Sheet 4 of 2
JUL 30 1998

ENGINEERING DATA TRANSMITTAL

Page 1 of 1
1. EDT 623162

2. To: (Receiving Organization) Distribution		3. From: (Originating Organization) 222-S Facility Planning		4. Related EDT No.: N/A	
5. Proj./Prog./Dept./Div.: Tank 100/Waste Management/FP/HALO		6. Design Authority/ Design Agent/Cog. Engr.: R. Keith Fuller		7. Purchase Order No.: N/A	
8. Originator Remarks: This document is being released into the supporting document system for retrievability puposes.				9. Equip./Component No.: N/A	
11. Receiver Remarks: For release.				10. System/Bldg./Facility: Tank 100	
				12. Major Assm. Dwg. No.: N/A	
				13. Permit/Permit Application No.: N/A	
				14. Required Response Date: 07/29/98	

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	HNF-SD-WM-DP-309	N/A	0	Final Report for Tank 100 Sump Sludge (KON332) for Polychlorinated Biphenyl's (PCB)	Q	2	1	1

16. KEY							
Approval Designator (F)		Reason for Transmittal (G)			Disposition (H) & (I)		
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)		1. Approval	4. Review		1. Approved	4. Reviewed no/comment	
		2. Release	5. Post-Review		2. Approved w/comment	5. Reviewed w/comment	
		3. Information	6. Dist. (Receipt Acknow. Required)		3. Disapproved w/comment	6. Receipt acknowledged	

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
		Design Authority									
		Design Agent									
2	1	Cog. Eng. R. K. Fuller	<i>Keith Fuller</i>	7/29/98							
2	1	Cog. Mgr. D. B. Hardy	<i>D. B. Hardy</i>	7/29/98							
2	1	QA T. L. Tung	<i>T. L. Tung</i>	7/29/98							
		Safety									
		Env.									

18. M. T. Ellsworth <i>M. T. Ellsworth</i> Signature of EDT Date 7/29/98 Originator		19. N/A Authorized Representative Date for Receiving Organization		20. D. B. Hardy <i>D. B. Hardy</i> Design Authority/ Date Cognizant Manager		21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments	
--	--	--	--	--	--	---	--

Final Report for Tank 100 Sump Sludge (KON332) for Polychlorinated Biphenyl's (PCB)

R. Keith Fuller

Waste Management of Hanford, Inc., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

EDT/ECN: EDT-623162 UC: 2070
Org Code: 31132 Charge Code: KNOEO
B&R Code: EW 3120074 Total Pages: 164

Key Words: Final Report, Tank 100, 100, Sump, Sludge, KON332,
Polychlorinated Biphenyls, PCB

Abstract: N/A

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

Printed in the United States of America. To obtain copies of this document, contact: Document Control Services, P.O. Box 950, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420; Fax (509) 376-4989.

Karl J. Bior
Release Approval

7/30/98
Date

Approved for Public Release

HNF-SD-WM-DP-309, REV. 0

HANFORD ANALYTICAL LABORATORY OPERATIONS

**FINAL REPORT FOR
TANK 100 SUMP SLUDGE (KON332)
FOR POLYCHLORINATED BIPHENYL'S (PCB)**

Project Coordinator: R. Keith Fuller

**Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management**

by

**222-S Laboratory
Waste Management of Hanford, Inc.
P.O. Box 700
Richland, Washington**

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

Introduction (Attachment 1)	1
Narrative and Data Summary (Attachment 2)	4
Sample Breakdown Diagrams (Attachment 3)	15
Chain of Custody and Request for Sample Analysis (Attachment 4)	18
222-S Extraction Bench Sheet (Attachment 5)	22
PCB Raw Data (Attachment 6)	25
This document consists of pages 1 through 160. Pages ii, 2, 5, 16, 19, 23 and 26 were intentionally left blank.	

ATTACHMENT 1

INTRODUCTION

HNF-SD-WM-DP-309, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

Final Report for Tank 100 Sump Sludge (KON332) for Polychlorinated Biphenyl's
(PCB)

Sample Receipt

Sample KON332 was received from Tank 100-Sump (WESF) on May 18, 1998. The laboratory number issued for this sample is S98B000207 as shown on the Request for Sample Analysis (RSA) form (Attachment 4).

The sample breakdown diagram (Attachment 3) provides a cross-reference of customer sample identification to the laboratory identification number. Attachment 4 provides copies of the Request for Sample Analysis (RSA) and Chain of Custody (COC) forms.

Sample Description, Handling, and Preparation

- The sample was received in the laboratory in a 125-ml polybottle. Breakdown and subsampling was performed on June 6, 1998.

Analytical Results

Polychlorinated Biphenyl (PCB)

PCB analysis was performed on the wet sludge. The laboratory sample number for the wet sludge is S98B000220. A discussion of the results is presented in Attachment 2. The 222-S extraction bench sheets are presented in Attachment 5. The PCB raw data is presented in Attachment 6.

ATTACHMENT 2

NARRATIVE AND DATA SUMMARY

THIS PAGE INTENTIONALLY LEFT BLANK

POLYCHLORINATED BIPHENYLS (PCB) ANALYSIS REPORT
FOR SOLID SAMPLE FROM WESF TANK 100 SUMP

222-S Laboratory
July 1998

submitted by

GA Ross

Waste Management Federal Services of Hanford

POLYCHLORINATED BIPHENYLS (PCB) ANALYSIS REPORT
FOR SOLID SAMPLE FROM WESF TANK 100 SUMP

SAMPLE ANALYSIS REPORTED

One waste sample with centrifuged solids was obtained from the 222-S Hot Cells. The sample was received in a plastic bottle from the Waste Encapsulation and Storage Facility (WESF) and centrifuged. The centrifuged solid was then obtained from the hot cell in a glass jar with Teflon¹ lid, was analyzed (with duplicate, matrix spike, matrix spike duplicate, method blank and laboratory control sample) for PCBs as Aroclor² mixtures by the Direct Analysis Team. A soxhlet extraction procedure was used to extract the Aroclors from the sample. Analysis was performed using dual column confirmation gas chromatography/ electron capture detection (GC/ECD). Extraction closely follows SW-846 method 3540C, and the analysis follows SW-846 method 8082.

SAMPLE DESCRIPTION, HANDLING, AND PREPARATION

The sample was received in a plastic bottle and introduced to the 222-S Hotcells. The solids of the sample were collected by centrifugation and transferred to a glass wide-mouth jar with Teflon lid. This sample, S98B000220, consisting of centrifuged solids from a jar of TK-100 sludge, was analyzed and reported on a post centrifugation basis. The sample was grey in color and had the consistency of putty. After one minute of shaking and one minute of stirring, four 1-gram aliquots were taken from the parent sample jar for analysis. Extraction of the samples were started on June 15, 1998 in a radiological fume hood. Due to duplicate and other QC failures with the first set of extractions, extraction of four 2-2.5 gram aliquots of the sample was started on June 19, 1998. The results of the second set of sample extractions are reported here.

Preparation Procedure: LA-523-138 Rev. A2, Soxhlet Extraction of Solid Samples for Semivolatile and/or Pesticide and/or PCB Analysis, Waste Management Federal Services of Hanford, Inc. for Fluor Daniel Hanford, Inc., Richland, Washington.

Preparation Location: Room 4P, 222-S Laboratory, 200W Area, Hanford Site

Preparation Type: Soxhlet Extraction using methylene chloride, Kuderna-Danish concentration with solvent exchange to hexane and cleanup by sulfuric acid.

Sample Extract Storage: 4 degrees Celsius in darkness

¹ Teflon is a trademark of E.I. duPont de Nemours & Company, Incorporated.

² Aroclor is a trademark of the Monsanto Company

ANALYSIS METHOD

GC/ECD Procedure: LA-523-136 Rev. A1, Gas Chromatograph Analysis of Pesticides and PCBs - SW-846, Waste Management Federal Services of Hanford, Inc. for Fluor Daniel Hanford, Inc., Richland, Washington.

GC/ECD instrumentation: HP-5890 Series II gas chromatograph with dual on-column injection, XTI-5 and DB-608 columns, and dual electron capture (EC) Detectors, (property number WC 44940).

Location: Room 4TUV, 222-S Laboratory

Due to the high concentrations of PCBs present, the extracts were analyzed on May 30, 1998 with a dilution. The (100X) dilution of the sample and sample duplicate was accomplished by diluting 10.0 μ L of the extract with 990 μ L of hexane. The laboratory control sample, matrix spike and matrix spike duplicate were accomplished by adding 200-400 μ L of 40 μ g/mL Aroclor 1254 standard before dilution.

QUALITY CONTROL

Due to radiological issues the extraction portion of the procedure was scaled down from SW-846 method 3540C. Appendix A of LA-523-138 details the deviations to method 3540C that are contained in the procedure. The analysis follows SW-846 method 8082. Deviations from method 8082 are detailed in appendix D of LA-523-136. Nominally, two grams of sample was extracted per analytical result.

For the initial calibration, five point calibrations were run for the following Aroclors: 1016, 1221, 1248, 1254, and 1260. Concentration ranges went from 20 to 400 ng/mL, or 40 to 800 ng/mL for 1221. Three point calibrations were performed for Aroclors 1232, and 1242. The sample analysis was bracketed with mid-level Aroclor 1254 and Aroclor 1221 standards. An instrument blank, method blank and LCS were analyzed during the sequence of sample analysis. A trip blank was not received with the sample.

Quantitation was performed using LA-523-136 option 1 (three peak) for Aroclors. A primary column and the secondary column was used to confirm identification. A detailed description of the specific procedural requirements is available in the analytical procedure LA-523-136. Laboratory bench sheets, data, chromatograms, and reports are maintained in room 25, 2704-S at the 222-S Laboratory. The initial calibration information and data is located in the attached initial calibration report or on the HP UNIX computer system, Chemsys1.

Table I summarizes the QC requirements and adherence.

Table I.

QC Parameter	Comments
Target Compounds	Detection levels are based on sample size and the determination of Method Detection Limits (MDLs) from multiple injections of a low standard. Requirements were met.
Surrogate Recoveries	Surrogate spiking was performed on all samples using Tetrachloro-m-xylene (TCX) and Decachlorobiphenyl (DCB). A summary of the surrogate recoveries is provided in Table II. A high outside bias was observed for DCB due to coelution of a peak that precedes the DCB in the sample chromatograms. All of the primary surrogate (TCX) recoveries were acceptable (see discussion).
Matrix Spike Recovery	A matrix spike (MS) and matrix spike duplicate (MSD) using Aroclor 1254 was performed. MS/MSD recoveries were 51.1%, and 78.4% which is acceptable (see Table III).
Method Blank Summary	A method blank was extracted and met requirements.
Initial Method Detection Limit Determination	Multiple extraction and analysis of a low concentration standard. Requirements were met. (For 2g sample the MDL for Aroclor 1248 = 3.71 ug/kg, documented in files).
Initial Calibration	Five point Aroclor calibrations for 1016, 1248, 1254, and 1260 were performed on 5/21/98 at 20ng/mL to 400ng/mL, and three point calibrations were performed for Aroclors 1232, and 1242 at 100 ng/mL to 400ng/mL. The 1221 5-point was calibrated on 6/22/98 at 40-800 ng/mL.
Carry-over evaluation	An instrument blank was run after the calibration standards. No PCB carry-over was detected. Met requirements.
Continuing Calibration Verifications (CCV)	Aroclor 1254 was used to assess instrument performance before and after the samples were analyzed on it. The value found for the .200ng Aroclor 1254 standard before the samples was .22248ng. This is 111% of the amount, and is within the 15% (Deviation) acceptable. The other 1254 CCVs were 107%, 112%, 100%, and 114%. The 1221 CCVs during and after samples was 104%, and 108%, respectively. CCVs were acceptable.
Laboratory Control Sample	A blank matrix spike blank was used as a Laboratory Control Sample to assess method performance. This contained Aroclor 1254. Recovery was 88%, and met requirements of 70-130%.

