0057823 H1740

RECEIVED MAY 2002

Lionville Laboratory, Inc.
PEST/PCB ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B02-003 H1740

DATE RECEIVED: 04/09/02 LVL LOT # :0204L355

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B14CW8	001	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CW8	001 01	SO		04/04/02	04/10/02	04/21/02
B14CW8	001 MS	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CW8	001 MS 01	SO		04/04/02	04/10/02	04/21/02
B14CW8	001 MSD	SO	02LE0395	04/04/02	04/10/02	04/22/02
B14CW8	001 MSD 01	SO		04/04/02	04/10/02	04/22/02
B14CW9	002	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CW9	002 01	SO		04/04/02	04/10/02	04/21/02
B14CX0	003	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CX0	003 01	SO		04/04/02	04/10/02	04/21/02
B14CX1	004	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CX1	004 01	SO		04/04/02	04/10/02	04/21/02
B14CX2	005	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CX2	005 01	SO		04/04/02	04/10/02	04/21/02
B14CX3	006	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CX3	006 01	SO		04/04/02	04/10/02	04/21/02
B14CX4	007	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CX5	008	SO	02LE0395	04/04/02	04/10/02	04/21/02
B14CW1	009	SO	02LE0395	04/04/02	04/10/02	04/21/02

LAB QC:

PBLKLR	MB1	S	02LE0395	N/A	04/10/02	04/21/02
PBLKLR	MB1 BS	S	02LE0395	N/A	04/10/02	04/21/02

RECEIVED AUG 12 2002 EDMC

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU HANFORD B02-003
LVL#: 0204L355
SDG/SAF#: H1740/B02-003

W.O.#: 11343-606-001-9999-00
Date Received: 04-09-2002

PESTICIDES

Nine (9) solid samples were collected on 04-04-2002.

The samples and their associated QC samples were extracted on 04-10-2002 and analyzed according to Lionville Laboratory OPs based SW846, 3rd Edition procedures on 04-21,22-2002. The extraction procedure was based on method 3540 and the extracts were analyzed based on method 8081.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.
2. The required holding time for extraction and analysis has been met.
3. Samples and their associated QC samples received a sulfur cleanup.
4. The method blank was below the reporting limits for all target compounds.
5. One (1) of twelve (12) obtainable surrogate recoveries was outside acceptance criteria. However, the surrogate recovery criteria were met (i.e., no more than one outlier per sample).
6. All blank spike recoveries were within acceptance criteria.
7. Matrix spike recoveries were unobtainable due to the dilution required for analysis.
8. Most samples required dilution due to high levels of target analytes. Reporting limits have been adjusted to reflect the necessary dilution.
9. All initial calibrations associated with this data set were within acceptance criteria.
10. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria with the exception of target compound 4,4-DDE analyzed on 04-22-2002 at 0957 on the secondary column. The data reflected an increase in instrument response, so the ability to identify the compound was not impaired. A copy of the Sample Discrepancy Report (SDR) has been enclosed.
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.

By J. Michael Taylor
President
Lionville Laboratory Incorporated

04-26-02
Date

somm\r:\group\data\hpest\urs lipari\04L-355.pes

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 1 1 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610) 280-3000 • Fax (610) 280-3041

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 02GC209

Initiator: Bryce Santoro
Date: 4/23/02
Client: TNU

Batch: 0204L355
Samples: 001,S,T(100x), 003,006(100x) 002,004 005,007 (1x)
Method: SW846/MCAWW/CLP/

Parameter: 0608L
Matrix: Soil
Prep Batch: 02LE0315

1. Reason for SDR

a. COC Discrepancy
__ Tech Profile Error __ Client Request __ Sampler Error on C-O-C
__ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy
__ Missing Sample/Extract* __ Container Broken __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

c. Problem (Include all relevant specific results; attach data if necessary)

(1) CCV prior to samples was increased on conf. column. ok, primary, quants done from primary column as needed.

