	001 MS	SO	08LE0274	05/01/08	06/05/08	06/06/08
J16V88	001 MSD	SO	08LE0274	05/01/08	06/05/08	06/06/08
LAB QC:						
BLK	MB1	S	08LE0274	N/A	06/05/08	06/06/08
BLK	MB1 BS	S	08LE0274	N/A	06/05/08	06/06/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-073
LVL #: 0805L052
SDG/SAF # K1217 /RC-073

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2008

POLYAROMATIC HYDROCARBONS

One (1) solid sample was collected on 05-01-2008.

The sample and its associated QC samples were extracted on 06-05-2008 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedures on 06-06-2008. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8310.

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 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 21 days outside of recommended hold time. These samples are non-environmental matrices.
2. The method blank was below the reporting limits for all target compounds.
3. All obtainable surrogate recoveries were within acceptance criteria.
4. All blank spike recoveries were within acceptance criteria.
5. Matrix spike recoveries were unobtainable due dilution required for analyses.
6. Samples J16V88, J16V88 MS and J16V88 MSD required instrument dilutions due to high concentrations of target anlaytes.
7. The initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
9. 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.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/16/08
Date

r:\group\data\2008\8310\0805-052ksol1.8310.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 8 pages.

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.

Lionville Laboratory, Inc.

PAH'S by HPLC / Method 8310 Report Date: 06/09/08 13:41

RFW Batch Number: 0805L052 Client: TNUHANFORD RC-073 K1217 Work Order: 11343606001 Page: 1

000000004

	Cust ID:	J16V88	J16V88	J16V88	BLK	BLK BS
Sample Information	RFW#:	001	001 MS	001 MSD	08LE0274-MB1	08LE0274-MB1
	Matrix:	SOLID	SOLID	SOLID	SOIL	SOIL
	D.F.:	50.0	50.0	50.0	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg

Triphenylene	D	%	D	%	D	%	101	%	99	%
Naphthalene	310000		D	%	D	%	33.3	U	95	%
Acenaphthylene	200000		D	%	D	%	33.3	U	96	%
Acenaphthene	400000		D	%	D	%	33.3	U	89	%
Fluorene	10000	U	D	%	D	%	3.33	U	96	%
Phenathrene	44000		D	%	D	%	3.33	U	96	%
Anthracene	10000	U	D	%	D	%	3.33	U	97	%
Fluoranthrene	13000		D	%	D	%	3.33	U	94	%
Indeno (1,2,3-cd) pyrene	9600	J	D	%	D	%	3.33	U	96	%
Pyrene	10000	U	D	%	D	%	3.33	U	109	%
Benzo (a) anthracene	10000	U	D	%	D	%	3.33	U	100	%
Chrysene	10000	U	D	%	D	%	3.33	U	111	%
Benzo (b) fluoranthrene	3900	J	D	%	D	%	3.33	U	101	%
Benzo (k) fluoranthrene	10000	U	D	%	D	%	3.33	U	100	%
Benzo (a) pyrene	10000	U	D	%	D	%	3.33	U	100	%
Dibenzo (a,h) anthracene	10000	U	D	%	D	%	3.33	U	102	%
Benzo (ghi) perylene	10000	U	D	%	D	%	3.33	U	104	%

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

Lionville Laboratory, Inc.

SAMPLE EXTRACTION RECORD

Sheet no.: 1

Extract. Date: 05/22/08 Extraction Batch No: 08LE0251 Analyst: MF Method: **** SOX3540

Test: O831 Cleanup Date: Analyst: Client: LQAP-HW0408

LIMS Report Date: 05/23/08 Solvent: DCM,ACN 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
0804L984-	LQAP-HW0408										
016 0	7032-22 PAHS HPLC		30.0	1.0		5.0		1.0	N	0.00	166.7
0805L052-	TNUHANFORD RC-073 K1217										
001 0	J16V88		1.0	1.0		10.0		1.0	N	0.00	10000
001 0S	J16V88		1.0	1.0	1.0	10.0		1.0	N	0.00	10000
001 0T	J16V88		1.0	1.0	1.0	10.0		1.0	N	0.00	10000
08LE0251-MB1 0	BLK		30.0	1.0		5.0		1.0	N	100.00	166.7
08LE0251-MB1 0S	BLK		30.0	1.0	1.0	5.0		1.0	N	100.00	166.7
08LE0251-MB1 0T	BLK		30.0	1.0	1.0	5.0		1.0	N	100.00	166.7

Comments: 0805L052 TAR/SHOE POLISH
Surrogate: 500 UL 8310 SURR 86971909 @1.0 UG/ML
Spike: 1.0 ML 8310 SPIKE 86971907 @5.0 UG/ML

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
all	[illegible]	5/23/08 1305	SZ	5/23/08 13:05	GC

00000005

nville Laboratory Use Only

08051052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

nt TNU HANFORD SAF# RC-023

Final Proj. Sampling Date

ect# 11343-606-001-9999-00

ect Contact/Phone#

nville Laboratory Project Manager O Johnson

SW846 Del STD TAT 15 days

e Rec'd 5-6-08 Date Due 5-21-08

	A	B
Refrigerator #	6	3
#/Type Container (Liquid / Solid)	1G	1G
Volume	60	250
Preservatives		

ANALYSES REQUESTED →

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	LEACHATE	TCLP Metal RG	CN	Sulfide	LEACHATE	Paint Filter
							ITCLV	ITCLP	OPCB		8270	8260	8082			RCRA	IPAIN
001	J16V88	✓	✓	SO	5-1-08	1005	X	X	X	X	X			X		X	X
002	TCLV of 001			L								X					
003	TCLP of 001			L									X			X	

Lionville Laboratory Use Only

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

Special Instructions: * See Lab Chron

Special Instructions:

6-4-08 1. Added paint filter to sample 001 per client req

2.

