



H1610

0056949

Analytical Report

Client: TNU HANFORD B02-002
LVL#: 0111L396
SDG/SAF#: H1610/B02-002

W.O.#: 11343-606-001-9999-00
Date Received: 11-20-01

RECEIVED
APR 19 2002

EDMC

PESTICIDE

The set of samples consisted of three (3) soil samples collected on 11-16-01.

The samples and their associated QC samples were extracted on 11-26-01 and analyzed according to Lionville Laboratory OPs based on SW846, 3rd Edition procedures on 12-01,04,05-01. 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. The cooler temperature has been recorded on the chain-of-custody.
2. All required holding times for extraction and analysis have been met.
3. The method blank was below the reporting limits for all target compounds.
4. One (1) of twenty-four (24) surrogate recoveries was outside QC limits; however, the surrogate recovery acceptance criteria were met (i.e., no more than one outlier per sample).
5. The blank spike recovery was within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. All samples required instrument dilutions due to the high concentrations of target analytes. Reporting limits have been adjusted to reflect the necessary dilutions.
8. All initial calibrations associated with this data set were within acceptance criteria.

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.

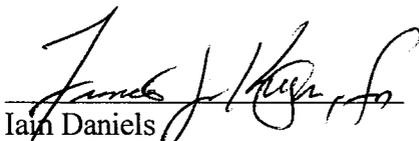
02

9. Several continuing calibration standards analyzed prior to sample extracts were outside acceptance criteria:

Standards	Analysis Date	Analysis Time	Column
4,4'-DDD	12-01-01	15:21	Both
4,4'-DDT	12-01-01	15:21	Confirmation
4,4'-DDE	12-04-01	15:22	Confirmation
4,4'-DDD	12-05-01	02:02	Confirmation
4,4'-DDE	12-05-01	02:51	Confirmation
4,4'-DDE	12-06-01	00:12	Primary

A copy of the Sample Discrepancy Report (SDR) has been enclosed.

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
Deputy Laboratory Manager
Lionville Laboratory Incorporated

12/7/01
Date

pefr:\group\data\pest\11L-396.pes

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 0167LS25

Initiator: M. Kober Batch: 0111396 Parameter: 0608X
 Date: 12/6/01 Samples: all Matrix: soil
 Client: TNO Method: SW846/MCAWW/CLP/ Prep Batch: 01E1408

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 DDD increased on both columns before samples 001, 1-MS, 1-MSD (all straight runs), (cleaned)
- ② DDT increased on confirmation column only before samples 001, 1-MS, 1-MSD, B3. Reported from primary column.
- ③ DDD and DDE increased on confirmation column only before samples 1, 1-MS, 1-MSD, B3. All hits

2. Known or Probable Causes(s)

reported from primary column.

- ① DDE decreased on primary column only before sample 002. DDE reported from confirmation column.

3. Discussion and Proposed Action

Other Description:

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

Report and narrate

4. Project Manager Instructions...signature/date: _____

Michelle Johnson 12/6/01

- 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: _____

Miche Kober 12/6/01

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
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Initiator
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Lab General Manager: <u>M. Taylor</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Project Mgr: <u>Stone/Johnson/Haslett</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Technical Mgr: <u>Wesson/Daniels</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> QA (file): <u>Alberts</u>
<input type="checkbox"/>	<input type="checkbox"/> Data Management: <u>Feldman</u>
<input type="checkbox"/>	<input type="checkbox"/> Sample Prep: <u>Beegle/Kiger</u>

Route	Distribution of Completed SDR
<input type="checkbox"/>	<input type="checkbox"/> Metals: <u>Beegle</u>
<input type="checkbox"/>	<input type="checkbox"/> Inorganic: <u>Perrone</u>
<input type="checkbox"/>	<input type="checkbox"/> GC/LC: <u>Kiger</u>
<input type="checkbox"/>	<input type="checkbox"/> MS: <u>Rychlak/Layman</u>
<input type="checkbox"/>	<input type="checkbox"/> Log-in: <u>Keppel</u>
<input type="checkbox"/>	<input type="checkbox"/> Admin: <u>Soos</u>
<input type="checkbox"/>	<input type="checkbox"/> Other: _____



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.



GLOSSARY OF PESTICIDE/PCB DATA

- 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 1 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.