RESULTS / DISCUSSION

The Aroclors 1221 and 1254 were observed in the sample at high concentrations. such that a dilution was necessary to bring the amounts on column within the calibration curve. After careful comparison, it was noted that the Aroclors 1221, and 1254 were present in the samples. Aroclor 1221 is the predominant pattern. The amounts are reported per three peak quantitation in the attached result summary forms.

The PCBs were quantified in sample S98B000220, on an as received, post centrifugation basis. The Aroclor 1221 (25.4 mg/Kg), and Aroclor 1254 (8.43 mg/Kg) were observed in the sample. The highest total of PCBs identified in the sample was 34 mg/Kg. The duplicate and average result in Table IV is for reference. The peak at 10.8 minutes, which is Biphenyl, was not used for quantitation purposes, because it did not match the expected pattern ratio for 1221. There was a high bias noted for that non-PCB peak of Biphenyl observed, perhaps due to coelution. The peaks at 13.28, 13.67, and 13.83 minutes were used for quantitation of the 1221 present in the sample.

The Laboratory Control Spike (LCS) recovery was good. The Aroclor mixture of 1254 was used as an LCS, and was recovered at 88%.

Surrogate spiking was performed on all samples using Tetrachloro-m-xylene (TCX) and Decachlorobiphenyl (DCB). and is summarized in Table II for the instrument blank, method blank, LCS, sample, duplicate, MS and MSD. According to U.S. Environmental Protection Agency advisory limits, set at 50-150%, surrogate recoveries for these samples are acceptable. We are in the process of implementing surrogate control limits. Tentative control limits based on sample data that has been reported from this lab are 39-148% for TCX, and 43-163% for DCB. Surrogate concentrations were determined by the 5-point (1254) calibration on 5-21-98.

Table II.
SURROGATE RECOVERIES (%)

Sample	TCX (%)	DCB (%)
Instrument Blank	92	100
Method Blank	66	90
LCS	70	97
S98B000220/100	93	194*
S98B000220D/100	107	175*
S98B000220MS/300	94	183*
S98B000220MSD/300	94	158*

* surrogate outside surrogate advisory limits of 50-150%.

Table III.
SPIKE RECOVERIES (%)

Sample	Aroclor 1254 (%)
S98B000220MS	51.1
S98B000220MSD	78.4
RPD	42.2

MS/MSD EPA advisory limits of 50-150%

Table IV.
AROCLOR RESULTS

AROCLOR	S98B000220 (ug/g)	S98B000220Dup (ug/g)
TOTAL	33.8	22.3
	AVG 28	RPD 41

File:C:\wpdata\ross\PCBtk100.gar

ANALYST PA Ron DATE 7-20-98 REVIEWER JL Hansen DATE 7/23/98

Appendix A
Comparison to SW-846

Method 3540C, *Soxhlet Extraction*, Revision 3, December 1996

SW-846 States:	Procedure States:	Type of Change:	Reason for Change:
Section 7.2: Use 5 to 10 grams of sample	Step 9.5: Use 1 to 10 grams of sample	Deviation- allows scale down of the sample and spike additions appropriately (cut by approximately 1/4)	Due to limited amounts of samples, waste minimization and ALARA concerns, smaller amounts of sample may need to be used.
Section 7.4: Use 300 mL solvent	Step 9.5: Use 90 mL solvent.	Deviation- scale down of the sample, solvent, and spike additions appropriately (cut by approximately 1/4)	See above. This also reduces the amount of methylene chloride evaporated up the hood.
Section 7.4: Use 500 mL round flask.	Step 9.11: Use 125 mL round flask with flat bottom.	Deviation	Smaller flasks provide efficient extraction in limited hood space.
Section 7.10: Add approximately 50 mL exchange solvent once.	Steps 9.16.1 - 9.16.2: Add 30 mL of hexane three times	Deviation	Repeating process efficiently removes first solvent residue.
Section 7.12.2: Place the concentrator tube in a warm bath (35 °C) and evaporate to 0.5 mL...	9.25.1: Place the tube in the Reacti-vap evaporator assembly, with the heating module preheated to 40 °C... semivolatiles are collected when the MeCl_2 level reaches 2 mL.	Substitution	Heat transfer is done with a heating block instead of a bath, temperature differences are nominal. A final volume of 2 mL was necessary to prevent losses.

Procedure No.

LA-523-138

Rev Mod

A-2

Page

19 of 23

Appendix D Comparison to SW-846⁸

Method 8082, Revision 0, December 1996, *Polychlorinated Biphenyls (PCBs) By Gas Chromatography*

SW-846 States:	Procedure States:	Type of Change:	Reason for Change:
Table 3 or Step 2.5: (GC Operating Conditions or summary) Injection volume: 2 μ L (with a 0.54 mm id. megabore column), or Step 7.4.5 A 2- μ L injection of each calibration standard is recommended. Other injection volumes may be used if the analyst can demonstrate adequate sensitivity for the compounds.	Step 10.1: Gas Chromatograph Operating Conditions - Injection Volume: 1 μ L	Substitution	Smaller injection needed for mid-bore column (0.32 mm id). Otherwise injection of oil sample extracts will compromise the system. The "Suggested" calibration levels of 100, 150, 200, 400, and 600 ng/mL extends above the linear calibration range for a 1 μ L injection. Hence the calibration levels selected are at 20, 50, 100, 200, and 400 ng/mL.
Step 5.5: Stock standard solutions (1000 mg/L)	Step 4.1.2: ...the QC reference sample concentrate should contain the most representative multicomponent parameter at a concentration of 50 mg/L. (In fact, 40 mg/L Standards custom made by Restek are used so that the threshold limit of 50 PPM will not be met or exceeded.)	Deviation- scale down of the spike additions appropriately (cut by approximately 1/100).	TSCA Regulation concerns, waste minimization, otherwise all spiked matrices must be isolated and treated as mixed regulated waste without a disposal path. Also, the level of QC spike suggested is above the calibration levels of the GC.
Section 8.3.1: A 1 mL volume of the (QC) concentrate spiked into 1 L of organic free water will result in a sample concentration of 10-50 μ g/L.	See step 9.1.5.2 of LA-523-115: If not, add the water diluent first, so the sample plus diluent equals 100 mL.	Deviation	Custom semi-micro liquid-liquid extractor used in LA-523-115 requires less volume (ca. 100 mL) ALARA concerns and limited sample and hood size make smaller extraction vessel a necessity.
8081A and 8082 are separate methods.	8081A and 8082 have been combined.	Two methods combined.	Sulfuric acid cleanup limits pesticide applicability. Acid cleanup rarely used for pesticides.

⁸NOTE: See LA-523-115 and LA-523-138 for sample preparation comparisons.

Procedure No.	Rev Mod	Page
LA-523-136	A-1	39 of 39

ATTACHMENT 3

SAMPLE BREAKDOWN DIAGRAMS

THIS PAGE INTENTIONALLY LEFT BLANK

Tank 100 Sump Samples

ATTACHMENT 4

CHAIN OF CUSTODY AND REQUEST FOR SAMPLE ANALYSIS

THIS PAGE INTENTIONALLY LEFT BLANK

Waste Management Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R98-061-1

Page 1 of 1

Collector Hogan, J.G.		Company Contact Simmons, F.M.		Telephone No. 372-0413		Project Coordinator Pool, KN		Data Turnaround 45 Days	
Project Designation Tank 100 - Sump Sludge		Sampling Location Tank 100, WESF		SAF No. R98-061					
Ice Chest No. N/A		Field Logbook No. WM-SML-H13		Method of Shipment Govt. Truck					
Shipped To 222-S Lab Operations		Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS RADIOACTIVE		Preservation		None					
		Type of Container		P					
		No. of Container(s)		1					
Special Handling and/or Storage		Volume		125ml					
SAMPLE ANALYSIS				EPAS082 - PCBs					
Sample No.	Matrix *	Sample Date	Sample Time						
KON332	Other Solid	5-14-98	1915	K					
CHAIN OF POSSESSION		Sign/Print Names			SPECIAL INSTRUCTIONS				
Relinquished By		Date/Time	Received By		Standards Deliverable due 45 Days after receipt - Submit to Sandy Walls.				
J. Hogan		5-18-98	S. Knight		*****222-S: PCB result to be shown as Total for all Analytes. Laboratory will use the procedure that references this EPA method.*****				
Relinquished By		Date/Time	Received By		Matrix *				
					S - Soil				
					SE - Sediment				
					SD - Solid				
					SL - Sludge				
					W - Water				
					O - Oil				
					A - Air				
					DS - Dross Solids				
					DL - Drum Liquids				
					T - Tissue				
					WI - Wipe				
					L - Liquid				
					V - Vegetation				
					X - Other				
LABORATORY SECTION		Received By			Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method			Disposed By				
					Date/Time				

0002

20

05/21/13 06:29 FAX

REQUEST FOR SAMPLE ANALYSIS (RSA)

Group ID No. (For lab use only)

98000322

1. Sample Origin Tank 100, WESF		2. Date Sampled 5/14/98		4. Requestor's Name Simmons, F.M.		6. TPCN KN0E0		7. Org. Code 03E00	
Customer/Project Code		3. Submitted By Hogan, J.G.			5. Requestor's Phone/MSIN/FAX 2-0413 S6-60				
8. Customer ID No.	9. Laboratory Sample No.	10. Volume of Sample	11. Matrix of Sample	12. Requested Analyses				13. Expected Range	
KON331	598B000206	125ml	Other	Gross Alpha/Beta, Gamma Spec., Sr-89				/90, Sr-90	
KON332	598B000207	125ml	Other	PCBs					
KON335	598B000208	(2)125	ml Wat	er Gross Alpha/Beta, Gamma Spec, Sr-				89/90, Sr-90	

14. Does sample have a MSDS?

☐ Yes HEHF assigned MSDS No. _____☒ No Description of process that produced waste/sample:

Low Level Liquid Waste from WESF

15. Is this sample RCRA listed? ☐ Yes ☒ No

Applicable Listed Waste Codes:

☐ Yes ☐ No P Codes: (list) _____

☐ Yes ☐ No U Codes: (list) _____

☐ Yes ☒ No K Codes: (list) _____

☐ Yes ☐ No F Codes: (list) _____

Applicable Characteristic Codes:

☐ Yes ☐ No D001: (how determined) _____ Ignitable

☐ Yes ☐ No D002: (how determined) _____ Corrosive

☐ Yes ☐ No D003: (how determined) _____ Reactive

☐ Yes ☐ No Toxic: (list codes) _____

PCB: Does this waste/sample contain PCBs?

☐ Yes Over 500 ppm

☐ Yes Over 50 ppm

☒ Yes PCBs are suspected

☐ No PCBs are suspected

If YES, what is the source of the PCBs?

