

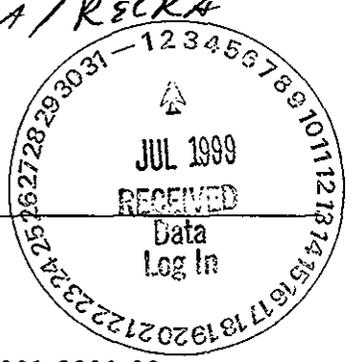


a division of Recra Environmental, Inc.

Virtual Laboratories Everywhere

H0423-TMA/RECRA

0051665



**Recra LabNet Philadelphia
Analytical Report**

Client: TNU-HANFORDB99-057
RFW#: 9905L091
SDG/SAF#: H0423/B99-057

W.O.#: 10985-001-001-9999-00
Date Received: 05-27-99

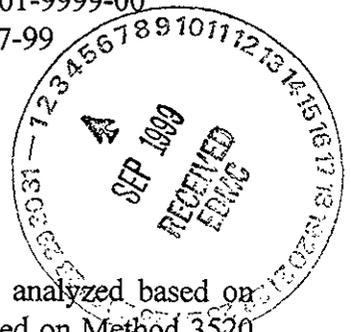
PESTICIDE

The set of samples consisted of three (3) water samples collected on 04-19-99.

The samples and their associated QC samples were extracted on 06-10-99 and analyzed based on SW846, 3rd Edition, procedures on 06-11-99. The extraction procedure was based on Method 3520 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 analysis have been met. The samples were received out of extraction hold.
3. The method blank was below the reporting limits for all target compounds.
4. All surrogate recoveries were within acceptance criteria.
5. All blank spike recoveries were within acceptance criteria.
6. Due to insufficient sample volume, matrix spike QC could not be performed on any samples in this data set. However, blank spike QC were performed with these samples to demonstrate that systems were in control. A copy of the Sample Discrepancy Report (SDR) has been enclosed.
7. All 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.



JMT
J. Michael Taylor

Vice President
Philadelphia Analytical Laboratory

06-29-99
Date

jeh\group\data\pest\05L-091 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 11 pages.

Recra LabNet Philadelphia Sample Discrepancy Report (SDR) SDR #: 99EX045

Initiator: Bernard Foley RFW Batch: 99051091091 Parameter: 0088
 Date: 6/10/99 Samples: 13 Matrix: W
 Client: TNV Method: SW846/MCAWW/CLP/ Prep Batch: 99LE0704

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

MS, MAD NOT PERFORMED

2. Known or Probable Causes(s)

Insufficient volume sent by client 100 mls

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)

4. Project Manager Instructions...signature/date: [Signature] (6-14-99)

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] 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
<u>2</u>	<input checked="" type="checkbox"/> Initiator	—	<input type="checkbox"/> Metals: Doughty
—	<input checked="" type="checkbox"/> Lab Manager: C. Stefanosky	—	<input type="checkbox"/> Inorganic: Perrone
<u>1</u>	<input checked="" type="checkbox"/> Project Mgr: <u>O. Schnitzler</u>	<input checked="" type="checkbox"/> <u>2</u>	<input checked="" type="checkbox"/> GC/LC: Rycklak/Schnell
—	<input checked="" type="checkbox"/> Section Mgr: Siery/Wesson/Daniels	—	<input type="checkbox"/> MS: LeMin/Taylor/Kasdras
—	<input checked="" type="checkbox"/> QA (file): Racioppi	—	<input type="checkbox"/> Log-in: Toder
—	<input type="checkbox"/> Data Management: Feldman	—	<input type="checkbox"/> Admin: Soos
—	<input type="checkbox"/> Sample Prep: Schnell/Doughty/Kauffman	—	<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 a pesticide/Aroclor 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.



Recra LabNet - Lionville Laboratory
PEST/PCB ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B99-057