RFW Batch Number: 0111L396

Cust ID:	B13945	B13945	B13945	B13945	B13945	B13945	B13945	B13945	B13945
Sample Information:	RFW#: 001	001 DL	001 MS	001 MSD	002	002 DL	Matrix: SOIL	SOIL	SOIL
	D.F.: 1.00	20.0	1.00	1.00	20.0	200	Units: ug/Kg	ug/Kg	ug/Kg

Surrogate:	Decachlorobiphenyl	122	%	D	%	121	%	124	%	D	%
	Tetrachloro-m-xylene	112	%	D	%	112	%	115	%	D	%
4,4'-DDE		E		140		E		E		E	1200
4,4'-DDD		3.5	U	NA		7.0	U	7.0	U	70	U
4,4'-DDT		32		NA		117	%	123	%	140	NA

Sample Information:	RFW#: 003	003 DL	011E1408-MB1	011E1408-MB1	Matrix: SOIL	SOIL	SOIL	SOIL
	D.F.: 1.00	20.0	1.00	1.00	Units: ug/Kg	ug/Kg	ug/Kg	ug/Kg

Surrogate:	Decachlorobiphenyl	120	%	D	%	117	%	119	%
	Tetrachloro-m-xylene	115	%	D	%	115	%	115	%
4,4'-DDE		E		630		3.3	U	3.3	U
4,4'-DDD		72	I	NA		3.3	U	3.3	U
4,4'-DDT		E		200		3.3	U	118	%

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

Handwritten signature

0111L396



Client TRU - HANFORD SAF B02.002

Est. Final Proj. Sampling Date _____

Project # 11343-606-001-9999-00

Project Contact/Phone # _____

Lionville Laboratory Project Manager _____

QC SPEC Del STD TAT 30 day

Date Rec'd 11-20-01 Date Due (12-20-01)

#/Type Container	Refrigerator #	Volume	Preservatives	ANALYSES REQUESTED	ORGANIC		METAL		
					VOA	BNA	Pes/ PCB	Herb	INORG
Liquid	2								
Solid									
Liquid									
Solid									

MATRIX CODES:	Lab ID	Client ID/Description	Matrix Chosen (✓)	Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only	
							MS	MSD
S - Soil	001	B13945			5	11/6/01	1133	
SE - Sediment	002	KN3				1205	1	
SO - Solid	003	L KN7				1238	1	
SL - Sludge								
W - Water								
O - Oil								
A - Air								
DS - Drum								
DL - Drum								
L - Liquids								
EP/TC/CP								
Leachate								
WI - Wipe								
X - Other								
F - Fish								

Special Instructions: SAF # B02-002

Run Matrix QC

DATE/REVISIONS: 0600X 1. 4.4-DDD, 4.4-DDC, 4.4-DDT

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

Relinquished by	Received by	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	11/20/01	1000

Relinquished by	Received by	Date	Time

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

Lionville Laboratory Use Only

Samples were: ✓ or _____
 1) Shipped _____ or _____
 Hand Delivered _____
 Aisle # 515/516

2) Ambient or Shielded
 Condition ✓ or N

3) Received in Good Condition ✓ or N

4) Samples Properly Preserved ✓ or N

5) Received Within Holding Times ✓ or N

Tamper Resistant Seal was: _____
 1) Present ✓ or N
 Package _____
 2) Unbroken on Outer Package ✓ or N
 3) Present on Sample ✓ or N

4) Unbroken on Sample ✓ or N

COC Record Present Upon Sample Recl ✓ or N
 Cooler Temp. 41.8 °C

COMPOSITE ORIGINAL
 WASTE REWRITTEN

0111-076

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B02-002-12 Page 1 of 1
Data Turnaround
45 Days

Collector: **Fahberg/Watson**
Company Contact: **W Ransen**
Telephone No.: **372-9086**
Project Coordinator: **TRENT SJ**
Price Code: **8N**

Project Designation: **Horseshoe Landfill Residual Pesticide Sampling - Soil**
Sampling Location: **Horseshoe Landfill Residual Pesticide - Soil**
SAF No.: **B02-002**
Air Quality:

Ice Chest No.: **ERA-01-018**
Field Logbook No.: **EL 1517-2**
COA: **R601162000**
Method of Shipment: **Fed EX**

Shipped To: **TM/REGRA**
Onsite Property No.: **RT-11-19-01**
Bill of Lading/Air Bill No.: **42557954-9118**

POSSIBLE SAMPLE HAZARD/REMARKS
Samples are not originate in radiological controlled area. No total activity associated with sample/samples.
RT-11-19-01
Special Handling and/or Storage