3.

4.

5.

6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE	

000000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-073-040	Page 1 of 1

Collector D.W.Shea D. Eberhart SEC	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 9K	Data Turnaround 15 days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No. RC-073
Ice Chest No. GPR-03-014	Field Logbook No. EL-1607-3	COA R126D22600	Method of Shipment Fed Ex
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. See OPSC A080245		Bill of Lading/Air Bill No:

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

Preservation	None	Cool 4C	None	Cool 4C	Cool 4C						
Type of Container	G	~~G~~ 5/1/08 Bags	G 5/1/08 Bags	Gs*	Gs*						
No. of Container(s)	1	1/0	1/0	1	1/0						
Volume	~~60mL~~ 5/1/08 Bags 250	60mL	60mL	60mL	60mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A 4 PAH						
Sample No. / Matrix * / Sample Date / Sample Time											
J16V88 / OTHER SOLID / 5/1/08 / 1005	✓	✓	✓	✓	✓						

CHAIN OF POSSESSION	Sign/Print Names
Relinquished By/Removed From: D. Eberhart SEC — Date/Time: 1035	Received By/Stored In: DWShea DWShea — Date/Time: 5/1/08 1035
Relinquished By/Removed From: DWShea DWSHEA — Date/Time: 5/1/08 1802	Received By/Stored In: Fridge 3A — Date/Time: 5/1/08 1802
Relinquished By/Removed From: 1060/3A 5/5/08 0925	Received By/Stored In: MS MStankovich 5/5/08 — Date/Time: 0925
Relinquished By/Removed From: WCH MS MStankovich 5/5/08 — Date/Time: 0925	Received By/Stored In: FedEx — Date/Time:
Relinquished By/Removed From: Fed Ex — Date/Time: 5-6-08 0840	Received By/Stored In: — Date/Time: 5-6-08 0840
Relinquished By/Removed From: — Date/Time:	Received By/Stored In: — Date/Time:

SPECIAL INSTRUCTIONS

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

KW

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

WCH-EE-011

000000007

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/SAF/SOW/Release #: RC-073

Date: 5-6-08

LvLI Batch #: 0805L052

Sample Custodian: V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.1	°C	Cooler # GPR-03-014
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 LIONVILLE LABORATORY INC.

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-073 K1217

RECEIVED JUN 2008

DATE RECEIVED: 05/06/08 LVL LOT # :0805L0521

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88						
TCLP	001	SO	08LT0041	05/01/08	05/12/08	05/13/08
SILVER, TCLP LEACHAT	003	W	08L0204	05/13/08	05/19/08	05/19/08
SILVER, TCLP LEACHAT	003 REP	W	08L0204	05/13/08	05/19/08	05/19/08
SILVER, TCLP LEACHAT	003 MS	W	08L0204	05/13/08	05/19/08	05/19/08
ARSENIC, TCLP LEACHA	003	W	08L0199	05/13/08	05/14/08	05/20/08
ARSENIC, TCLP LEACHA	003 REP	W	08L0199	05/13/08	05/14/08	05/20/08
ARSENIC, TCLP LEACHA	003 MS	W	08L0199	05/13/08	05/14/08	05/20/08
BARIUM, TCLP LEACHAT	003	W	08L0199	05/13/08	05/14/08	05/20/08
BARIUM, TCLP LEACHAT	003 REP	W	08L0199	05/13/08	05/14/08	05/20/08
BARIUM, TCLP LEACHAT	003 MS	W	08L0199	05/13/08	05/14/08	05/20/08
CADMIUM, TCLP LEACHA	003	W	08L0199	05/13/08	05/14/08	05/20/08
CADMIUM, TCLP LEACHA	003 REP	W	08L0199	05/13/08	05/14/08	05/20/08
CADMIUM, TCLP LEACHA	003 MS	W	08L0199	05/13/08	05/14/08	05/20/08
CHROMIUM, TCLP LEACH	003	W	08L0199	05/13/08	05/14/08	05/20/08
CHROMIUM, TCLP LEACH	003 REP	W	08L0199	05/13/08	05/14/08	05/20/08
CHROMIUM, TCLP LEACH	003 MS	W	08L0199	05/13/08	05/14/08	05/20/08
MERCURY, TCLP LEACHA	003	W	08C0086	05/13/08	05/15/08	05/15/08
MERCURY, TCLP LEACHA	003 REP	W	08C0086	05/13/08	05/15/08	05/15/08
MERCURY, TCLP LEACHA	003 MS	W	08C0086	05/13/08	05/15/08	05/15/08
LEAD, TCLP LEACHATE	003	W	08L0199	05/13/08	05/14/08	05/20/08
LEAD, TCLP LEACHATE	003 REP	W	08L0199	05/13/08	05/14/08	05/20/08
LEAD, TCLP LEACHATE	003 MS	W	08L0199	05/13/08	05/14/08	05/20/08
SELENIUM, TCLP LEACH	003	W	08L0199	05/13/08	05/14/08	05/20/08
SELENIUM, TCLP LEACH	003 REP	W	08L0199	05/13/08	05/14/08	05/20/08
SELENIUM, TCLP LEACH	003 MS	W	08L0199	05/13/08	05/14/08	05/20/08

