





16 June 2008

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

**Subject:** Analytical Data Package

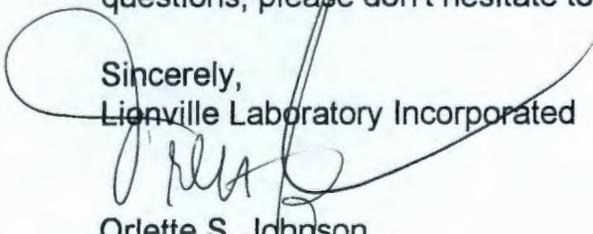
Dear Ms. Kessner:

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

LvLI Batch #	0804L990
SDG #	K1210
SAF #	RC-012
Date Received	4/24/08
# Samples	1
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	
Inorganics	

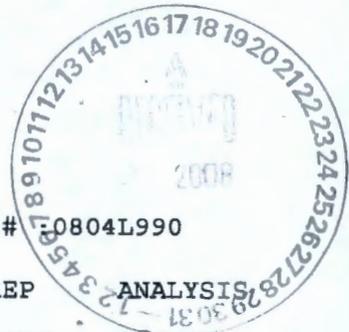
The electronic data deliverable (EDD) will be emailed shortly. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,  
Lionville Laboratory Incorporated

  
Orlette S. Johnson  
Project Manager

r:\group\pm\orlette\tnu-hanford\data\b\_ltrs.doc

Lionville Laboratory, Inc.  
 PCB ANALYTICAL DATA PACKAGE FOR  
 TNU-HANFORD RC-012 *K1210*



DATE RECEIVED: 04/24/08

LVL LOT # 0804L990

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16HX6	001	OI	08LE0204	04/17/08	04/28/08	04/29/08
J16HX6	001 MS	OI	08LE0204	04/17/08	04/28/08	04/29/08
J16HX6	001 MSD	OI	08LE0204	04/17/08	04/28/08	04/29/08

LAB QC:

PBLKPP	MB1	S	08LE0204	N/A	04/28/08	04/29/08
PBLKPP	MB1 BS	S	08LE0204	N/A	04/28/08	04/29/08



## Case Narrative

**Client:** TNU-HANFORD RC-012  
**LVL #:** 0804L990  
**SDG/SAF #** K1210 / RC-012

**W.O. #:** 11343-606-001-9999-00  
**Date Received:** 04-24-2008

### PCB

One (1) oil sample was collected on 04-17-2008.

The sample and its associated QC samples was extracted on 04-28-2008 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 04-29-2008. The extraction procedure was based on method 3580A (waste dilution 1g into 10 mLs Hexane) and the extracts were analyzed based on method 8082.

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

1. The sample was extracted and analyzed within required holding time
2. The sample and its associated QC samples received Copper-Sulfur and Sulfuric Acid cleanups according to Lionville Laboratory SOPs based on SW846 methods 3660A and 3665A respectively.
3. The method blank was below the reporting limits for all target compounds.
4. All surrogate recoveries were within acceptance criteria.
5. The blank spike recoveries were within acceptance criteria.
6. The matrix spike recoveries were within acceptance criteria.
7. The initial calibrations associated with this data set were within acceptance criteria.
8. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

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The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 9 pages.



9. The results for oil samples were reported on an 'as-received basis' as required by the project.
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.

A handwritten signature in black ink, appearing to read 'Iain Daniels', is written over a horizontal line.

Iain Daniels  
Laboratory Manager  
Lionville Laboratory Incorporated

5/2/08  
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.

000000005

Sample Information	Cust ID:	J16HX6	J16HX6	J16HX6	PBLKPP	PBLKPP BS
	RFW#:	001	001 MS	001 MSD	08LE0204-MB1	08LE0204-MB1
	Matrix:	OIL	OIL	OIL	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	88 %	91 %	92 %	102 %	109 %
	Decachlorobiphenyl	90 %	92 %	93 %	92 %	96 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====						
Aroclor-1016		400 U	78 %	77 %	400 U	101 %
Aroclor-1221		400 U	400 U	400 U	400 U	400 U
Aroclor-1232		400 U	400 U	400 U	400 U	400 U
Aroclor-1242		400 U	400 U	400 U	400 U	400 U
Aroclor-1248		400 U	400 U	400 U	400 U	400 U
Aroclor-1254		400 U	400 U	400 U	400 U	400 U
Aroclor-1260		400 U	81 %	81 %	400 U	98 %

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

SAMPLE EXTRACTION RECORD

Sheet no.: 1

Extract. Date: 04/28/08

Extraction Batch No: 08LE0204

Analyst: MF

Method: \*\*\*\* *WD 3580*

Test: OPCB

Cleanup Date: 04/28/04

Analyst: MF

Client: TNU-HANFORD RC-012

LIMS Report Date: 04/28/08

Solvent: 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
0804L990-	TNU-HANFORD RC-012										
001	J16HX6	1.0	1.0			10		1.0	N	0.0	10000
001 -S	J16HX6	1.0	1.0	1.0		10		1.0	N	0.0	10000
001 -T	J16HX6	1.0	1.0	1.0		10		1.0	N	0.0	10000
08LE0204-MB1	PBLKPP	1.0	1.0			10		1.0	N	100.00	10000
08LE0204-MB1 -S	PBLKPP	1.0	1.0	1.0		10		1.0	N	100.00	10000
<del>08LE0204-MB1 -T</del>	<del>PBLKPP</del>	1.0	1.0	1.0		10		1.0	N	100.00	10000