2. Known or Probable Causes(s)

3. Discussion and Proposed Action

Other Description: Narrate

__ Re-log
__ Entire Batch
__ Following Samples: _____
__ Re-leach
__ Re-extract
__ Re-digest
__ Revise EDD
__ Change Test Code to _____
__ Place On/Take Off Hold (circle)

4. Project Manager Instructions...signature/date: [signature] 4/23/02

__ Concur with Proposed Action
✓ Disagree with Proposed Action; See Instruction
✓ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: [signature] 4/24/02 Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
__	X Initiator	__	__ Metals: Beegle
__	X Lab General Manager: M. Taylor	__	__ Inorganic: Perrone
✓	X Project Mgr: Stone/Johnson/Haslett	__	__ GC/LC: Kiger
__	X Technical Mgr: Wesson/Daniels	__	__ MS: Rychlak/Layman
__	X QA (file): Alberts	__	__ Log-in: Melnic
__	__ Data Management: Feldman	__	__ Admin: Soos
__	__ Sample Prep: Beegle/Kiger	__	__ Other: _____

QA-105-A-0801

GLOSSARY OF PESTICIDE/PCB 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.

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.

SP = Indicates Spiked Compound.

4

VLI
LIONVILLE LABORATORY INC.

GLOSSARY OF PESTICIDE/PCB DATA

' = 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.

R:/SHARE/HPLC/PESTICIDE/PCBGLOS

Lionville Laboratory, Inc.

Pesticides/PCB by GC, Special List

Report Date: 04/24/02 15:00

RFW Batch Number: **0204L355** Client: **TNUHANFORD B02-003 H1740** Work Order: 11343606001 Page: 1

	Cust ID:	**B14CW8**	**B14CW8**	**B14CW8**	**B14CW8**	**B14CW8**	**B14CW8**
Sample Information	RFW#:	**001**	**001 DL**	**001 MS**	**001 MS**	**001 MSD**	**001 MSD**
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	D.F.:	10.0	100	10.0	100	10.0	100
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate:	Decachlorobiphenyl	D %	D %	D %	D %	D %	D %
	Tetrachloro-m-xylene	D %	D %	D %	D %	D %	D %
		fl	fl	fl	fl	fl	fl
4,4'-DDE		E	1000	E	1000	E	530
4,4'-DDD		33 U	NA	32 U	NA	33 U	NA
4,4'-DDT		85	NA	D %	D %	D %	D %

	Cust ID:	**B14CW9**	**B14CW9**	**B14CX0**	**B14CX0**	**B14CX1**	**B14CX1**
Sample Information	RFW#:	**002**	**002 DL**	**003**	**003 DL**	**004**	**004 DL**
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	D.F.:	1.00	10.0	10.0	100	1.00	10.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate:	Decachlorobiphenyl	110 %	D %	D %	D %	105 %	D %
	Tetrachloro-m-xylene	80 %	D %	D %	D %	55 %	D %
		fl	fl	fl	fl	fl	fl
4,4'-DDE		E	270	E	480	E	270
4,4'-DDD		3.3 U	NA	33 U	NA	5.3 .I	NA
4,4'-DDT		14	NA	58	NA	15	NA

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.

Pesticides/PCB by GC, Special List

Report Date: 04/24/02 15:00

RFW Batch Number: **0204L355** Client: **TNUHANFORD B02-003 H1740** Work Order: 11343606001 Page: 2

	Cust ID:	B14CX2	B14CX2	B14CX3	B14CX3	B14CX4	B14CX5
Sample Information	RFW#:	005	005 DL	006	006 DL	007	008
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	D.F.:	1.00	10.0	10.0	100	1.00	10.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate:	Decachlorobiphenyl	75 %	D %	D %	D %	90 %	D %
	Tetrachloro-m-xylene	100 %	D %	D %	D %	80 %	D %
4,4'-DDE		E	370	E	520	5.0	33 U
4,4'-DDD		3.2 U	NA	32 U	NA	3.3 U	33 U
4,4'-DDT		12	NA	69	NA	3.3 U	330