☐ Transformer, capacitor, or ballast

☐ Other, specify _____

☒ Unknown

16. Sample Disposition

☐ Return to Customer

☒ Samples found to contain PCBs will be returned to the customer

☐ Dispose of per facility procedures with applied charges for analyses and disposal

Sample(s) Dose Rate at Contact

7 mSv/hr

HPT Signature: *[Signature]*

17. QC Required ☒ Per 222-S Laboratory Quality Assurance Plan (HNF-SD-CP-QAPP-016)☐ Other (list reference document or attach) _____

18. Special Instructions (Special Storage Requirements, Reporting format, holding times, etc.)

S.A.F.#s R98-060, R98-061, R98-063

19. Requested Turnaround Time

☐ 2 Weeks ☐ 4 Weeks

☐ Other See SAF

20. Sample Received By:

[Signature]

Date: 5/18/98

Time: 10:40

21. Chain of Custody

☐ No ☒ Yes

Number: 060-1,061-1,063-1

HNF-SD-WM-DP-309, REV. 0

ATTACHMENT 5

222-S EXTRACTION BENCH SHEET

THIS PAGE INTENTIONALLY LEFT BLANK

PROJECT: TK-100

FILE LOCATION:	EXTRACTION PROCEDURE:	ANALYSIS PROCEDURE:
WORK PKG./R NUMBER	EXTRACTION ANALYST:	INSTRUMENTAL ANALYST:
MATRIX:	DATE/SYSTEM:	DATE/SYSTEM:

No. 504

SAMPLE NUMBER	WEIGHT VOLUME	BAR CODE #		FINAL SOLVENT	FINAL VOLUME
S98B000220	1.452	123/124		HEXANE	2 ml.
DUP	1.333	125/126			
SAKE	1.165	127/128			
✓ S98B000220	1.038	129/130	Bright yellow before ACID WASH		
LCS	N/A	131/132			
BLANK	N/A	133/134			
CKLT. 2.117	1.999	OK	6-19-98 MAR +100A SURF		
S98B000220	2.242	135/136	started 8 p.m. 6-19-98		2ml
S98B000220	2.549	137/138	"		
" MS	1.250	139/140	" + 400A A1254		
" ASD	1.800	141/142	" + 400A A1254		

SURR. NAME	VOLUME (uL)	ID NUMBER	CONC.	MATRIX SPIKE NAME	VOLUME (uL)	ID NUMBER	CONC.
TEX DIB	100 uL	A01057	40 ppm	Ar-1254	200 uL	A010455	40 ppm

ANALYSIS VOLUME OF EXTRACT USED	INTERNAL STANDARD SUPPLIER	VOLUME ADDED (uL)	ID NUMBER LOT NUMBER	CONC. INITIAL	CONC. FINAL

ATTACHMENT 6

PCB RAW DATA

THIS PAGE INTENTIONALLY LEFT BLANK

Sequence Table

Inj.	Seq.	Cal.	Method	From	To	Inj/
FRONT	Line	Line	Name	Vial	Vial	Vial
	1		PCB-FRNT	1	1	3
	2		PCB-FRNT	2	2	2
	3		PCB-FRNT	3	12	1
	4		PCB-FRNT	12	16	1
	5		PCB-FRNT	13	13	1
	6		PCB-FRNT	17	17	1
	7		PCB-FRNT	13	13	1
	8		PCB-FRNT	18	18	1
	9		PCB-FRNT	13	13	1
	10		PCB-FRNT	19	19	1
	11		PCB-FRNT	13	13	1
	12		PCB-FRNT	20	22	1
	13		PCB-FRNT	22	27	1
	14		PCB-FRNT	27	29	1

HNF-SD-WM-DP-309 REV. 0

REAR	1		PCB-REAR	51	51	4
	2		PCB-REAR	52	52	2
	3		PCB-REAR	3	11	1
	4		PCB-REAR	53	53	2
	5		PCB-REAR	13	16	1
	6		PCB-REAR	13	13	1
	7		PCB-REAR	17	17	1
	8		PCB-REAR	13	13	1
	9		PCB-REAR	18	18	1
	10		PCB-REAR	13	13	1
	11		PCB-REAR	19	19	1
	12		PCB-REAR	13	13	1
	13		PCB-REAR	20	21	1
	14		PCB-REAR	53	53	2
	15		PCB-REAR	23	26	1
	16		PCB-REAR	54	54	1
	17		PCB-REAR	20	21	1

Sample Table

Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount
1	2000ng/ml A1254		1	
2	400ng/ml A1254		1	
3	800ng/ml A1221		1	
4	400ng/ml A1221		1	
5	200ng/ml A1221		1	
6	100ng/ml A1221		1	
7	50ng/ml A1221		1	
8	200ng/ml A1232		1	
9	200ng/ml A1242		1	
10	200ng/ml A1248		1	
11	200ng/ml A1660		1	
12	200ng/ml A1254		1	
13	iblnk		1	
14	131fCS/20		1	
15	133mblnk/30		1	

Sample Table

HNF-SD-WM-DP-309 REV. 0

Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount
16	135tk100/300		1	
17	137tk100/300		1	
18	139tk100/300MS		1	
19	141tk100/300MSD		1	
20	200ng/ml A1660		1	
21	400ng/ml A1221		1	
22	200ng/ml A1254		1	
23	135tk100/100		1	
24	iblnk		1	
25	137tk100/100		1	
26	iblnk		1	
27	200ng/ml A1254		1	
28	400ng/ml A1221		1	
29	200ng/ml A1660		1	
31	2000ng/ml A1254		1	
32	400ng/ml A1254		1	
33	200ng/ml A1254		1	
34	200ng/ml A1254		1	

Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount
16	135tk100/300		1	
17	137tk100/300		1	
18	139tk100/300MS		1	
19	141tk100/300MSD		1	
20	200ng/ml A1660		1	
21	400ng/ml A1221		1	
22	200ng/ml A1254		1	
23	135tk100/100		1	
24	iblnk		1	
25	137tk100/100		1	
26	iblnk		1	
27	200ng/ml A1254		1	
28	400ng/ml A1221		1	
29	200ng/ml A1660		1	
31	2000ng/ml A1254		1	
32	400ng/ml A1254		1	
33	200ng/ml A1254		1	
34	200ng/ml A1254		1	

Report Date : 24-Jun-1998 09:14

Page 1

222-S Laboratory

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-97 17:19
 End Cal Date : 22-JUN-98 19:59
 Quant Method : ESTD
 Origin : Force
 Target Version : 3.10
 Integrator : HP Genie
 Method file : /chem/gc2.i/062298.b/rcrapcb.m
 Cal Date : 24-Jun-1998 09:07
 Curve Type : Average

Calibration File Names:

Level 1: /chem/gc2.i/062298.b/007f0301.d
 Level 2: /chem/gc2.i/062298.b/006f0301.d
 Level 3: /chem/gc2.i/062298.b/005f0301.d
 Level 4: /chem/gc2.i/062298.b/004f0301.d
 Level 5: /chem/gc2.i/062298.b/003f0301.d

Compound	0.0200 Level 1	0.0500 Level 2	0.1000 Level 3	0.2000 Level 4	0.4000 Level 5	RRF	% RSD
1 alpha-BHC	++++	++++	++++	++++	++++	++++	++++
2 beta-BHC	++++	++++	++++	++++	++++	++++	++++
3 delta-BHC	++++	++++	++++	++++	++++	++++	++++
4 gamma-BHC (Lindane)	++++	++++	++++	++++	++++	++++	++++
5 Heptachlor	++++	++++	++++	++++	++++	++++	++++
6 Aldrin	++++	++++	++++	++++	++++	++++	++++
7 Heptachlor epoxide	++++	++++	++++	++++	++++	++++	++++
8 Endosulfan I	++++	++++	++++	++++	++++	++++	++++
9 Dieldrin	++++	++++	++++	++++	++++	++++	++++
10 4,4'-DDE	++++	++++	++++	++++	++++	++++	++++
11 Endrin	++++	++++	++++	++++	++++	++++	++++
12 Endosulfan II	++++	++++	++++	++++	++++	++++	++++
13 4,4'-DDD	++++	++++	++++	++++	++++	++++	++++
14 Endosulfan sulfate	++++	++++	++++	++++	++++	++++	++++
15 4,4'-DDT	++++	++++	++++	++++	++++	++++	++++
16 Methoxychlor	++++	++++	++++	++++	++++	++++	++++
17 Endrin ketone	++++	++++	++++	++++	++++	++++	++++
18 Endrin aldehyde	++++	++++	++++	++++	++++	++++	++++
19 alpha-Chlordane	++++	++++	++++	++++	++++	++++	++++
20 gamma-Chlordane	++++	++++	++++	++++	++++	++++	++++
21 Toxaphene(1)	++++	++++	++++	++++	++++	++++	++++
(2)	++++	++++	++++	++++	++++	++++	++++
(3)	++++	++++	++++	++++	++++	++++	++++
22 Aroclor-1016(1)	685050	706900	706720	622025	513460	646831	12.716
(2)	798050	774260	801400	717850	592898	736892	11.830
(3)	987100	981500	1026050	940650	784878	944036	9.955
23 Aroclor-1221(1)	167720	194070	234670	214092	178668	197847	13.630
(2)	62160	77090	76970	84552	72731	74701	10.979
(3)	180975	164390	220580	217148	200075	196637	12.169
(4)	235075	231000	230465	223318	208110	225595	4.722
(5)	478100	470360	563445	524620	458450	498999	8.798

222-S Laboratory

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-97 17:19
 End Cal Date : 22-JUN-98 19:59
 Quant Method : ESTD
 Origin : Force
 Target Version : 3.10
 Integrator : HP Genie
 Method file : /chem/gc2.i/062298.b/rcrapcb.m
 Cal Date : 24-Jun-1998 09:07
 Curve Type : Average

Compound	0.0200 Level 1	0.0500 Level 2	0.1000 Level 3	0.2000 Level 4	0.4000 Level 5	RRF	% RSD
24 Aroclor-1232(1)	++++	++++	549340	559235	460210	522928	10.430
(2)	++++	++++	326870	350830	292162	323288	9.124
(3)	++++	++++	401730	437850	394132	411238	5.680
25 Aroclor-1242(1)	++++	++++	467560	512610	456095	478755	6.240
(2)	++++	++++	509520	576045	530280	538615	6.319
(3)	++++	++++	625990	731335	693558	683628	7.807
26 Aroclor-1248(1)	767300	692800	677830	720975	629835	697748	7.311
(2)	675800	635180	628660	688730	616158	648906	4.861
(3)	910550	840920	815560	899215	803228	853894	5.698
27 Aroclor-1254(1)	827300	812780	803440	839655	792698	815174	2.291
(2)	1101500	1086100	1060040	1086780	1057750	1078434	1.751
(3)	936000	941120	936560	1003545	1020202	967486	4.237
28 Aroclor-1260(1)	1056950	1017260	1040630	979115	775998	973990	11.754
(2)	1060000	994400	1034930	982735	769212	968256	11.930
(3)	860200	901620	960980	957400	753830	886806	9.617
\$ 29 Tetrachloro-m-xylene	14389700	14672520	16410640	14254860	13998965	14745337	6.525
\$ 30 Decachlorobiphenyl	8633100	8030800	8248180	7121710	8643725	8135503	7.670