DATE RECEIVED: 05/27/99

RFW LOT # :9905L091

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0V996	001	W	99LE0704	04/19/99	06/10/99	06/11/99
B0V997	002	W	99LE0704	04/19/99	06/10/99	06/11/99
B0V998	003	W	99LE0704	04/19/99	06/10/99	06/11/99
LAB QC:						
PBLKMA	MB1	W	99LE0704	N/A	06/10/99	06/11/99
PBLKMA	MB1 BS	W	99LE0704	N/A	06/10/99	06/11/99
PBLKMA	MB1 BSD	W	99LE0704	N/A	06/10/99	06/11/99

aw
06-17-99

Recra LabNet - Lionville Laboratory

Pesticides/PCB by GC, Special List

Report Date: 06/16/99 08:53

RFW Batch Number: 9905L091

Client: TNU-HANFORD B99-057

Work Order: 10985001001 Page: 1

906

Sample Information	Cust ID:	B0V996	B0V997	B0V998	PBLKMA	PBLKMA BS	PBLKMA BSD
RFW#:	001	002	003	99LE0704-MB1	99LE0704-MB1	99LE0704-MB1	
Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	
D.F.:	1.00	1.00	1.00	1.00	1.00	1.00	
Units:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	

Surrogate:	Decachlorobiphenyl	93 %	101 %	93 %	109 %	97 %	110 %
	Tetrachloro-m-xylene	75 %	65 %	58 %	62 %	68 %	70 %
=====fl=====							
4,4'-DDE	1.0 U	1.0 U	1.0 U	0.10 U	90 %	104 %	
4,4'-DDD	1.0 U	1.0 U	1.0 U	0.10 U	82 %	98 %	
4,4'-DDT	1.0 U	1.0 U	1.0 U	0.10 U	86 %	104 %	

gw
06-17-99

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

SAMPLE EXTRACTION RECORD

Sheet no.: 1

Extract. Date: 06/10/99

Extraction Batch No: 99LE0704

Analyst: BF

Method: CONT

Test: 0608

Cleanup Date:

Analyst:

Client: TNU-HANFORD B99-057

LIMS Report Date: 06/11/99

Solvent: DCM/HEX

Adsorbent:

Sample No:	Client Name Client ID	pH	Initial Surr. WT/VOL	Spike Mult.	Final Mult.	Final VOL	Split Mult.	GPC Y/N	% Solids	C/D FACTOR
9905L091-	TNU-HANFORD B99-057									
001 X	BOV996	7	100	1.0		10	1.0	N	0.0	100.0
002 X	BOV997	7	100	1.0		10	1.0	N	0.0	100.0
003 X	BOV998	7	100	1.0		10	1.0	N	0.0	100.0
99LE0704-MB1 X	PBLKMA	7	1000	1.0		10	1.0	N	0.0	10.0
99LE0704-MB1 XS	PBLKMA	7	1000	1.0	1.0	10	1.0	N	0.0	10.0
99LE0704-MB1 XT	PBLKMA	7	1000	1.0	1.0	10	1.0	N	0.0	10.0

Comments: NOT ENOUGH VOLUME FOR MS & MSD
 Surrogate: 100 UL 8080 PSUR 65370107 @ 4-10 UG/ML
 Spike: 500 UL DDT SERIES SPIKE

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
A11	<i>[Signature]</i>	6/11/99	<i>[Signature]</i>	6/11/99	CO2

200

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-057-01

Page 1 of 1

Collector J. Linville / <i>D Bowers</i>	Company Contact <i>Steve Weiss</i>	Telephone No.	Project Coordinator TRENT, SJ
Project Designation Biological Sampling for DDT/DDE on the North Slope - W	Sampling Location <i>3728</i>	SAF No. B99-057	Price Code Data Turnaround 45 Days
Ice Chest No. <i>L00246</i>	Field Logbook No.	Method of Shipment <i>Fed Ex</i>	
Shipped To TMA/RECRA	Offsite Property No. <i>A 990154</i>	Bill of Lading/Air Bill No. <i>4235 7952 6492</i>	
		COA <i>MEA1221P40</i>	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	Cooled to 4C							
	Special Handling and/or Storage	Type of Container	aG						
	No. of Container(s)	1							
	Volume	120mL							
SAMPLE ANALYSIS			Pest/PCBs - 8081 (4,4'-DDD, 4,4'-DDE, 4,4'-DDT)						

Sample No.	Matrix *	Sample Date	Sample Time						
B0V996	Water	<i>4-17-99</i>	<i>1600</i>	<i>X</i>					

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By <i>Debra K. J...</i>	Received By <i>Renee Nielsen / R. Nielson</i>	Sample stored in Ref 1A @ 3728 from date of collection until shipment to lab. 5/26/99 RWN	Soil Water Vapor Other Solid Other Liquid
Relinquished By <i>R. Nielson</i>	Received By <i>Fed Ex</i>		
Relinquished By <i>Fed Ex</i>	Received By <i>B. Nelson</i>		
Relinquished By	Received By		