	Cust ID:	B14CW1	PBLKLR	PBLKLR BS
Sample Information	RFW#:	009	02LE0395-MB1	02LE0395-MB1
	Matrix:	SOLID	SOIL	SOIL
	D.F.:	10.0	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg
Surrogate:	Decachlorobiphenyl	D %	130 * %	120 %
	Tetrachloro-m-xylene	D %	110 %	105 %
4,4'-DDE		32 U	3.3 U	3.3 U
4,4'-DDD		32 U	3.3 U	3.3 U
4,4'-DDT		270	3.3 U	99 %

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

Jfox 4/25/02

(8) P/PCB From Tynn

Lionville Laboratory Use Only
0204L355

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI LIONVILLE LABORATORY INC.

Client: TNU Hanford B02-003
Est. Final Proj. Sampling Date:
Project #: 11343-606-001-9999-03
Project Contact/Phone #:
Lionville Laboratory Project Manager: OJ
QC: SPEC Del: STD TAT: 30 days
Date Rec'd: 04/09/02 Date Due: 5-9-02

Refrigerator #		A 5	
#/Type Container	Liquid		
	Solid	pl	
Volume	Liquid		
	Solid	1L	
Preservatives			

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN

Lionville Laboratory Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0608X
001	B14CW8			SO	04/04/02	1029	1
002	B14CW9					1115	1
003	B14CX0					1145	1
004	B14CX1					1210	1
005	B14CX2					1315	1
006	B14CX3					1335	1
007	B14CX4					1405	1
008	B14CX5					1445	1
009	B14CW1					1515	1

Special Instructions:
SAF # B02-003
Run Matrix QC
0608XD
SO = vegetation

DATE/REVISIONS:
0608X 1. DDD, DDE, DDT
4-11-02 2. Cancel 1% SOL per Client, Report As Rec'd
3.
4.
5.
6.

Lionville Laboratory Use Only

Samples were: 1) Shipped ✓ or Hand Delivered ___ Airbill # FedEx 7903 7399 5440
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Samples Properly Preserved Y or N
5) Received Within Holding Times Y or N

Tamper Resistant Seal was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N
Cooler Temp. 3 °C

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

Relinquished by	Received by	Date	Time
FedEx	JPerry	04/09/02	0945

Relinquished by	Received by	Date	Time
COMPOSITE WASTE		ORIGINAL REWRITTEN	

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B02-003-13	Page 1 of 1

Collector: K Gano / A. Johnson	Company Contact: K Gano	Telephone No.: 372-9216	Project Coordinator: TRENT, SJ
Price Code: 9N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: Horseshoe Landfill Residual Pesticide - Biota	Sampling Location: ALE	SAF No.: B02-003	
Ice Chest No.: ERC 02-004	Field Logbook No.:	COA: MEA1221P40	Method of Shipment: Fed EX
Shipped To: TMA/RECRA	Offsite Property No.: A020105	Bill of Lading/Air Bill No.: 790373995440	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	P											
No. of Container(s)	1											
Volume	1000mL											
SAMPLE ANALYSIS	Pesticides - 8081 (4,4'-DDD, 4,4'-DDE, 4,4'-DDT)											

Sample No.	Matrix *	Sample Date	Sample Time											
B14CW8	OTHER SOLID	4.4.02	1029	x			Grid #1							
B14CW9	OTHER SOLID	4.4.02	1115	x			Grid #4							
B14CX0	OTHER SOLID	4.4.02	1145	x			Grid #10							
B14CX1	OTHER SOLID	4.4.02	1210	x			Grid #17							

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
April Johnson, April Johnson	4.4.02 1545	R. Fahlberg / R. Fahlberg	1545 4.4.02
REF 2C	4 8 02 1300	SJGALE	4 8 02 1300
SJGALE	4 8 02 1300	FED EX	
Fed EX	04/09/02 @ 0945		04/09/02 @ 0945

SPECIAL INSTRUCTIONS

Samples did not originate in radiological controlled area. No total activity associated with sample/samples.