HNF-SD-WM-DP-309 REV. 0

222-S Laboratory

Data file : /chem/gc2.i/062298.b/002f0202.d
Lab Smp Id: 400ng/ml A1254 Client Smp ID: 400ng/ml A1254
Inj Date : 22-JUN-98 15:09
Operator : Gerald Ross Inst ID: gc2.i
Smp Info : 400ng/ml A1254
Misc Info : 400ng/ml A1254
Comment :
Method : /chem/gc2.i/062298.b/rcrapcb.m
Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: AR1254.sub
Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS							
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
27 Aroclor-1254			CAS #: 11097-69-1				
21.741	21.767	-0.026	299477	0.367	7.35		100.00
22.820	22.846	-0.026	387779	0.360	7.19	112.00- 152.00	129.49
24.753	24.780	-0.027	380213	0.393	7.86	96.00- 136.00	126.96
Average of Peak Concentrations =					7.47		

\$ 29 Tetrachloro-m-xylene			CAS #: 877-09-8				
12.641	12.654	-0.013	2427996	0.165	3.29		100.00

\$ 30 Decachlorobiphenyl			CAS #: 2051-24-3				
42.681	42.728	-0.047	1368017	0.168	3.36		100.00

Data File: /chem/gc2.i/062298.b/002f0202.d
Report Date: 29-Jun-1998 13:37

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 400ng/ml A1254 Client Smp ID: 400ng/ml A1254
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 400ng/ml A1254

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	4.00	3.29	82.33	50-150
\$ 30 Decachlorobiphenyl	4.00	3.36	84.08	50-150

Data File: /chem/gc2.i/062298.b/002f0202.d
Report Date: 29-Jun-1998 13:37

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 400ng/ml A1254
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 400ng/ml A1254

Client SDG: 062298
Client Smp ID: 400ng/ml A1254
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11097-69-1-----	Aroclor-1254	7.47	
877-09-8-----	Tetrachloro-m-xylene	3.29	
2051-24-3-----	Decachlorobiphenyl	3.36	

Date: 22-JUN-98 15:09

Client ID: 400g/ml A1254

Sample Info: 400g/ml A1254

Volume Injected (uL): 1.0

Column phase: Kti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/002f0202.d (Part 1 of 2)

Date : 22-JUN-98 15:09

Client ID: 400ng/ml A1254

Sample Info: 400ng/ml A1254

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/002F0202.d (Part 2 of 2)

HNF-SD-WM-DP-309 REV.0

222-S Laboratory

Data file : /chem/gc2.i/062298.b/003f0301.d
 Lab Smp Id: 800ng/ml A1221 Client Smp ID: 800ng/ml A1221
 Inj Date : 22-JUN-98 16:07
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 800ng/ml A1221
 Misc Info : 800ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 16:07 Cal File: 003f0301.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1221.sub
 Target Version: 3.10 Sample Matrix: WATER

AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET	RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	=====	
23 Aroclor-1221					CAS #: 11104-28-2				
10.801	10.811	-0.010	142934					100.00	
11.897	11.923	-0.026	58185			75.00-	115.00	40.71	
13.276	13.282	-0.006	160060	0.800	0.814	208.00-	258.00	111.98	
13.627	13.673	-0.046	166488	0.800	0.738	0.00-	0.00	116.48	
13.835	13.849	-0.014	366760	0.800	0.735	0.00-	0.00	256.59	
Average of Peak Amounts =					0.749				

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8				
12.640	12.654	-0.014	4262207	0.200	0.289			100.00	

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3				
42.682	42.728	-0.046	1845243	0.200	0.227			100.00	

Data File: /chem/gc2.i/062298.b/003f0301.d
Report Date: 29-Jun-1998 13:37

Page 2

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 800ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 800ng/ml A1221

Client SDG: 062298
Client Smp ID: 800ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221	15.0	
877-09-8-----	Tetrachloro-m-xylene	5.78	
2051-24-3-----	Decachlorobiphenyl	4.54	

Date : 22-JUN-98 16:07

Client ID: 800ng/ml A1221

Sample Info: 800ng/ml A1221

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/003f0301.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/003f0301.d
Date : 22-JUN-98 16:07
Client ID: 800ng/ml A1221
Sample Info: 800ng/ml A1221
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/003f0301.d (Part 2 of 2)

HNF-SD-WM-DP-309 REV.0

Data File: /chem/gc2.i/062298.b/004f0301.d
 Report Date: 29-Jun-1998 13:37

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/004f0301.d
 Lab Smp Id: 400ng/ml A1221 Client Smp ID: 400ng/ml A1221
 Inj Date : 22-JUN-98 17:05
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 400ng/ml A1221
 Misc Info : 400ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 17:05 Cal File: 004f0301.d
 Als bottle: 1 Calibration Sample, Level: 4
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1221.sub
 Target Version: 3.10 Sample Matrix: WATER

AMOUNTS							
			CAL-AMT		ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
23 Aroclor-1221					CAS #: 11104-28-2		
10.804	10.811	-0.007	85637				100.00
11.901	11.923	-0.022	33821			75.00- 115.00	39.49
13.279	13.282	-0.003	86859	0.400	0.442	208.00- 258.00	101.43
13.630	13.673	-0.043	89327	0.400	0.396	0.00- 0.00	104.31
13.837	13.849	-0.012	209848	0.400	0.420	0.00- 0.00	245.04
Average of Peak Amounts =				0.424			

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.641	12.654	-0.013	2510549	0.100	0.170		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.681	42.728	-0.047	1260662	0.100	0.155		100.00

Data File: /chem/gc2.i/062298.b/004f0301.d
Report Date: 29-Jun-1998 13:37

Page 2

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 400ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 400ng/ml A1221

Client SDG: 062298
Client Smp ID: 400ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221	8.48	
877-09-8-----	Tetrachloro-m-xylene	3.40	
2051-24-3-----	Decachlorobiphenyl	3.10	

Date : 22-JUN-98 17:05

Client ID: 400ng/ml A1221

Sample Info: 400ng/ml A1221

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/004f0301.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/004f0301.d

Date : 22-JUN-98 17:05

Client ID: 400ng/ml A1221

Sample Info: 400ng/ml A1221

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

Page 4

/chem/gc2.i/062298.b/004f0301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/005f0301.d
 Report Date: 29-Jun-1998 13:37

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/005f0301.d
 Lab Smp Id: 200ng/ml A1221 Client Smp ID: 200ng/ml A1221
 Inj Date : 22-JUN-98 18:03
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1221
 Misc Info : 200ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 18:03 Cal File: 005f0301.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1221.sub
 Target Version: 3.10 Sample Matrix: WATER

AMOUNTS							
			CAL-AMT		ON-COL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
23 Aroclor-1221					CAS #: 11104-28-2		
10.806	10.811	-0.005	46934				100.00
11.906	11.923	-0.017	15394			75.00- 115.00	32.80
13.281	13.282	-0.001	44116	0.200	0.224	208.00- 258.00	94.00
13.633	13.673	-0.040	46093	0.200	0.204	0.00- 0.00	98.21
13.840	13.849	-0.009	112689	0.200	0.226	0.00- 0.00	240.10
Average of Peak Amounts =					0.217		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.641	12.654	-0.013	1418832	0.0500	0.0962		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.680	42.728	-0.048	888361	0.0500	0.109		100.00

Data File: /chem/gc2.i/062298.b/005f0301.d
Report Date: 29-Jun-1998 13:37

Page 2

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1221

Client SDG: 062298
Client Smp ID: 200ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221	4.35	
877-09-8-----	Tetrachloro-m-xylene	1.92	
2051-24-3-----	Decachlorobiphenyl	2.18	

Data File: /chem/gc2.i/062298.b/005f0301.d
Date : 22-JUN-98 18:03
Client ID: 200ng/ml A1221
Sample Info: 200ng/ml A1221
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 3

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/005f0301.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/005f0301.d
Date : 22-JUN-98 18:03
Client ID: 200ng/ml A1221
Sample Info: 200ng/ml A1221
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0,25

/chem/gc2.i/062298.b/005f0301.d (Part 2 of 2)

222-S Laboratory

Data file : /chem/gc2.i/062298.b/006f0301.d
 Lab Smp Id: 100ng/ml A1221 Client Smp ID: 100ng/ml A1221
 Inj Date : 22-JUN-98 19:01
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 100ng/ml A1221
 Misc Info : 100ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:01 Cal File: 006f0301.d
 Als bottle: 1 Calibration Sample, Level: 2
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1221.sub
 Target Version: 3.10 Sample Matrix: WATER

AMOUNTS							
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
23 Aroclor-1221			CAS #: 11104-28-2				
10.808	10.811	-0.003	19407				100.00(M)
11.913	11.923	-0.010	7709			75.00- 115.00	39.72
13.283	13.282	0.001	16439	0.100	0.0820	208.00- 258.00	84.70
13.672	13.673	-0.001	23100	0.100	0.103	0.00- 0.00	119.03
13.845	13.849	-0.004	47036	0.100	0.0933	0.00- 0.00	242.36
Average of Peak Amounts =					0.0944		

\$ 29 Tetrachloro-m-xylene			CAS #: 877-09-8				
12.642	12.654	-0.012	1109398	0.0250	0.0752		100.00

\$ 30 Decachlorobiphenyl			CAS #: 2051-24-3				
42.684	42.728	-0.044	692033	0.0250	0.0851		100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/gc2.i/062298.b/006f0301.d
Report Date: 29-Jun-1998 13:37

Page 2

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 100ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 100ng/ml A1221

Client SDG: 062298
Client Smp ID: 100ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221_____	1.89	
877-09-8-----	Tetrachloro-m-xylene_____	1.50	
2051-24-3-----	Decachlorobiphenyl_____	1.70	

Date : 22-JUN-98 19:01

Client ID: 100g/ml R1221

Sample Info: 100g/ml R1221

Volume Injected (uL): 1.0

Column phase: Wt-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/006f0301.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/006f0301.d
Date : 22-JUN-98 19:01
Client ID: 100ng/ml A1221
Sample Info: 100ng/ml A1221
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald.Ross

Column diameter: 0.25

HNF-SD-WM-DP-309 REV.0

Data File: /chem/gc2.i/062298.b/007f0301.d
 Report Date: 20-Jul-1998 09:08

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/007f0301.d
 Lab Smp Id: 40ng/ml A1221 Client Smp ID: 40ng/ml A1221
 Inj Date : 22-JUN-1998 19:59
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 40ng/ml A1221
 Misc Info : 40ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 20-Jul-1998 09:08 gar Quant Type: ESTD
 Cal Date : 22-JUN-1998 19:59 Cal File: 007f0301.d
 Als bottle: 1 Calibration Sample, Level: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1221.sub
 Target Version: 3.10 Sample Matrix: WATER

AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		
23 Aroclor-1221						CAS #: 11104-28-2			
10.811	10.811	0.000	8386						100.00(M)
11.923	11.923	0.000	3108			75.00-	115.00		37.06
13.282	13.282	0.000	7239	0.0400	0.0368	208.00-	258.00		86.32
13.673	13.673	0.000	9403	0.0400	0.0417	0.00-	0.00		112.13
13.849	13.849	0.000	19124	0.0400	0.0383	0.00-	0.00		228.05
Average of Peak Amounts =					0.0402				

\$ 29 Tetrachloro-m-xylene						CAS #: 877-09-8			
12.644	12.654	-0.010	487969	0.0100	0.0331				100.00