Comments:

Surrogate: 250 UL OLM PSURR 89916406

Spike: 250 UL AR1660 89916602

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
<i>all</i>	<i>[Signature]</i>	<i>4/28/08 16:12</i>	<i>LB</i>	<i>4/28/08</i>	<i>Analysis</i>

00000006



Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-012-018	Page 1 of 21
Collector Edmundson/Isom/Perry	Company Contact Tom Edmundson	Telephone No. 376-4058	Project Coordinator KESSNER, JH		Price Code 95	Data Turnaround 15 Days 7 day free #17-08
Project Designation 100-N Ancillary Facilities & 190-DR Waste Characterization	Sampling Location 1330-N Waste Pad 2nd Event		SAF No. RC-012			
Chest No. Hazmat Box	Field Logbook No. EL-1516-12	COA RD4MXX2F00	Method of Shipment Fed Ex			
Shipped To EBERLINE SERVICES LIONVILLE		Offsite Property No. HMSR# 7909-9083-8234	Bill of Lading/Air Bill No. See 08PC HMSR # na 4/23/08			

POSSIBLE SAMPLE HAZARDS/REMARKS Non-rad  Special Handling and/or Storage Cool to 4c	Preservation	Cool 4C	Cool 4C	None	None	None	Cool 4C
	Type of Container	aG	aGs*	G/P	G/P	G/P	Gs*
	No. of Container(s)	1	0	1	1	1	1
	Volume	1000mL 250mL	200mL → TRE 4-17-08	500mL	500mL	1000mL	60mL

SAMPLE ANALYSIS		PCBs - 8082	TOX - 9020	Gross Alpha	Gross Beta	See item ( ) in Special Instructions.	Alcohols, Glycols, & Ketones - 8015 (Ethylene glycol)
		TRE 4-17-08					

Sample No.	Matrix *	Sample Date	Sample Time				
6HX6	OTHER LIQUID	4-17-08	1330	✓	✓		
<del>6HX7</del>	<del>OTHER LIQUID</del>	<del>4-17-08</del>	<del>1330</del>	<del>✓</del>	<del>✓</del>		
<del>6HX8</del>	<del>OTHER LIQUID</del>	<del>4-17-08</del>	<del>1500</del>	<del>✓</del>	<del>✓</del>		
<del>6HX9</del>	<del>OTHER LIQUID</del>	<del>4-17-08</del>	<del>1535</del>	<del>✓</del>	<del>✓</del>		
<del>6HX10</del>	<del>OTHER LIQUID</del>	<del>4-17-08</del>	<del>1545</del>	<del>✓</del>	<del>✓</del>		

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Acquired By/Removed From <i>R. Edmundson</i>	Date/Time 4-17-08 1830	Received By/Stored In <i>1060 Bottle #2C</i>	Date/Time 4-17-08 1830	(1) Gamma Spectroscopy (TCL List) (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155)  Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.		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
Acquired By/Removed From <i>60/RC</i>	Date/Time 4/23/08 1500	Received By/Stored In <i>MILK</i>	Date/Time 4/23/08			
Acquired By/Removed From <i>WCH</i>	Date/Time 4/23/08 1500	Received By/Stored In <i>mstantouch</i>	Date/Time 4/23/08			
Acquired By/Removed From <i>WCH</i>	Date/Time 4/23/08 1500	Received By/Stored In <i>Fed Ex</i>	Date/Time 4/23/08			
Acquired By/Removed From <i>Fed Ex</i>	Date/Time 4/24/08 1155	Received By/Stored In <i>WCH</i>	Date/Time 4-24-08 1155			
Acquired 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

0000000000

**Lionville Laboratory Incorporated**  
**SAMPLE RECEIPT CHECKLIST (SRC)**

CLIENT: TNU HANFORD  
 Project/BAF/SOW/Release #: RC-012  
 LvLI Batch #: 0804L990

Date: 4-24-08

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier <u>Fed Ex</u>		Airbill # <u>7909 9083 8234</u>
2. Custody Seals on coolers or shipping containers intact, signed & dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No Seals
3. Outside of coolers or shipping containers are free from damage?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:
4. All expected paperwork received (coc & other client specific information) sealed in plastic bag and easily accessible?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
5. Samples received cooled or <u>ambient?</u>	Temp <u>8.9</u> °C		Cooler #
How was the temperature taken?	<input checked="" type="checkbox"/> IR	<input type="checkbox"/> Temp. Blank	<input type="checkbox"/> Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
6. Custody seals on sample containers intact, signed and dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No Seals
7. COC (Client & LvLI) signed & dated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
8. Sample containers are intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
9. All samples on COC received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
All samples received on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
10. All sample label information matches COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
11. Samples properly preserved? (If #5 is no, then this is no.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
12. Samples received within hold times?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Short holds taken to wet lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
13. VOA, TOC, TOX free of headspace?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
14. QC stickers placed on bottles designated by client?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
16. Project Manager contacted concerning any discrepancies?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Person Contacted _____		Date _____	