LAB QC:

SILVER LABORATORY	LC1 BS	W	08L0204	N/A	05/19/08	05/19/08
SILVER, TCLP LEACHAT	MB1	W	08L0204	N/A	05/19/08	05/19/08
SILVER, TCLP LEACHAT	MB2	W	08L0204	N/A	05/19/08	05/19/08
ARSENIC LABORATORY	LC1 BS	W	08L0199	N/A	05/14/08	05/15/08
ARSENIC, TCLP LEACHA	MB1	W	08L0199	N/A	05/14/08	05/15/08
ARSENIC, TCLP LEACHA	MB2	W	08L0199	N/A	05/14/08	05/15/08
BARIUM LABORATORY	LC1 BS	W	08L0199	N/A	05/14/08	05/15/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-073

DATE RECEIVED: 05/06/08 LVL LOT # :0805L052

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BARIUM, TCLP LEACHAT	MB1	W	08L0199	N/A	05/14/08	05/15/08
BARIUM, TCLP LEACHAT	MB2	W	08L0199	N/A	05/14/08	05/15/08
CADMIUM LABORATORY	LC1 BS	W	08L0199	N/A	05/14/08	05/15/08
CADMIUM, TCLP LEACHA	MB1	W	08L0199	N/A	05/14/08	05/15/08
CADMIUM, TCLP LEACHA	MB2	W	08L0199	N/A	05/14/08	05/15/08
CHROMIUM LABORATORY	LC1 BS	W	08L0199	N/A	05/14/08	05/15/08
CHROMIUM, TCLP LEACH	MB1	W	08L0199	N/A	05/14/08	05/15/08
CHROMIUM, TCLP LEACH	MB2	W	08L0199	N/A	05/14/08	05/15/08
MERCURY LABORATORY	LC1 BS	W	08C0086	N/A	05/15/08	05/15/08
MERCURY, TOTAL	MB1	W	08C0086	N/A	05/15/08	05/15/08
MERCURY, TCLP LEACHA	MB2	W	08C0086	N/A	05/15/08	05/15/08
MERCURY, TCLP LEACHA	MB3	W	08C0086	N/A	05/15/08	05/15/08
LEAD LABORATORY	LC1 BS	W	08L0199	N/A	05/14/08	05/15/08
LEAD, TCLP LEACHATE	MB1	W	08L0199	N/A	05/14/08	05/15/08
LEAD, TCLP LEACHATE	MB2	W	08L0199	N/A	05/14/08	05/15/08
SELENIUM LABORATORY	LC1 BS	W	08L0199	N/A	05/14/08	05/15/08
SELENIUM, TCLP LEACH	MB1	W	08L0199	N/A	05/14/08	05/15/08
SELENIUM, TCLP LEACH	MB2	W	08L0199	N/A	05/14/08	05/15/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-073
LVL#: 0805L052
SDG/SAF#: K1217/RC-073

W.O.#: 11343-606-001-9999-00
Date Received: 05-06-08

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.

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 analysis of 1 TCLP leachate sample.

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

   The TCLP leachate sample was reported with a 6-fold dilution for all ICP analytes with the exception of Silver due to sample matrix.

   The TCLP leachate sample for Silver was redigested in digestion batch #: 08L0204 due to the Silver Laboratory Control Sample (LCS) in batch 08L0199 was outside the 80-120% control limit. In digestion batch# 08L0204 for Silver the sample J16V88 was prepped with a 5.525-fold dilution due to limited sample volume. Samples J16V88R and J16B88S (duplicate and Spike) were prepped with a 5-fold dilution due to limited sample volume.

   The TCLP leachate sample for Mercury was prepped with a 2-fold dilution due to limited sample volume.

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

4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury) with the exception of Arsenic and Lead CCV3 and CCV4 in file PS0515C. The samples were rerun in file TA0520C for all TCLP analytes.

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

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.

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 limit. Refer to the Inorganics Laboratory Control Standards Report.

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

10. The TCLP extract from client sample J16V88 was selected for the matrix spike (MS) for this analytical batch.

11. The matrix spike for Arsenic, Chromium, and Selenium were below 50% recovery (29.3, 22.7, 46.3%). The recovery 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.