\$ 30 Decachlorobiphenyl						CAS #: 2051-24-3			
42.683	42.728	-0.045	307510	0.0100	0.0378				100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/gc2.i/062298.b/007f0301.d
Report Date: 20-Jul-1998 09:08

Page 2

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 40ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 40ng/ml A1221

Client SDG: 062298
Client Smp ID: 40ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221	0.803	
877-09-8-----	Tetrachloro-m-xylene	0.662	
2051-24-3-----	Decachlorobiphenyl	0.756	

Date : 22-JUN-1998 19:59

Client ID: 40ng/ml A1221

Sample Info: 40ng/ml A1221

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/007f0301.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/007f0301.d
Date : 22-JUN-1998 19:59
Client ID: 40g/ml R1221
Sample Info: 40g/ml R1221
Volume Injected (uL): 1.0
Column phase: Xti-5

Instrument: gc2.i
Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/007f0301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/008f0301.d
 Report Date: 29-Jun-1998 13:38

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/008f0301.d
 Lab Smp Id: 200ng/ml A1232 Client Smp ID: 200ng/ml A1232
 Inj Date : 22-JUN-98 20:57
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1232
 Misc Info : 200ng/ml A1232
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1232.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL		FINAL	RATIO
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	
==	=====	=====	=====	=====	=====	=====
24 Aroclor-1232					CAS #: 1114-16-5	
13.841	13.856	-0.015	95866	0.183	3.67	100.00
15.356	15.376	-0.020	55704	0.172	3.45	110.00- 140.00 58.11
17.231	17.249	-0.018	74987	0.182	3.65	126.00- 166.00 78.22
Average of Peak Concentrations =					3.59	

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.641	12.654	-0.013	1374661	0.0932	1.86	100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.681	42.728	-0.047	731549	0.0899	1.80	100.00

Data File: /chem/gc2.i/062298.b/008f0301.d
Report Date: 29-Jun-1998 13:38

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name:	Client SDG: 062298
Sample Matrix: LIQUID	Fraction: PEST
Lab Smp Id: 200ng/ml A1232	Client Smp ID: 200ng/ml A1232
Level: LOW	Operator: Gerald Ross
Data Type: GC MULTI COMP	SampleType: SAMPLE
SpikeList File: RESOLUTION.spk	Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m	
Misc Info: 200ng/ml A1232	

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.86	93.23	50-150
\$ 30 Decachlorobiphenyl	2.00	1.80	89.92	50-150

Data File: /chem/gc2.i/062298.b/008f0301.d
Report Date: 29-Jun-1998 13:38

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1232
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1232

Client SDG: 062298
Client Smp ID: 200ng/ml A1232
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
1114-16-5-----	Aroclor-1232	3.59	
877-09-8-----	Tetrachloro-m-xylene	1.86	
2051-24-3-----	Decachlorobiphenyl	1.80	

Date : 22-JUN-98 20:57

Client ID: 200ng/ml A1232

Sample Info: 200ng/ml A1232

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

Data File: /chem/gc2.i/062298.b/008f0301.d
Date : 22-JUN-98 20:57
Client ID: 200ng/ml A1232
Sample Info: 200ng/ml A1232
Volume Injected (uL): 1.0
Column phase: Kti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0,25

/chem/gc2.i/062298.b/008f0301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/009f0301.d
 Report Date: 29-Jun-1998 13:38

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/009f0301.d
 Lab Smp Id: 200ng/ml A1242 Client Smp ID: 200ng/ml A1242
 Inj Date : 22-JUN-98 21:55
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1242
 Misc Info : 200ng/ml A1242
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1242.sub
 Target Version: 3.10 Sample Matrix: WATER

			CONCENTRATIONS				
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
25 Aroclor-1242					CAS #: 53469-21-9		
15.354	15.385	-0.031	99087	0.207	4.14		100.00
17.149	17.181	-0.032	108714	0.202	4.04	201.00- 241.00	109.72
17.227	17.257	-0.030	149094	0.218	4.36	83.00- 133.00	150.47
Average of Peak Concentrations =					4.18		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.640	12.654	-0.014	1566948	0.106	2.12		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.680	42.728	-0.048	987702	0.121	2.43		100.00

Data File: /chem/gc2.i/062298.b/009f0301.d
Report Date: 29-Jun-1998 13:38

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1242 Client Smp ID: 200ng/ml A1242
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1242

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	2.12	106.27	50-150
\$ 30 Decachlorobiphenyl	2.00	2.43	121.41	50-150

Data File: /chem/gc2.i/062298.b/009f0301.d
Report Date: 29-Jun-1998 13:38

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1242
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1242

Client SDG: 062298
Client Smp ID: 200ng/ml A1242
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
53469-21-9-----	Aroclor-1242	4.18	
877-09-8-----	Tetrachloro-m-xylene	2.12	
2051-24-3-----	Decachlorobiphenyl	2.43	

Data File: /chem/gc2.i/062298.b/009f0301.d
Date : 22-JUN-98 21:55
Client ID: 200ng/ml A1242
Sample Info: 200ng/ml A1242
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/009f0301.d (Part 1 of 2)

Date : 22-JUN-98 21:55

Client ID: 200ng/ml A1242

Sample Info: 200ng/ml A1242

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/009f0301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/010f0301.d
 Report Date: 29-Jun-1998 13:38

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/010f0301.d
 Lab Smp Id: 200ng/ml A1248 Client Smp ID: 200ng/ml A1248
 Inj Date : 22-JUN-98 22:53
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1248
 Misc Info : 200ng/ml A1248
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1248.sub
 Target Version: 3.10 Sample Matrix: WATER

			CONCENTRATIONS				
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
26 Aroclor-1248					CAS #: 12672-29-6		
18.665	18.675	-0.010	122431	0.175	3.51		100.00
19.668	19.679	-0.011	109732	0.169	3.38	95.00- 135.00	89.63
21.503	21.505	-0.002	122965	0.144	2.88	108.00- 148.00	100.44
Average of Peak Concentrations =					3.26		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.641	12.654	-0.013	1291125	0.0876	1.75		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.680	42.728	-0.048	689977	0.0848	1.70		100.00

Data File: /chem/gc2.i/062298.b/010f0301.d
Report Date: 29-Jun-1998 13:38

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name:	Client SDG: 062298
Sample Matrix: LIQUID	Fraction: PEST
Lab Smp Id: 200ng/ml A1248	Client Smp ID: 200ng/ml A1248
Level: LOW	Operator: Gerald Ross
Data Type: GC MULTI COMP	SampleType: SAMPLE
SpikeList File: RESOLUTION.spk	Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m	
Misc Info: 200ng/ml A1248	

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.75	87.56	50-150
\$ 30 Decachlorobiphenyl	2.00	1.70	84.81	50-150

Data File: /chem/gc2.i/062298.b/010f0301.d
Report Date: 29-Jun-1998 13:38

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1248
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1248

Client SDG: 062298
Client Smp ID: 200ng/ml A1248
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/KG)	ug/L	
12672-29-6-----	Aroclor-1248		3.26	
877-09-8-----	Tetrachloro-m-xylene		1.75	
2051-24-3-----	Decachlorobiphenyl		1.70	

Data File: /chem/gc2.i/062298.b/010f0301.d
Date : 22-JUN-98 22:53
Client ID: 200ng/ml A1248
Sample Info: 200ng/ml A1248
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/010f0301.d (Part 1 of 2)

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/010f0301.d
Date : 22-JUN-98 22:53
Client ID: 200ng/ml A1248
Sample Info: 200ng/ml A1248
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/010f0301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/011f0301.d
 Report Date: 29-Jun-1998 13:38

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/011f0301.d
 Lab Smp Id: 200ng/ml A1660 Client Smp ID: 200ng/ml A1660
 Inj Date : 22-JUN-98 23:50
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1660
 Misc Info : 200ng/ml A1660
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1660.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL FINAL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE RATIO
==	=====	=====	=====	=====	=====	=====
22 Aroclor-1016					CAS #: 12674-11-2	
15.352	15.374	-0.022	113954	0.176	3.52	100.00
17.147	17.171	-0.024	125349	0.170	3.40 114.00- 134.00	110.00
17.224	17.247	-0.023	172862	0.183	3.66 134.00- 154.00	151.69
Average of Peak Concentrations =					3.53	
28 Aroclor-1260					CAS #: 11096-82-5	
25.989	26.019	-0.030	173459	0.178	3.56	100.00
27.222	27.253	-0.031	172663	0.178	3.57 89.00- 109.00	99.54
28.770	28.800	-0.030	164746	0.186	3.72 72.00- 92.00	94.98
Average of Peak Concentrations =					3.61	
\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.640	12.654	-0.014	1491505	0.101	2.02	100.00
\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.679	42.728	-0.049	829945	0.102	2.04	100.00

Data File: /chem/gc2.i/062298.b/011f0301.d
Report Date: 29-Jun-1998 13:38

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1660 Client Smp ID: 200ng/ml A1660
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1660

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	2.02	101.15	50-150
\$ 30 Decachlorobiphenyl	2.00	2.04	102.02	50-150

Data File: /chem/gc2.i/062298.b/011f0301.d
Report Date: 29-Jun-1998 13:38

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1660
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1660

Client SDG: 062298
Client Smp ID: 200ng/ml A1660
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
12674-11-2-----	Aroclor-1016	3.53	
11096-82-5-----	Aroclor-1260	3.61	
=====		=====	=====
877-09-8-----	Tetrachloro-m-xylene	2.02	
2051-24-3-----	Decachlorobiphenyl	2.04	

Data File: /chem/gc2.i/062298.b/011f0301.d
Date : 22-JUN-98 23:50
Client ID: 200ng/ml A1660
Sample Info: 200ng/ml A1660
Volume Injected (uL): 1.0
Column phase: Kti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/011f0301.d (Part 1 of 2)

Data File: /chem/gc2.i/062298,b/011f0301.d
Date : 22-JUN-98 23:50
Client ID: 200ng/ml A1660
Sample Info: 200ng/ml A1660
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298,b/011f0301.d (Part 2 of 2)

HNF-SU-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/012f0401.d
 Report Date: 29-Jun-1998 13:39

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/012f0401.d
 Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
 Inj Date : 23-JUN-98 01:46
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1254
 Misc Info : 200ng/ml A1254
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-MAY-1998 20:13 Cal File: 028f0401.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1254.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS							
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
27 Aroclor-1254					CAS #: 11097-69-1		
21.740	21.767	-0.027	180380	0.221	4.42		100.00
22.820	22.846	-0.026	233311	0.216	4.33	112.00- 152.00	129.34
24.754	24.780	-0.026	222327	0.230	4.60	96.00- 136.00	123.25
Average of Peak Concentrations =					4.45		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.641	12.654	-0.013	1425728	0.0967	1.93		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.680	42.728	-0.048	956554	0.118	2.35		100.00

Data File: /chem/gc2.i/062298.b/012f0401.d
Report Date: 29-Jun-1998 13:39

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 061698
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: METHSPIKE
SpikeList File: Aroclor-1254.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1254

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
27 Aroclor-1254	4.00	4.45	111.24	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.93	96.69	50-150
\$ 30 Decachlorobiphenyl	2.00	2.35	117.58	50-150

Data File: /chem/gc2.i/062298.b/012f0401.d
Report Date: 29-Jun-1998 13:39

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1254
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1254

Client SDG: 061698
Client Smp ID: 200ng/ml A1254
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11097-69-1-----	Aroclor-1254	4.45	
877-09-8-----	Tetrachloro-m-xylene	1.93	
2051-24-3-----	Decachlorobiphenyl	2.35	

Data File: /chem/gc2.i/062298.b/012F0401.d
Date: 23-JUN-98 01:46
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/012F0401.d (Part 1 of 2)

Date : 23-JUN-98 01:46

Client ID: 200ng/ml A1254

Sample Info: 200ng/ml A1254

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/012f0401.d (Part 2 of 2)

80

Data File: /chem/gc2.i/062298.b/013f0401.d
Report Date: 20-Jul-1998 07:56

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/013f0401.d
Lab Smp Id: iblnk Client Smp ID: iblnk
Inj Date : 23-JUN-1998 02:44
Operator : Gerald Ross Inst ID: gc2.i
Smp Info : iblnk
Misc Info : iblnk
Comment :
Method : /chem/gc2.i/062298.b/rcrapcb.m
Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP Genie Compound Sublist: AroclorS.sub
Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

22 Aroclor-1016 CAS #: 12674-11-2

Peaks not detected for Quant. or Qual. signal(s).