Personnel not available to relinquish samples from the 3728 Ref # 2C on 4 / 8 / 02

R. FAHLBERG UNAVAILABLE TO RELINQUISH SAMPLES. 4-8-02

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

BHI-EE-011 (03/01/2002)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		B02-003-14	Page 1 of 1
Collector: K Gano / A. Johnson	Company Contact: K Gano	Telephone No.: 372-9216	Project Coordinator: TRENT, SJ	Price Code: 9N
				Data Turnaround: 45 Days
Project Designation: Horseshoe Landfill Residual Pesticide - Biota	Sampling Location: ALE		SAF No.: B02-003	Air Quality ☐
Ice Chest No.: ERC-02-004	Field Logbook No.	COA: MEA1221P40	Method of Shipment: Fed EX	
Shipped To: TMA/RECRA	Offsite Property No.: A020185		Bill of Lading/Air Bill No.: 7903 7399 5440	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	P											
No. of Container(s)	1											
Volume	1000mL											
SAMPLE ANALYSIS	Pesticides - 8081 (4,4'-DDD, 4,4'-DDE, 4,4'-DDT)											
Sample No.	Matrix *	Sample Date	Sample Time									
B14CX2	OTHER SOLID	4.4.02	1315	X	Grid # 8							
B14CX3	OTHER SOLID	4.4.02	1335	X	Grid # 7							
B14CX4	OTHER SOLID	4.4.02	1405	X	Grid #37							
B14CX5	OTHER SOLID	4.4.02	1445	X	Grid #22							
B14CW1	other solid	4.4.02	1515	X	control							

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From: April Johnson	April Johnson	4.4.02 1545	R. Fahlberg / R. Fahlberg	1545 4.4.02
Relinquished By/Removed From: REF ZC		4 8 02 1300	Received By/Stored In: SJ GALE	4802 1300
Relinquished By/Removed From: ERC / SJ GALE		4802 1300	Received By/Stored In: FED EX	
Relinquished By/Removed From: fedEX		04/09/02 @ 0945	Received By/Stored In: J TRENTZ	04/09/02 @ 0945
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

Samples did not originate in radiological controlled area. No total activity associated with sample/samples.

Personnel not available to relinquish samples from the 3728 Ref # ZC on 4 18 02

R. FAHLBERG UNAVAILABLE TO RELINQUISH SAMPLES

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

BHI-EE-011 (03/01/2002)

LIONVILLE LABORATORY INCORPORATED
SAMPLE RECEIPT CHECKLIST

CLIENT: TNU Hanford

DATE: 04/09/02

Purchase Order/Project:

SAF# / SOW# / Release #: B02-003

Laboratory SDG #: 0204L355

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

1. Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
2. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
3. Airbill # recorded? 7903739 5440	☑ Yes	☐ No	☐ N/A	☐ see Comment #
4. All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid)	☑ Yes	☐ No	☐ N/A	☑ see Comment # 1
5. Sample containers are intact?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
7. All samples on coc received?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
8. All sample label information matches coc?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?)	☐ Yes	☐ No	☑ N/A	☐ see Comment #
10. Shipment meets LvLI Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	☐ N/A	☐ see Comment #
11. Where applicable, bar code labels are affixed to coc?	☐ Yes	☐ No	☑ N/A	☐ see Comment #
12. coc signed and dated?	☑ Yes	☐ No	☐ N/A	☐ see Comment #
13. coc faxed or emailed to client?	☐ Yes	☐ No	☐ N/A	☐ see Comment #
14. Project Manager/Client contacted concerning discrepancies? (name/date)	☐ Yes	☐ No	☐ N/A	☐ see Comment #

Cooler # / temp and Comments: 1 Not taped to inside of lid

ERC-02-004
3°C

Laboratory Sample Custodian: JFleury 04/09/02 @ 0945

Laboratory Project Manager:

11