Judy Stine

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

5/22/08
Date

alm/m05-052

LvLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

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

t#: 0805L052

aching Procedure: __1310 __1311 __1312 __Other:_____

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

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

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
uminum	__6010B		__200.7				__99
ıtimony	__6010B	__7041 [5]	__200.7	__204.2			__99
·senic	✓6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
ırium	✓6010B		__200.7				__99
:ryllium	__6010B		__200.7				__99
smuth	__6010B [1]		__200.7 [1]			__1620	__99
›ron	__6010B		__200.7				__99
ıdmium	✓6010B	__7131A [5]	__200.7	__213.2			__99
ılcium	__6010B		__200.7				__99
hromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
›balt	__6010B		__200.7				__99
›pper	__6010B	__7211 [5]	__200.7	__220.2			__99
on	__6010B		__200.7				__99
ɜad	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
thium	__6010B	__7430 [4]	__200.7			__1620	__99
agnesium	__6010B		__200.7				__99
anganese	__6010B		__200.7				__99
ercury	✓7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
olybdenum	__6010B		__200.7				__99
ickel	__6010B		__200.7				__99
›tassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
are Earths	__6010B [1]		__200.7 [1]			__1620	__99
·lenium	✓6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
licon	__6010B [1]		__200.7			__1620	__99
lica	__6010B		__200.7			__1620	__99
lver	✓6010B	__7761 [5]	__200.7	__272.2			__99
›dium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
:rontium	__6010B		__200.7				__99
hallium	__6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
in	__6010B		__200.7				__99
itanium	__6010B		__200.7				__99
ranium	__6010B [1]		__200.7 [1]			__1620	__99
anadium	__6010B		__200.7				__99
inc	__6010B		__200.7				__99
irconium	__6010B [1]		__200.7 [1]			__1620	__99

ther: _____ Method: _____

L-WI-000000005

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, approximately 0.3 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Flame AA.

4. Graphite Furnace AA.

L-WI-033/N-04/98

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 05/22/08

CLIENT: TNU-HANFORD RC-073

LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	J16V88	Silver, TCLP Leachate	5.5	u	UG/L	5.5	1.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Barium, TCLP Leachate	83.9		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
		Mercury, TCLP Leachate	0.12	u	UG/L	0.12	2.0
		Lead, TCLP Leachate	47.8		UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 05/22/08

CLIENT: TNU-HANFORD RC-073 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0204-MB1	Silver, TCLP Leachate	1.0	u	UG/L	1.0	1.0
BLANK2	08L0204-MB2	Silver, TCLP Leachate	6.0	u	UG/L	6.0	6.0
BLANK1	08L0199-MB1	Arsenic, TCLP Leachate	31.7	u	UG/L	31.7	1.0
		Barium, TCLP Leachate	3.1	u	UG/L	3.1	1.0
		Cadmium, TCLP Leachate	5.6	u	UG/L	5.6	1.0
		Chromium, TCLP Leachate	4.6	u	UG/L	4.6	1.0
		Lead, TCLP Leachate	34.8	u	UG/L	34.8	1.0
		Selenium, TCLP Leachate	41.3	u	UG/L	41.3	1.0
BLANK2	08L0199-MB2	Arsenic, TCLP Leachate	31.7	u	UG/L	31.7	1.0
		Barium, TCLP Leachate	3.1	u	UG/L	3.1	1.0
		Cadmium, TCLP Leachate	5.6	u	UG/L	5.6	1.0
		Chromium, TCLP Leachate	4.6	u	UG/L	4.6	1.0
		Lead, TCLP Leachate	34.8	u	UG/L	34.8	1.0
		Selenium, TCLP Leachate	41.3	u	UG/L	41.3	1.0
BLANK1	08C0086-MB1	Mercury, Total	0.10	u	UG/L	0.10	1.0
BLANK2	08C0086-MB2	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0
BLANK3	08C0086-MB3	Mercury, TCLP Leachate	0.10	u	UG/L	0.10	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 05/22/08

CLIENT: TNU-HANFORD RC-073

LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-003	J16V88	Silver, TCLP Leachate	18000	5.5 u	25000	71.9	1.0
		Arsenic, TCLP Leachate	1460	30.0 u	5000	29.3	6.0
		Barium, TCLP Leachate	97300	83.9	100000	97.2	6.0
		Cadmium, TCLP Leachate	994	3.0 u	1000	99.4	6.0
		Chromium, TCLP Leachat	1140	12.0 u	5000	22.7	6.0
		Mercury, TCLP Leachate	189	0.12u	200	94.4	50.0
		Lead, TCLP Leachate	5030	47.8	5000	99.6	6.0
		Selenium, TCLP Leachat	463	36.0 u	1000	46.3	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 05/22/08

CLIENT: TNU-HANFORD RC-073 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-003REP	J16V88	Silver, TCLP Leachate	5.5 u	5.1	NC	1.0
		Arsenic, TCLP Leachate	30.0 u	30.0 u	NC	6.0
		Barium, TCLP Leachate	83.9	82.1	2.2	6.0
		Cadmium, TCLP Leachate	3.0 u	3.0 u	NC	6.0
		Chromium, TCLP Leachate	12.0 u	12.0 u	NC	6.0
		Mercury, TCLP Leachate	0.12u	0.12u	NC	2.0
		Lead, TCLP Leachate	47.8	43.7	9.0	6.0
		Selenium, TCLP Leachate	36.0 u	36.0 u	NC	6.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 05/22/08

CLIENT: TNU-HANFORD RC-073 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0204-LC1	Silver, LCS	498	500	UG/L	99.6
LCS1	08L0199-LC1	Arsenic, LCS	9580	10000	UG/L	95.8
		Barium, LCS	4390	5000	UG/L	87.8
		Cadmium, LCS	233	250	UG/L	93.1
		Chromium, LCS	470	500	UG/L	94.1
		Lead, LCS	2460	2500	UG/L	98.3
		Selenium, LCS	9440	10000	UG/L	94.4
LCS1	08C0086-LC1	Mercury, LCS	5.1	5.0	UG/L	102.7