23 Aroclor-1221 CAS #: 11104-28-2

Peaks not detected for Quant. or Qual. signal(s).

24 Aroclor-1232 CAS #: 1114-16-5

Peaks not detected for Quant. or Qual. signal(s).

25 Aroclor-1242 CAS #: 53469-21-9

Peaks not detected for Quant. or Qual. signal(s).

26 Aroclor-1248 CAS #: 12672-29-6

Peaks not detected for Quant. or Qual. signal(s).

27 Aroclor-1254 CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

Data File: /chem/gc2.i/062298.b/013f0401.d
 Report Date: 20-Jul-1998 07:56

Page 2

		CONCENTRATIONS					
		ON-COL	FINAL				
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

28 Aroclor-1260

CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

\$	29	Tetrachloro-m-xylene				CAS #:	877-09-8
12.641	12.654	-0.013	1361404	0.0923	1.85		100.00

\$	30	Decachlorobiphenyl				CAS #:	2051-24-3
42.681	42.728	-0.047	816518	0.100	2.01		100.00

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: iblnk Client Smp ID: iblnk
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: iblnk

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.85	92.33	50-150
\$ 30 Decachlorobiphenyl	2.00	2.01	100.36	50-150

Data File: /chem/gc2.i/062298.b/013f0401.d
 Report Date: 20-Jul-1998 07:56

Page 4

222-S Laboratory

TARGET COMPOUNDS

Client Name:
 Lab Smp Id: iblnk
 Sample Location:
 Sample Date:
 Sample Matrix: WATER
 Analysis Type: PEST
 Data Type: GC MULTI COMP
 Misc Info: iblnk

Client SDG: 062298
 Client Smp ID: iblnk
 Sample Point:
 Date Received:
 Quant Type: ESTD
 Level: LOW
 Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
12674-11-2-----	Aroclor-1016	0.600	U
11104-28-2-----	Aroclor-1221	0.600	U
1114-16-5-----	Aroclor-1232	0.600	U
53469-21-9-----	Aroclor-1242	0.600	U
12672-29-6-----	Aroclor-1248	0.600	U
11097-69-1-----	Aroclor-1254	0.600	U
11096-82-5-----	Aroclor-1260	0.600	U
=====		=====	=====
877-09-8-----	Tetrachloro-m-xylene	1.85	
2051-24-3-----	Decachlorobiphenyl	2.01	

Data File: /chem/gc2.i/062298.b/013f0401.d
Date : 23-JUN-1998 02:44
Client ID: iblnk
Sample Info: iblnk
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/013f0401.d (Part 1 of 2)

HNF-SD-WM-DP-309 REV. 0

Date : 23-JUN-1998 02:44

Client ID: iblnk

Instrument: gc2.i

Sample Info: iblnk

Volume Injected (uL): 1.0

Operator: Gerald Ross

Column phase: Xti-5

Column diameter: 0.25

/chem/gc2.i/062298.b/013F0401.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/014f0401.d
 Report Date: 20-Jul-1998 07:56

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/014f0401.d
 Lab Smp Id: 131LCS/20 Client Smp ID: 131LCS/20
 Inj Date : 23-JUN-98 03:42
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 131LCS/20
 Misc Info : 131LCS/20
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 20.000
 Integrator: HP Genie Compound Sublist: AR1254.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL		FINAL	
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	TARGET RANGE
==	=====	=====	=====	=====	=====	=====
27 Aroclor-1254					CAS #: 11097-69-1	
21.741	21.767	-0.026	143378	0.176	70.4	100.00
22.822	22.846	-0.024	187168	0.174	69.4 112.00- 152.00	130.54
24.753	24.780	-0.027	174507	0.180	72.1 96.00- 136.00	121.71
Average of Peak Concentrations =					70.6	

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.642	12.654	-0.012	1030912	0.0699	28.0	100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.682	42.728	-0.046	788626	0.0969	38.8	100.00

Data File: /chem/gc2.i/062298.b/014f0401.d
Report Date: 20-Jul-1998 07:56

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 131LCS/20 Client Smp ID: 131LCS/20
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: METHSPIKE
SpikeList File: Aroclor-1254.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 131LCS/20

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
27 Aroclor-1254	80.0	70.6	88.30	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	40.0	28.0	69.91	50-150
\$ 30 Decachlorobiphenyl	40.0	38.8	96.94	50-150

Data File: /chem/gc2.i/062298.b/014f0401.d
Report Date: 20-Jul-1998 07:56

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 131LCS/20
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 131LCS/20

Client SDG: 062298
Client Smp ID: 131LCS/20
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11097-69-1-----	Aroclor-1254	70.6	
877-09-8-----	Tetrachloro-m-xylene	28.0	
2051-24-3-----	Decachlorobiphenyl	38.8	

Data File: /chem/gc2.i/062298.b/014f0401.d
Date : 23-JUN-98 03:42
Client ID: 131LCS/20
Sample Info: 131LCS/20
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i
Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/014f0401.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/014f0401.d
Date : 23-JUN-98 03:42
Client ID: 131LCS/20
Sample Info: 131LCS/20
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/014f0401.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/015f0401.d
 Report Date: 20-Jul-1998 07:35

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/015f0401.d
 Lab Smp Id: 133mblnk/30 Client Smp ID: 133mblnk/30
 Inj Date : 23-JUN-1998 04:40
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 133mblnk/30
 Misc Info : 133mblnk/30
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 30.000
 Integrator: HP Genie Compound Sublist: AroclorS.sub
 Target Version: 3.10 Sample Matrix: SOIL

		CONCENTRATIONS					
		ON-COL	FINAL				
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

22 Aroclor-1016

CAS #: 12674-11-2

Peaks not detected for Quant. or Qual. signal(s).

23 Aroclor-1221

CAS #: 11104-28-2

Peaks not detected for Quant. or Qual. signal(s).

24 Aroclor-1232

CAS #: 1114-16-5

Peaks not detected for Quant. or Qual. signal(s).

25 Aroclor-1242

CAS #: 53469-21-9

Peaks not detected for Quant. or Qual. signal(s).

26 Aroclor-1248

CAS #: 12672-29-6

Peaks not detected for Quant. or Qual. signal(s).

27 Aroclor-1254

CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

Report Date: 20-Jul-1998 07:35

		CONCENTRATIONS							
		ON-COL		FINAL					
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		

28 Aroclor-1260

CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

\$	29	Tetrachloro-m-xylene			CAS #:	877-09-8
12.641	12.654	-0.013	649199	0.0440	2640	100.00

\$	30	Decachlorobiphenyl			CAS #:	2051-24-3
42.682	42.728	-0.046	490877	0.0603	3620	100.00

Data File: /chem/gc2.i/062298.b/015f0401.d
Report Date: 20-Jul-1998 07:35

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: SOLID Fraction: PEST
Lab Smp Id: 133mblnk/30 Client Smp ID: 133mblnk/30
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 133mblnk/30

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	4000	2640	66.04	50-150
\$ 30 Decachlorobiphenyl	4000	3620	90.51	50-150

Data File: /chem/gc2.i/062298.b/015f0401.d
 Report Date: 20-Jul-1998 07:35

222-S Laboratory

TARGET COMPOUNDS

Client Name:
 Lab Smp Id: 133mblnk/30
 Sample Location:
 Sample Date:
 Sample Matrix: SOIL
 Analysis Type: PEST
 Data Type: GC MULTI COMP
 Misc Info: 133mblnk/30

Client SDG: 062298
 Client Smp ID: 133mblnk/30
 Sample Point:
 Date Received:
 Quant Type: ESTD
 Level: LOW
 Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/Kg
			Q
12674-11-2-----	Aroclor-1016	990	U
11104-28-2-----	Aroclor-1221	990	U
1114-16-5-----	Aroclor-1232	990	U
53469-21-9-----	Aroclor-1242	990	U
12672-29-6-----	Aroclor-1248	990	U
11097-69-1-----	Aroclor-1254	990	U
11096-82-5-----	Aroclor-1260	990	U
=====		=====	=====
877-09-8-----	Tetrachloro-m-xylene	2640	
2051-24-3-----	Decachlorobiphenyl	3620	

Data File: /chem/gc2.i/062298.b/015f0401.d
Date : 23-JUN-1998 04:40
Client ID: 133mbink/30
Sample Info: 133mbink/30
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/015f0401.d (Part 1 of 2)

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/015F0401.d
Date : 23-JUN-1998 04:40
Client ID: 133mblink/30
Sample Info: 133mblink/30
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 6

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/015F0401.d (Part 2 of 2)

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/018f0801.d
 Report Date: 20-Jul-1998 06:25

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/018f0801.d
 Lab Smp Id: S98B000220MS Client Smp ID: 139tk100/300MS
 Inj Date : 23-JUN-1998 09:29
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 139tk100/300MS
 Misc Info : 139tk100/300MS
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1 QC Sample: MS
 Dil Factor: 300.000
 Integrator: HP Genie Compound Sublist: AroclorS.sub
 Target Version: 3.10 Sample Matrix: SOIL

CONCENTRATIONS							
			ON-COL	FINAL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

22 Aroclor-1016 CAS #: 12674-11-2

Peaks not detected for Quant. or Qual. signal(s).

23 Aroclor-1221 CAS #: 11104-28-2							
10.806	10.811	-0.005	49407				100.00
11.920	11.923	-0.003	6818		75.00- 115.00		13.80
13.289	13.282	0.007	11077	0.0563	19300 208.00- 258.00		22.42
13.640	13.673	-0.033	9515	0.0422	14500 0.00- 0.00		19.26
13.851	13.849	0.002	35869	0.0719	24600 0.00- 0.00		72.60
Average of Peak Concentrations =					19500		

24 Aroclor-1232 CAS #: 1114-16-5

Peaks not detected for Quant. or Qual. signal(s).

25 Aroclor-1242 CAS #: 53469-21-9

Peaks not detected for Quant. or Qual. signal(s).

26 Aroclor-1248 CAS #: 12672-29-6

Operator disabled compound identification.