Preservation	Cool JC	Type of Container	No. of Container(s)	Volume	Pesticides: 8081 (4,4'-DDD, 4,4'-DDE, 4,4'-DDT)
				120mL	

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time																
B13944	SOIL	11-16-01	1130	X	RT-11-19-01														
B13945	SOIL	11-16-01	1133	X															
B13946	SOIL	11-16-01	1137	X															
B13947	SOIL	11-16-01	1143	X	RT-11-19-01														
B13948	SOIL	11-16-01	1200	X															

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	Signature/Print Names	Date/Time	
RT-11-19-01	11-16-01	Ref 2.c	11-16-01	1400		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time			
RT-11-19-01	11-14-01	RT-11-19-01	1300			
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time			
RT-11-19-01	11-20-01	RT-11-19-01	1000			
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time			
RT-11-19-01	11-20-01	RT-11-19-01	1000			
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time			

SPECIAL INSTRUCTIONS

SAMPLES STORED IN REF.#22 AT THE 3728 SHIPPING FACILITY ON 11/16/01. COLLECTOR NOT AVAILABLE TO RELINQUISH SAMPLES ON 11/19/01 FOR SHIPMENT.
RT-11-19-01

LABORATORY SECTION: Received By: _____ Date/Time: _____
FINAL SAMPLE DISPOSITION: Disposal Method: _____ Date/Time: _____

Collector: Fahlberg/Watson Company Contact: W Kamsen Telephone No.: 372-9086 Project Coordinator: TRENT, SJ Price Code: 8N Data Turnaround: 45 Days

Project Designation: Horseshoe Landfill Residual Pesticide Sampling - Soil Sampling Location: Horseshoe Landfill SAF No.: B02-002 Method of Shipment: Federal Express Air Quality:

Site Chest No.: CPA-01-018 Field Logbook No.: EL 1517-2 COA: R60162000 Bill of Lading/Trailer Bill No.: 42387954-9118

Shipped To: TMA/RECRA Offsite Property No.: A0200034

POSSIBLE SAMPLE HAZARDS/REMARKS
 Samples did not originate in radiological controlled area. No total activity associated with sample/samples.
 Specimen containing unknown source RT 11-19-01

Preservation	Cool Ice
Type of Container	ag
No. of Container(s)	1
Volume	120ml

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Pesticides - 8081 144- DDD 44- DDE 44- DDT1
B13KN7	SOIL	11.16.01	1238	X
B13KN8	SOIL	11.16.01	1243	RT 11-19-01
B13KN9	SOIL	11.16.01	1245	
B13KN0	SOIL			

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	Sign/Print Names
Relinquished By/Removed From	11.16.01 1400	Received By/Stored In	11.16.01 1400	ROSE 2-C
Relinquished By/Removed From	11.16.01 1300	Received By/Stored In	11.16.01 1300	ROSE 2-C
Relinquished By/Removed From	11.16.01 1300	Received By/Stored In	11.16.01 1300	ROSE 2-C
Relinquished By/Removed From	11.16.01 1300	Received By/Stored In	11.16.01 1300	ROSE 2-C
Relinquished By/Removed From	11.16.01 1300	Received By/Stored In	11.16.01 1300	ROSE 2-C

SPECIAL INSTRUCTIONS

Samples stored in Ref.# 24 at the 3728 Shipping Facility on 11/16/01. Collector not available to relinquish samples on 11/19/01 for shipment. RT 11-19-01

LABORATORY SECTION Received By: _____ Date/Time: _____

FINAL SAMPLE DISPOSITION Disposal Method: _____ Date/Time: _____

BH-EE-011 (10/99) Disposed By: _____

Figure 1. Sample Check-in List

Date/Time Received: 11/20/01 1000

SDG#: 0111L396

Work Order Number: _____

SAF# B02-002

Shipping Container ID: ERC-01-018

Chain of Custody # B02-002-12

1. Custody Seals on shipping container intact? Yes No

2. Custody Seals dated and signed? Yes No

3. Chain-of-Custody record present? Yes No

4. Cooler temperature _____

5. Vermiculite/packing materials is Wet Dry

6. Number of samples in shipping container: _____

7. Sample holding times exceeded? Yes No

8. Samples have:
_____ tape _____ hazard labels
 custody seals _____ appropriate sample labels

9. Samples are:
 in good condition _____ leaking
_____ broken _____ have air bubbles

10. Were any anomalies identified in sample receipt? Yes No

11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: *Peter Albertson*
Louisville Laboratory Incorporated Date: 11/20/01

Telephoned to: _____ On _____ By _____