Lionville Laboratory Incorporated Logbook #: 458

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0199
Date/Time Initiated: 5/14/08 1430
Date/Time Completed: 5/14/08 2030
Analyst(s): MW
Matrix: Soil Water Other: TCLP
Instr. Type: AA (ICP)
Parameters: RCRA

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

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

TW/NMED

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
5									
0804L053-002		100 ml	100 ml	<2	TC	N/A	clear/colorless		
002R		↓	↓	↓	↓	↓	↓		
002S	1.0 ml	↓	↓	↓	↓	↓	↓		
0804L052-003		50 ml	50 ml	↓	↓	↓	↓		
003R		↓	↓	↓	↓	↓	↓		
003S	0.5 ml	↓	↓	↓	↓	↓	↓		
0805L033-011		100 ml	100 ml	↓	↓	↓	↓		
011S	1.0 ml	↓	↓	↓	↓	↓	↓		
012		↓	↓	↓	↓	↓	↓		
013		↓	↓	↓	↓	↓	↓		
08LT0041-LB1		↓	↓	↓	↓	↓	↓		
08L0199-MB1		↓	↓	↓	↓	↓	↓		
LC1	1.0 ml	↓	↓	↓	↓	↓	↓		

MW 5/14/08

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

LCS #: 6072-78-08
09
10
11

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

File ID#: IC019901
LIMS Transfer: (Y) N
Data Review By/Date: updated
RMP, 05/15/08

Lionville Laboratory Incorporated

Logbook #: 458

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0204
Date/Time Initiated: 5/19/08 1145
Date/Time Completed: 5/19/08 1645
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: 94°

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 glass

TNW/NMED

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
08052053-002		20ml	100ml	<2	TC	N/A	clear/colorless		RMD
002R								LTD VOL.	
002S	1.0ml								
08052052-003									
003R									
003S	1.0ml								
08052033-011		100ml							
011S	1.0ml								
012									
013									
08LT0041-MB1									
08L0204-MB1									
LCS	1.0ml								

MW 5/19/08

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

LCS #: 6072-78-08
09
10
11

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

File ID#: IC020401
IC020402

LIMS Transfer: (Y) N

Data Review By/Date: PMP, 05/19/08

Updated

L-SPI-3020-A-0601

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 455

Analyst: CB
Date 5/15/08
Start Time/Temp: 1235 | 98°
End Time/Temp: 1435 | 95°

Instrument ID HG3.1 | 3.2
Balance #: (NA)
Pipette Calibration (Daily) Y ✓

Prep Batch: 0820086
Worksheet: HG051509/02
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	G12			33mL	33mL	
0.2 µg/L	92	0.0667				
1.0	500	0.334				
2.0	508	0.667				
5.0	NR	1.667				
10.0	X3	3.334				
ICV	PC	0.0834	2.5			
CCV	N60	0.167	5.0			
ICB/CCB	PT					
MB1	A94					PBW186
LC1	WK	0.167	5.0			LCSW186
0805L068-001	95					
002	SPRT					
003	SS					
004	AB					
005	JS					
0805L085-001	CB2					
001R	461					
001S	H3	0.334	1.0			
001T	154	0.334	1.0			
002	X5					
004	CT					
*0805L097-001	857			16.5mL		dilution to matrix
001R	HR					
001S	N2	0.334	1.0			
0805L033-009	PA			33mL		
009R	503					

Standard:	ID	Prep Date/Time
ICAL/MS	RI 6072-78-14B	5/15/08 1015
ICV/CCV/LCS	US 6072-78-15A	

Reviewed By/Date: [signature] 5/20

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

* pH ~2, Acidified in tube
TEO 5/15/08

Page #:

000000014

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 455

Analyst: EB
Date 5/15/08
Start Time/Temp: See page 007
End Time/Temp:

Instrument ID HG3.1/3.2
Balance #: (NA)
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0086
Worksheet: HG05,501/02
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.
0805L033-0095	BLV	0.334	1.0	33mL	33mL	
010	AHA					
~~0805L033~~ * ~~0805L114-001~~ 011	WD					
0115	HH	0.667	200			
012	AG01					
013	R2					
0805L052-003	76			16.5mL		dil. due to lumps
003R	B14					
0035	B32	0.667	200			
0805L053-002	PF			33mL		R
002R	N4					
002S	2B	0.667	200			
08LT0041-LB1	3T					

EB 5/15/08

Standard:	ID	Prep Date/Time
ICAL/MS		
ICV/CCV/LCS	See page 007	

Reviewed By/Date: [signature] 5/20/08

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

*Sample chain lists as other liquid, however it is solid. EB 5/15/08

Page #:

onville Laboratory Use Only
08051052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI Lionville Laboratory Inc.