27 Aroclor-1254 CAS #: 11097-69-1							
21.747	21.767	-0.020	29945	0.0367	12600		100.00
22.828	22.846	-0.018	42063	0.0390	13400 112.00- 152.00		140.47
24.760	24.780	-0.020	37937	0.0392	13400 96.00- 136.00		126.69
Average of Peak Concentrations =					13100		

Data File: /chem/gc2.i/062298.b/018f0801.d
 Report Date: 20-Jul-1998 06:25

Page 2

		CONCENTRATIONS							
		ON-COL	FINAL						
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		

28 Aroclor-1260

CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

\$ 29 Tetrachloro-m-xylene			CAS #: 877-09-8		
12.648	12.654	-0.006	92790	0.00629	2160 100.00
\$ 30 Decachlorobiphenyl			CAS #: 2051-24-3		
42.684	42.728	-0.044	99132	0.0122	4180 100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/gc2.i/062298.b/018f0801.d
 Report Date: 20-Jul-1998 06:25

Page 3

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
 Sample Matrix: SOLID Fraction: PEST
 Lab Smp Id: S98B000220MS Client Smp ID: 139tk100/300MS
 Level: LOW Operator: Gerald Ross
 Data Type: GC MULTI COMP SampleType: MS
 SpikeList File: Aroclor-1254.spk Quant Type: ESTD
 Method File: /chem/gc2.i/062298.b/rcrapcb.m
 Misc Info: 139tk100/300MS

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
27 Aroclor-1254	9140	13100 ~ 8430	143.69	50-150

$$100 \times 4670 / 9140 = 51.09\% \quad \text{MAR 7-20}$$

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2280	2160	94.39	50-150
\$ 30 Decachlorobiphenyl	2280	4180	182.78*	50-150

Data File: /chem/gc2.i/062298.b/018f0801.d
 Report Date: 20-Jul-1998 06:25

Page 4

222-S Laboratory

TARGET COMPOUNDS

Client Name:
 Lab Smp Id: S98B000220MS
 Sample Location:
 Sample Date:
 Sample Matrix: SOIL
 Analysis Type: PEST
 Data Type: GC MULTI COMP
 Misc Info: 139tk100/300MS

Client SDG: 062298
 Client Smp ID: 139tk100/300MS
 Sample Point:
 Date Received:
 Quant Type: ESTD
 Level: LOW
 Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg	Q
12674-11-2-----	Aroclor-1016	9900	U
11104-28-2-----	Aroclor-1221	19500	
1114-16-5-----	Aroclor-1232	9900	U
53469-21-9-----	Aroclor-1242	9900	U
12672-29-6-----	Aroclor-1248	9900	U
11097-69-1-----	Aroclor-1254	13100	
11096-82-5-----	Aroclor-1260	9900	U
=====			
877-09-8-----	Tetrachloro-m-xylene	2160	
2051-24-3-----	Decachlorobiphenyl	4180	

Date : 23-JUN-1998 09:29

Client ID: 139K100/300HS

Sample Info: 139K100/300HS

Volume Injected (uL): 1.0

Column phase: Kti-5

Instrument: gc2.1

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.1/062298.b/018f0801.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/018F0801.d

Date : 23-JUN-1998 09:29

Client ID: 139tk100/300MS

Sample Info: 139tk100/300MS

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

Page 6

/chem/gc2.i/062298.b/018F0801.d (Part 2 of 2)

NINT-SL-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/019f1001.d
 Report Date: 20-Jul-1998 06:25

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/019f1001.d
 Lab Smp Id: S98B0000220MSD Client Smp ID: 141tk100/300MSD
 Inj Date : 23-JUN-1998 11:25
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 141tk100/300MSD
 Misc Info : 141tk100/300MSD
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1 QC Sample: MSD
 Dil Factor: 300.000
 Integrator: HP Genie Compound Sublist: AroclorS.sub
 Target Version: 3.10 Sample Matrix: SOIL

CONCENTRATIONS									
			ON-COL		FINAL				
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/Kg)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		
22 Aroclor-1016						CAS #: 12674-11-2			
Peaks not detected for Quant. or Qual. signal(s).									

23 Aroclor-1221						CAS #: 11104-28-2			
10.811	10.811	0.000	0						0.00(M)
11.923	11.923	0.000	0			75.00-	115.00		0.00
13.291	13.282	0.009	8306	0.0422	14100	208.00-	258.00		0.00
13.643	13.673	-0.030	7492	0.0332	11100	0.00-	0.00		0.00
13.853	13.849	0.004	28320	0.0568	18900	0.00-	0.00		0.00
Average of Peak Concentrations =						14700			

24 Aroclor-1232 CAS #: 1114-16-5

Peaks not detected for Quant. or Qual. signal(s).

25 Aroclor-1242 CAS #: 53469-21-9

Peaks not detected for Quant. or Qual. signal(s).

26 Aroclor-1248 CAS #: 12672-29-6

Operator disabled compound identification.

27 Aroclor-1254					CAS #: 11097-69-1				
21.747	21.767	-0.020	35792	0.0439	14600			100.00(R)	
22.828	22.846	-0.018	50847	0.0471	15700	112.00-	152.00	142.06	
24.760	24.780	-0.020	45687	0.0472	15700	96.00-	136.00	127.65	
Average of Peak Concentrations =					15400				

Data File: /chem/gc2.i/062298.b/019f1001.d
 Report Date: 20-Jul-1998 06:25

Page 2

		CONCENTRATIONS							
		ON-COL	FINAL						
RT	EXP RT DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO			
==	=====	=====	=====	=====	=====	=====			

28 Aroclor-1260

CAS #: 11096-82-5

Operator disabled compound identification.

\$	29	Tetrachloro-m-xylene				CAS #: 877-09-8			
	12.649	12.654	-0.005	92104	0.00625	2080		100.00	

\$	30	Decachlorobiphenyl				CAS #: 2051-24-3			
	42.686	42.728	-0.042	85534	0.0105	3500		100.00(R)	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

Data File: /chem/gc2.i/062298.b/019f1001.d
 Report Date: 20-Jul-1998 06:25

Page 3

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
 Sample Matrix: SOLID Fraction: PEST
 Lab Smp Id: S98B0000220MSD Client Smp ID: 141tk100/300MSD
 Level: LOW Operator: Gerald Ross
 Data Type: GC MULTI COMP SampleType: MSD
 SpikeList File: Aroclor-1254.spk Quant Type: ESTD
 Method File: /chem/gc2.i/062298.b/rcrapcb.m
 Misc Info: 141tk100/300MSD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
27 Aroclor-1254	8890	15400 - 8430	172.85*	50-150

$$100 \times 6970 / 8890 = 78.40\%$$

MAR 7-20

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2220	2080	93.69	50-150
\$ 30 Decachlorobiphenyl	2220	3500	157.71*	50-150

Data File: /chem/gc2.i/062298.b/019f1001.d
 Report Date: 20-Jul-1998 06:25

Page 4

222-S Laboratory

TARGET COMPOUNDS

Client Name:
 Lab Smp Id: S98B0000220MSD
 Sample Location:
 Sample Date:
 Sample Matrix: SOIL
 Analysis Type: PEST
 Data Type: GC MULTI COMP
 Misc Info: 141tk100/300MSD

Client SDG: 062298
 Client Smp ID: 141tk100/300MSD
 Sample Point:
 Date Received:
 Quant Type: ESTD
 Level: LOW
 Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg	Q
12674-11-2-----	Aroclor-1016	9900	U
11104-28-2-----	Aroclor-1221	14700	
1114-16-5-----	Aroclor-1232	9900	U
53469-21-9-----	Aroclor-1242	9900	U
12672-29-6-----	Aroclor-1248	9900	U
11097-69-1-----	Aroclor-1254	15400	
11096-82-5-----	Aroclor-1260	9900	U
=====			
877-09-8-----	Tetrachloro-m-xylene	2080	
2051-24-3-----	Decachlorobiphenyl	3500	

Date : 23-JUN-1998 11:25

Client ID: 141K100/300NSD

Sample Info: 141K100/300NSD

Volume Injected (uL): 1.0

Column phase: K1-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/019f1001.d (Part 1 of 2)

108

Data File: /chem/gc2.i/062298.b/019f1001.d
Date: 23-JUN-1998 11:25
Client ID: 141tk100/300MSD
Sample Info: 141tk100/300MSD
Volume Injected (uL): 1.0
Column phase: Xt-i-5

Instrument: gc2.i
Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/019f1001.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/020f1201.d
 Report Date: 20-Jul-1998 09:29

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/020f1201.d
 Lab Smp Id: 400ng/ml A1221 Client Smp ID: 400ng/ml A1221
 Inj Date : 23-JUN-98 13:21
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 400ng/ml A1221
 Misc Info : 400ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 20-Jul-1998 09:08 gar Quant Type: ESTD
 Cal Date : 22-JUN-1998 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie
 Target Version: 3.10
 Compound Sublist: AR1221.sub
 Sample Matrix: WATER

			CONCENTRATIONS				
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
23 Aroclor-1221					CAS #: 11104-28-2		
10.804	10.811	-0.007	82699				100.00
11.902	11.923	-0.021	32848			75.00- 115.00	39.72
13.278	13.282	-0.004	85621	0.435	8.71	208.00- 258.00	103.53
13.630	13.673	-0.043	89100	0.395	7.90	0.00- 0.00	107.74
13.838	13.849	-0.011	207159	0.415	8.30	0.00- 0.00	250.50
Average of Peak Concentrations =					8.30		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.641	12.654	-0.013	2465838	0.167	3.34		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.681	42.728	-0.047	1054205	0.130	2.59		100.00

103.75% *ICAL CLK OK 7-20-98*

Data File: /chem/gc2.i/062298.b/020f1201.d
Report Date: 20-Jul-1998 09:29

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 400ng/ml A1221 Client Smp ID: 400ng/ml A1221
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: Aroclor-1660.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 400ng/ml A1221

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	4.00	3.34	83.61	50-150
\$ 30 Decachlorobiphenyl	4.00	2.59	64.79	50-150

Data File: /chem/gc2.i/062298.b/020f1201.d
Report Date: 20-Jul-1998 09:29

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 400ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 400ng/ml A1221

Client SDG: 062298
Client Smp ID: 400ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221	8.30	
877-09-8-----	Tetrachloro-m-xylene	3.34	
2051-24-3-----	Decachlorobiphenyl	2.59	

Date: 23-JUN-98 13:21

Client: ID: 400ng/ml A1221

Sample Info: 400ng/ml A1221

Volume Injected (ul): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/020f1201.d (Part 1 of 2)

Date : 23-JUN-98 13:21

Client ID: 400ng/ml A1221

Sample Info: 400ng/ml A1221

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/020f1201.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/021f1201.d
 Report Date: 29-Jun-1998 15:02

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/021f1201.d
 Lab Smp Id: 200ng/ml A1660 Client Smp ID: 200ng/ml A1660
 Inj Date : 23-JUN-1998 14:19
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1660
 Misc Info : 200ng/ml A1660
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1660.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL		FINAL	
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE RATIO
==	=====	=====	=====	=====	=====	=====
22 Aroclor-1016					CAS #: 12674-11-2	
15.353	15.374	-0.021	128437	0.198	3.97	100.00
17.148	17.171	-0.023	138164	0.187	3.75 114.00- 134.00	107.57
17.225	17.247	-0.022	191522	0.203	4.06 134.00- 154.00	149.12
Average of Peak Concentrations =					3.93	
28 Aroclor-1260					CAS #: 11096-82-5	
25.989	26.019	-0.030	188487	0.194	3.87	100.00
27.223	27.253	-0.030	183541	0.190	3.79 89.00- 109.00	97.38
28.770	28.800	-0.030	172167	0.194	3.88 72.00- 92.00	91.34
Average of Peak Concentrations =					3.85	
\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.640	12.654	-0.014	1628593	0.110	2.21	100.00
\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.678	42.728	-0.050	745969	0.0917	1.83	100.00