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

600

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-057-02

Page 1 of 1

Collector J. Linville / <i>O Bowers</i>	Company Contact <i>Steve Weiss</i>	Telephone No.	Project Coordinator Trent, SJ
Project Designation Biological Sampling for DDT/DDE on the North Slope - W	Sampling Location <i>3728</i>	SAF No. B99-057	Price Code Data Turnaround 45 Days
Ice Chest No. <i>L0026</i>	Field Logbook No.	Method of Shipment <i>FedEx</i>	
Shipped To TMA/RECRA	Offsite Property No. <i>A990154</i>	Bill of Lading/Air Bill No. <i>4235 7952 6492</i>	
		COA <i>MEA1221P40...</i>	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	Cooled to 4C							
	Special Handling and/or Storage	Type of Container	σG						
	No. of Container(s)	1							
	Volume	120mL							
SAMPLE ANALYSIS		Pest/PCBs - 8081 (4,4'-DDD, 4,4'-DDE, 4,4'-DDT)							

Sample No.	Matrix *	Sample Date	Sample Time						
B0V997	Water	<i>4-19-99</i>	<i>1601</i>	<i>X</i>					

CHAIN OF POSSESSION	SPECIAL INSTRUCTIONS	Matrix *																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td><i>Denise K. Z...</i></td> <td><i>5/25/99 1600</i></td> <td><i>R. Nielson</i></td> <td><i>5/25/99 1600</i></td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td><i>R. Nielson</i></td> <td><i>5/26/99 1330</i></td> <td><i>FedEx</i></td> <td></td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Relinquished By	Date/Time	Received By	Date/Time	<i>Denise K. Z...</i>	<i>5/25/99 1600</i>	<i>R. Nielson</i>	<i>5/25/99 1600</i>	Relinquished By	Date/Time	Received By	Date/Time	<i>R. Nielson</i>	<i>5/26/99 1330</i>	<i>FedEx</i>		Relinquished By	Date/Time	Received By	Date/Time					Relinquished By	Date/Time	Received By	Date/Time					<p><i>Samples stored in Ref. 1A @ 3728 from date of collection until shipment to lab 5/26/99 R. N.</i></p>	<ul style="list-style-type: none"> Soil Water Vapor Other Solid Other Liquid
Relinquished By	Date/Time	Received By	Date/Time																															
<i>Denise K. Z...</i>	<i>5/25/99 1600</i>	<i>R. Nielson</i>	<i>5/25/99 1600</i>																															
Relinquished By	Date/Time	Received By	Date/Time																															
<i>R. Nielson</i>	<i>5/26/99 1330</i>	<i>FedEx</i>																																
Relinquished By	Date/Time	Received By	Date/Time																															
Relinquished By	Date/Time	Received By	Date/Time																															
LABORATORY SECTION	Received By	Title	Date/Time																															
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time																															

10

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-057-03

Page 1 of 1

Collector J. Linville <i>J.D. Bowers</i>	Company Contact <i>Steve Weiss</i>	Telephone No.	Project Coordinator Trent, SJ
Project Designation Biological Sampling for DDT/DDE on the North Slope - W	Sampling Location <i>3728</i>	SAF No. B99-057	Price Code Data Turnaround 45 Days
Ice Chest No. <i>L0026</i>	Field Logbook No.	Method of Shipment <i>Fed Ex</i>	
Shipped To TMA/ECRA	Offsite Property No. <i>A990154</i>	Bill of Lading/Air Bill No. <i>4235 7952 6492</i>	
COA			

POSSIBLE SAMPLE HAZARDS/REMARKS Special Handling and/or Storage	Preservation	Cooled to 4C							
	Type of Container	aG							
	No. of Container(s)	1							
	Volume	120mL							

SAMPLE ANALYSIS	Pest/PCBs - 8081 (4,4'- DDD, 4,4'- DDE, 4,4'- DDT)								
------------------------	--	--	--	--	--	--	--	--	--

Sample No.	Matrix *	Sample Date	Sample Time										
B0V998	Water	<i>4-19-99</i>	<i>1602</i>	<i>X</i>									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By <i>Quinn K. Jew</i>	Date/Time <i>5/25/99 1600</i>	Received By <i>R. Nielson</i>	Date/Time <i>5/25/99 1600</i>
Relinquished By <i>R. Nielson</i>	Date/Time <i>5/26/99 1330</i>	Received By <i>FedEx</i>	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Samples stored in Ref 1A @ 3728 Bldg. from sample

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

011