000000016

ent TNU HANFORD SAF# RC-073
. Final Proj. Sampling Date
ject# 11343-606-001-9999-00
ject Contact/Phone#
nville Laboratory Project Manager O Johnson
SW846 Del STD TAT 15 days
te Rec'd 5-6-08 Date Due 5-21-08

		A							B							
Refrigerator #		6							3							
#/Type Container	Liquid															
	Solid	1G							1G							
Volume		60							250							
Preservatives																
ANALYSES REQUESTED →		ORGANIC							INORG							
		TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	LEACHATE		TCLP Metal RG	CN	Ignitability	LEACHATE				
		Lionville Laboratory Use Only														
		ITCLP	ITCLP	OPCB		08310 Lionville 5-6-08	0624T	0625T	ITCLP		IIGN	RCRAFW				

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	T16V88	✓	✓	SO	5-1-08	1005	X	X	X	X	X			X		X				
	002	TCLV0F001			L	*							X								
	003	TCLP0F001			L	*								X				X			

ecial Instructions: * See Lab Chron

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	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-073-040	Page 1 of 1

ollector D.W.Shea D. Eberhart SEC	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 9K	Data Turnaround 15 days		
roject Designation 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No. RC-073
e Chest No. GPR-03-014	Field Logbook No. EL-1607-3	COA R126D22600	Method of Shipment Fed Ex
hipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. See OPSC A080245		Bill of Lading/Air Bill No.

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

SAMPLE ANALYSIS													
Preservation				None	Cool 4C	None	Cool 4C	Cool 4C					
Type of Container				G	~~G~~ 5/1/08 Bus 1/0	~~G~~ 5/1/08 Bus 1/0	Gs*	Gs* 5/1/08 Bus 1/0					
No. of Container(s)				1			1						
Volume				~~60mL~~ 5/1/08 Bus 250	60mL	60mL	60mL	60mL					
				See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A & PAH					
Sample No.	Matrix *	Sample Date	Sample Time										
6V88	OTHER SOLID	5/1/08	1005	✓	✓	✓	✓	✓					

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: [signature] Date/Time: 5-1-08 1035	Received By/Stored In: DWShea DWShea Date/Time: 5/1/08 1035	(1) Metals by ICP (TCLP) - 1311/6010 {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Mercury (TCLP) - 1311/7470 {Mercury}	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
Relinquished By/Removed From: WShea DWSHEA Date/Time: 5/1/08 1802	Received By/Stored In: Fridge 3A Date/Time: 5/1/08 1802		
Relinquished By/Removed From: 260/3A 5/5/08 0925	Received By/Stored In: MCH MStankovich 5/5/08 Date/Time: 0925		
Relinquished By/Removed From: WCH MCH MStankovich 5/5/08 Date/Time: 0925	Received By/Stored In: FedEx Date/Time:		
Relinquished By/Removed From: FedEx 5-6-08 0940	Received By/Stored In: [signature] Date/Time: 5-6-08 0940	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab. KW	
Relinquished By/Removed From: Date/Time:	Received By/Stored In: Date/Time:		

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	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-073

Date: 5-6-08

LvLI Batch #: 08051052

Sample Custodian: V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.1	°C	Cooler # GPR-03-014
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 LIONVILLE LABORATORY INC.

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-073 K1217

RECEIVED
JUN 2008

DATE RECEIVED: 05/06/08 LVL LOT # :0805L052

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88						
IGNITABILITY	001	SO	08LFP010	05/01/08	05/08/08	05/08/08
TCLP	001	SO	08LT0041	05/01/08	05/12/08	05/13/08
TCLP LEACHATE	001	SO	08LTV042	05/01/08	05/12/08	05/13/08
LAB QC:						
IGNITABILITY	MB1 BS	W	08LFP010	N/A	05/08/08	05/08/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-073 K1217
LVL#: 0805L052

W.O.#: 11343-606-001-9999-00
Date Received: 05-06-08

INORGANIC NARRATIVE

1. This narrative covers the analysis of 1 solid sample.

2. The sample was prepared and analyzed in accordance with the method checked on the attached glossary.

   LvLI is NELAP accredited by the State of Pennsylvania. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvLI certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

3. Sample holding time as required by the method and/or contract was met.

4. The result presented in this report is derived from a sample that met LvLI's sample acceptance policy as noted on the Sample Receipt Checklist.

5. The Laboratory Control Sample (LCS) was within the method criteria.

6. Insufficient sample was provided so as to perform replicate analysis.

7. 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 package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

5/23/08
Date

njp\i05-052

The results presented in this report relate to the analytical testing and conditions of the samples upon 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.

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% Ash	___ D2216-80		
% Moisture	___ D2216-80		___ ILMO4.0 (e)
% Solids	___ D2216-80		___ ILMO4.0 (e)
% Volatile Solids	___ D2216-80		
ASTM Extraction in Water	___ D3987-81/85		
BTU	___ D240-87		
CEC		___ 9081	___ c
Chromium VI		___ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		___ 1110(mod) ___ 9045C	
Cyanide, Total		___ 9010B	___ ILMO4.0 (e)
Cyanide, Reactive		___ Section 7.3/9014	
Halides, Extractable Organic		___ 9020B	___ EPA 600/4/84-008
Halides, Total		___ 9020B	___ EPA 600/4/84-008
EP Toxicity		___ 1310A	
Flash Point		___ 1010	
Ignitability		✓ 1010	
Oil & Grease		___ 9071A	
Carbon, Total Organic		___ 9060	___ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	___ D240-87(mod)	___ 5050	
Petroleum Hydrocarbons, Total Recoverable		___ 9071	___ EPA 418.1
pH, Soil		___ 9045C	
Sulfide, Reactive		___ Section 7.3/9030B	
Sulfide		___ 9030B(mod)	
Specific Gravity	___ D1429-76C/	___ D5057-90	
Sulfur, Total		___ 9056	
Synthetic Preparation Leach		___ 1312	
Paint Filter		___ 9095A	

Other: **Method:**

Other: **Method**

L-WI-034/B-01/01

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
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).

3. Test Methods for Evaluating Solid Waste (USEPA SW-846).

a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).

d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).

e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.

f. Code of Federal Regulations.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 05/22/08

CLIENT: TNUHANFORD RC-073 K1217 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J16V88	IGNITABILITY	103.0	DEG F	60.0	

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 05/22/08

CLIENT: TNUHANFORD RC-073 K1217 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
BLANK10	08LFP010-MB1	IGNITABILITY	82.0	0.0	81.0	101.2	1.0

onville Laboratory Use Only

)805C052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

VLI Lionville Laboratory, Inc.

ent TNU HANFORD SAF# RC-073

. Final Proj. Sampling Date

ject# 11343-606-001-9999-00

ject Contact/Phone#

nville Laboratory Project Manager O Johnson

SW846 Del STD TAT 15 days

te Rec'd 5-6-08 Date Due 5-21-08

		A							B							
Refrigerator #		6							3							
#/Type Container	Liquid															
	Solid	1G							1G							
Volume		60							250							
Preservatives																
ANALYSES REQUESTED		ORGANIC							INORG							
		TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	1,4 Dioxane		TCLP Metal RG	CN	Sanitize	LEACHATE				
		Lionville Laboratory Use Only														
		ITCLV	ITCLP	OPCB		8310 DBHC Tuesday 6-10-08	06284T	06285T	ITCLP		IIGN	RCRATCLP				
TRIX DES: 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	T16V88	✓	✓	SO	5-1-08	1005	X	X	X	X	X			X		X	
	002	TCLV of 001			L	#							X					
	003	TCLP of 001			L									X				X

ecial Instructions: # See Lab Chron

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	0940

Relinquished by	Received by	Date	Time

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

000000007

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-073-040 | Page 1 of 1

Collector: D.W.Shea D. Eberhart SEC	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 15 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location: 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No.: RC-073
Ice Chest No.: GPR-03-014	Field Logbook No.: EL-1607-3	COA: R126D22600	Method of Shipment: Fed Ex
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: See OPSC A080245		Bill of Lading/Air Bill No:

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

Preservation	None	Cool 4C	None	Cool 4C	Cool 4C						
Type of Container	G	G Silica Bags	G Silica Bags	Gs*	Gs* Silica Bags						
No. of Container(s)	1	1/0	1/0	1	1/0						
Volume	60mL Silica Bags 250	60mL	60mL	60mL	60mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A 4 PAH						
Sample No.	Matrix *	Sample Date	Sample Time								
16V88	OTHER SOLID	5/1/08	1005	✓	✓	✓	✓	✓			

CHAIN OF POSSESSION	Sign/Print Names
Relinquished By/Removed From: Date/Time 1085	Received By/Stored In: Date/Time
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time

SPECIAL INSTRUCTIONS

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *: S=Soil, SE=Sediment, SO=Solid, SI=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, T=Tissue, WI=Wipe, L=Liquid, V=Vegetation, X=Other

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

WCH-EE-011

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/SAF/SOW/Release #: RC-073

Date: 5-6-08

LvLI Batch #: 08051052

Sample Custodian: V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.1	°C	Cooler # GPR-03-014
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 LIONVILLE LABORATORY INC.

RECEIVED
JUN 2008

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-073 K1217

DATE RECEIVED: 05/06/08 LVL LOT # :0805L052

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16V88						
IGNITABILITY	001	SO	08LFP010	05/01/08	05/08/08	05/08/08
PAINT FILTER	001	SO	08LPA004	05/01/08	06/10/08	06/10/08
TCLP	001	SO	08LT0041	05/01/08	05/12/08	05/13/08
TCLP LEACHATE	001	SO	08LTV042	05/01/08	05/12/08	05/13/08
AB QC:						
IGNITEABILITY	MB1 BS	W	08LFP010	N/A	05/08/08	05/08/08

LIONVILLE LABORATORY INC.

Analytical Report
****Addendum****

Client: TNU-HANFORD RC-073 K1217
LVL#: 0805L052

W.O.#: 11343-606-001-9999-00
Date Received: 05-06-08

INORGANIC NARRATIVE

This report has been addended to include Paint Filter analysis results.

1. This narrative covers the analysis of 1 solid sample.

2. The sample was prepared and analyzed in accordance with the method checked on the attached glossary.

   LvLI is NELAP accredited by the State of Pennsylvania. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvLI certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

3. Sample holding time as required by the method and/or contract was met.

4. The result presented in this report is derived from a sample that met LvLI's sample acceptance policy as noted on the Sample Receipt Checklist.

5. The Laboratory Control Sample (LCS) was within the method criteria.

6. Insufficient sample was provided so as to perform replicate analysis.

7. 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 package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/10/08
Date

njp\i05-052a

The results presented in this report relate to the analytical testing and conditions of the samples upon 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 12 pages.
11 njp 6-10-08

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% Ash	__ D2216-80		
% Moisture	__ D2216-80		__ ILMO4.0 (e)
% Solids	__ D2216-80		__ ILMO4.0 (e)
% Volatile Solids	__ D2216-80		
ASTM Extraction in Water	__ D3987-81/85		
BTU	__ D240-87		
CEC		__ 9081	__ c
Chromium VI		__ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		__ 1110(mod) __ 9045C	
Cyanide, Total		__ 9010B	__ ILMO4.0 (e)
Cyanide, Reactive		__ Section 7.3/9014	
Halides, Extractable Organic		__ 9020B	__ EPA 600/4/84-008
Halides, Total		__ 9020B	__ EPA 600/4/84-008
EP Toxicity		__ 1310A	
Flash Point		__ 1010	
Ignitability		✓ 1010	
Oil & Grease		__ 9071A	
Carbon, Total Organic		__ 9060	__ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	__ D240-87(mod)	__ 5050	
Petroleum Hydrocarbons, Total Recoverable		__ 9071	__ EPA 418.1
pH, Soil		__ 9045C	
Sulfide, Reactive		__ Section 7.3/9030B	
Sulfide		__ 9030B(mod)	
Specific Gravity	__ D1429-76C/	__ D5057-90	
Sulfur, Total		__ 9056	
Synthetic Preparation Leach		__ 1312	
Paint Filter		✓ 9095A	

Other: **Method:**

Other: **Method**

Lionville Laboratory Incorporated

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
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).

3. Test Methods for Evaluating Solid Waste (USEPA SW-846).

a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).

d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).

e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.

f. Code of Federal Regulations.

Inorganic Data Summary Report
Physical Testing Observation

Client: TNU-HANFORD RC-073 K1217
LVL#: 0805L052

W.O.#: 11343-606-001-9999-00
Date Received: 05-06-08

Analyte:	**Observation:**
Paint Filter Analysis	No free liquids present in sample J16V88.

njp\i05-052.pt2

LIONVILLE LABORATORY INC.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 05/22/08

CLIENT: TNUHANFORD RC-073 K1217 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J16V88	IGNITABILITY	103.0	DEG F	60.0	

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 05/22/08

CLIENT: TNUHANFORD RC-073 K1217 LVL LOT #: 0805L052

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
BLANK10	08LFP010-MB1	IGNITABILITY	82.0	0.0	81.0	101.2	1.0

onville Laboratory Use Only
)805C052

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

ent TNU HANFORD SAF# RC-073
t. Final Proj. Sampling Date
ojects 11343-606-001-9999-00
oject Contact/Phone#
onville Laboratory Project Manager O Johnson
3W846 Del STD TAT 15 days
te Rec'd 5-6-08 Date Due 5-21-08

	A							B							
Refrigerator #	6							3							
#/Type Container (Liquid / Solid)	1G							1G							
Volume	60							250							
Preservatives															
ANALYSES REQUESTED	ORGANIC							INORG							
	TCLP VOA	TCLP BNA	Pest/PCB	Herb	PAH	LEACHATE		TCLP Metal RC	CN	Ignitable	LEACHATE	Paint Filter			

TRIX DES: 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	ITCLV	ITCLP	OPCB		8310 PAH	0624T	0625T	ITCLP		IIGN	RCRAT	IPAIN			
001	T16V88	✓	✓	SO	5-1-08	1005	X	X	X	X	X			X		X		X			
002	TCLV of 001											X									
003	TCLP of 001												X				X				

Lionville Laboratory Use Only

Special Instructions: * See Lab Chron

Special Instructions:
6-4-08 1. Added paint filter to sample 001 per client web
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN	"COMPOSITE		

0000000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-073-040	Page 1 of 1

Collector D.W.Shea D. Eberhart SEC	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 9K	Data Turnaround 15 days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Other Solid Q	Sampling Location 126-D-2, black tar anomaly, 100D-AN-08-024		SAF No. RC-073
Ice Chest No. GPR-03-014	Field Logbook No. EL-1607-3	COA R126D22600	Method of Shipment Fed Ex
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. See OPSC A080245		Bill of Lading/Air Bill No.

POSSIBLE SAMPLE HAZARDS/REMARKS

PAH's

Special Handling and/or Storage

Preservation	None	Cool 4C.	None	Cool 4C	Cool 4C						
Type of Container	G	~~G~~ S/L/Bag	G S/L/Bag	Gs*	Gs* S/L/Bag						
No. of Container(s)	1	1/0	1/0	1	1/0						
Volume	~~60mL~~ 5/1/08 250	60mL.	60mL.	60mL	60mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	PCBs - 8082	Ignitability - 1010	TCLP VOA - 1311/8260A	TCLP Semi-VOA - 1311/8270A 4 PAH						
Sample No.	Matrix *	Sample Date	Sample Time								
J16V88	OTHER SOLID	5/1/08	1005	✓	✓	✓	✓	✓			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	D. Eberhart SEC	5-1-08 1085	DWShea DWShea	5/1/08 1035
Relinquished By/Removed From	DWShea DWSHEA	5/1/08 1802	Fridge 3A	5/1/08 1802
Relinquished By/Removed From	1060/3A	5/5/08 0925	MCH MStankovich	5/5/08 0925
Relinquished By/Removed From	WCH MCH MStankovich	5/5/08 0925	Received By/Stored In	FedEx
Relinquished By/Removed From	FedEx	5-6-08 0940	Received By/Stored In	5-6-08 0940
Relinquished By/Removed From		Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

KW

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

WCH-EE-011

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD **Date:** 5-6-08

Project/SAF/SOW/Release #: RC-073

LvLI Batch #: 08051052 **Sample Custodian:** V. Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7900 0748 1198
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 4.4	°C	Cooler # GPR-03-014
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