Data File: /chem/gc2.i/062298.b/021f1201.d
Report Date: 29-Jun-1998 15:02

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1660 Client Smp ID: 200ng/ml A1660
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: METHSPIKE
SpikeList File: Aroclor-1660.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1660

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
22 Aroclor-1016	4.00	3.93	98.16	50-150
28 Aroclor-1260	4.00	3.85	96.20	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	2.21	110.45	50-150
\$ 30 Decachlorobiphenyl	2.00	1.83	91.69	50-150

Data File: /chem/gc2.i/062298.b/021f1201.d
Report Date: 29-Jun-1998 15:02

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1660
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1660

Client SDG: 062298
Client Smp ID: 200ng/ml A1660
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
12674-11-2-----	Aroclor-1016	3.93	
11096-82-5-----	Aroclor-1260	3.85	
=====			
877-09-8-----	Tetrachloro-m-xylene	2.21	
2051-24-3-----	Decachlorobiphenyl	1.83	

Data File: /chem/gc2.i/062298.b/021f1201.d
Date : 23-JUN-1998 14:19
Client ID: 200mg/ml H4660
Sample Info: 200mg/ml H4660
Volume Injected (uL): 1.0
Column phase: Xti-5

Instrument: gc2.i
Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/021f1201.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/021f1201.d
Date : 23-JUN-1998 14:19
Client ID: 200ng/ml A1660
Sample Info: 200ng/ml A1660
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/021f1201.d (Part 2 of 2)

HIN-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/022f1201.d
 Report Date: 29-Jun-1998 13:41

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/022f1201.d
 Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
 Inj Date : 23-JUN-98 15:17
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1254
 Misc Info : 200ng/ml A1254
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-MAY-1998 20:13 Cal File: 028f0401.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1254.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
		ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE RATIO
==	=====	=====	=====	=====	=====	=====
27 Aroclor-1254 CAS #: 11097-69-1						
21.741	21.767	-0.026	173483	0.213	4.26	100.00
22.820	22.846	-0.026	225475	0.209	4.18	112.00- 152.00 129.97
24.753	24.780	-0.027	213414	0.220	4.41	96.00- 136.00 123.02
Average of Peak Concentrations =					4.28	

\$ 29 Tetrachloro-m-xylene CAS #: 877-09-8						
12.642	12.654	-0.012	1391748	0.0944	1.89	100.00

\$ 30 Decachlorobiphenyl CAS #: 2051-24-3						
42.679	42.728	-0.049	904473	0.111	2.22	100.00

Data File: /chem/gc2.i/062298.b/022f1201.d
Report Date: 29-Jun-1998 13:41

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: METHSPIKE
SpikeList File: Aroclor-1254.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1254

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
27 Aroclor-1254	4.00	4.28	107.08	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.89	94.39	50-150
\$ 30 Decachlorobiphenyl	2.00	2.22	111.18	50-150

Data File: /chem/gc2.i/062298.b/022f1201.d
Report Date: 29-Jun-1998 13:41

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1254
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1254

Client SDG: 062298
Client Smp ID: 200ng/ml A1254
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11097-69-1-----	Aroclor-1254	4.28	
877-09-8-----	Tetrachloro-m-xylene	1.89	
2051-24-3-----	Decachlorobiphenyl	2.22	

Date : 23-JUN-98 15:17

Client ID: 200ng/ml A1254

Sample Info: 200ng/ml A1254

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/022f1201.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/022f1201.d
Date : 23-JUN-98 15:17
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/022f1201.d (Part 2 of 2)

124

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/022f1301.d
 Report Date: 29-Jun-1998 13:41

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/022f1301.d
 Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
 Inj Date : 23-JUN-98 16:15
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1254
 Misc Info : 200ng/ml A1254
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-MAY-1998 20:13 Cal File: 028f0401.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1254.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL		FINAL	RATIO
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	
==	=====	=====	=====	=====	=====	=====
27 Aroclor-1254					CAS #: 11097-69-1	
21.739	21.767	-0.028	181138	0.222	4.44	100.00
22.819	22.846	-0.027	235108	0.218	4.36	112.00- 152.00 129.79
24.751	24.780	-0.029	222829	0.230	4.61	96.00- 136.00 123.02
Average of Peak Concentrations ■					4.47	

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.640	12.654	-0.014	1466814	0.0995	1.99	100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.677	42.728	-0.051	926500	0.114	2.28	100.00

Data File: /chem/gc2.i/062298.b/022f1301.d
 Report Date: 29-Jun-1998 13:41

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
 Sample Matrix: LIQUID Fraction: PEST
 Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
 Level: LOW Operator: Gerald Ross
 Data Type: GC MULTI COMP SampleType: METHSPIKE
 SpikeList File: Aroclor-1254.spk Quant Type: ESTD
 Method File: /chem/gc2.i/062298.b/rcrapcb.m
 Misc Info: 200ng/ml A1254

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
27 Aroclor-1254	4.00	4.47	111.75	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.99	99.48	50-150
\$ 30 Decachlorobiphenyl	2.00	2.28	113.88	50-150

Data File: /chem/gc2.i/062298.b/022f1301.d
Report Date: 29-Jun-1998 13:41

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1254
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1254

Client SDG: 062298
Client Smp ID: 200ng/ml A1254
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11097-69-1-----	Aroclor-1254	4.47	
877-09-8-----	Tetrachloro-m-xylene	1.99	
2051-24-3-----	Decachlorobiphenyl	2.28	

Data File: /chem/gc2.i/062298.b/022f1301.d
Date : 23-JUN-98 16:15
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/022f1301.d (Part 1 of 2)

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/022f1301.d
Date : 23-JUN-98 16:15
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/022f1301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/023f1301.d
Report Date: 20-Jul-1998 06:26

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/023f1301.d
Lab Smp Id: S98B000220 Client Smp ID: 135tk100/100
Inj Date : 23-JUN-1998 17:13
Operator : Gerald Ross Inst ID: gc2.i
Smp Info : 135tk100/100
Misc Info : 135tk100/100
Comment :
Method : /chem/gc2.i/062298.b/rcrapcb.m
Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
Als bottle: 1
Dil Factor: 100.000
Integrator: HP Genie Compound Sublist: AroclorS.sub
Target Version: 3.10 Sample Matrix: SOIL

CONCENTRATIONS						
			ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE (ng)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====

22 Aroclor-1016

CAS #: 12674-11-2

Operator disabled compound identification.

23 Aroclor-1221 CAS #: 11104-28-2						
10.800	10.811	-0.011	185944			100.00
11.899	11.923	-0.024	43950		75.00- 115.00	23.64
13.279	13.282	-0.003	61456	0.312	27900 208.00- 258.00	33.05
13.628	13.673	-0.045	47107	0.209	18600 0.00- 0.00	25.33
13.837	13.849	-0.012	166537	0.334	29800 0.00- 0.00	89.56
Average of Peak Concentrations =				25400		

24 Aroclor-1232

CAS #: 1114-16-5

Operator disabled compound identification.

25 Aroclor-1242

CAS #: 53469-21-9

Operator disabled compound identification.

26 Aroclor-1248

CAS #: 12672-29-6

Operator disabled compound identification.

27 Aroclor-1254 CAS #: 11097-69-1						
21.742	21.767	-0.025	71969	0.0883	7880	100.00
22.821	22.846	-0.025	102405	0.0950	8470 112.00- 152.00	142.29
24.754	24.780	-0.026	97100	0.100	8950 96.00- 136.00	134.92
Average of Peak Concentrations =				8430		

Data File: /chem/gc2.i/062298.b/023f1301.d
 Report Date: 20-Jul-1998 06:26

Page 2

		CONCENTRATIONS					
		ON-COL	FINAL				
RT	EXP RT DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	

28 Aroclor-1260

CAS #: 11096-82-5

Operator disabled compound identification.

\$ 29 Tetrachloro-m-xylene		CAS #: 877-09-8	
12.644	12.654 -0.010	274969 0.0186	1660 100.00
\$ 30 Decachlorobiphenyl		CAS #: 2051-24-3	
42.682	42.728 -0.046	316223 0.0389	3470 100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/gc2.i/062298.b/023f1301.d
Report Date: 20-Jul-1998 06:26

Page 3

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: SOLID Fraction: PEST
Lab Smp Id: S98B000220 Client Smp ID: 135tk100/100
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 135tk100/100

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	1780	1660	93.24	50-150
\$ 30 Decachlorobiphenyl	1780	3470	194.35*	50-150

Data File: /chem/gc2.i/062298.b/023f1301.d
 Report Date: 20-Jul-1998 06:26

Page 4

222-S Laboratory

TARGET COMPOUNDS

Client Name:
 Lab Smp Id: S98B000220
 Sample Location:
 Sample Date:
 Sample Matrix: SOIL
 Analysis Type: PEST
 Data Type: GC MULTI COMP
 Misc Info: 135tk100/100

Client SDG: 062298
 Client Smp ID: 135tk100/100
 Sample Point:
 Date Received:
 Quant Type: ESTD
 Level: LOW
 Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg	Q
12674-11-2-----	Aroclor-1016	3300	U
11104-28-2-----	Aroclor-1221	25400	
1114-16-5-----	Aroclor-1232	3300	U
53469-21-9-----	Aroclor-1242	3300	U
12672-29-6-----	Aroclor-1248	3300	U
11097-69-1-----	Aroclor-1254	8430	
11096-82-5-----	Aroclor-1260	3300	U
=====			
877-09-8-----	Tetrachloro-m-xylene	1660	
2051-24-3-----	Decachlorobiphenyl	3470	

Data File: /chem/gc2.i/062298.b/023f1301.d
Date : 23-JUN-1998 17:13
Client ID: 135tk100/100
Sample Info: 135tk100/100
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/023f1301.d (Part 1 of 2)

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/023f1301.d
Date : 23-JUN-1998 17:13
Client ID: 135tk100/100
Sample Info: 135tk100/100
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 6

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/023f1301.d (Part 2 of 2)

135
NMF-SID-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/025f1301.d
 Report Date: 20-Jul-1998 07:30

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/025f1301.d
 Lab Smp Id: S98B000220D Client Smp ID: 137tk100/100
 Inj Date : 23-JUN-1998 19:08
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 137tk100/100
 Misc Info : 137tk100/100
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 100.000
 Integrator: HP Genie Compound Sublist: AroclorS.sub
 Target Version: 3.10 Sample Matrix: SOIL

		CONCENTRATIONS					
		ON-COL		FINAL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====

22 Aroclor-1016

CAS #: 12674-11-2

Operator disabled compound identification.

		CONCENTRATIONS					
		ON-COL		FINAL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO
23 Aroclor-1221							
10.802	10.811	-0.009	94238				100.00(M)
11.906	11.923	-0.017	20456		75.00- 115.00		21.71
13.283	13.282	0.001	43436	0.221	17300 208.00- 258.00		46.09
13.630	13.673	-0.043	31098	0.138	10800 0.00- 0.00		33.00
13.840	13.849	-0.009	112258	0.225	17600 0.00- 0.00		119.12
Average of Peak Concentrations =					15300		

24 Aroclor-1232

CAS #: 1114-16-5

Operator disabled compound identification.

25 Aroclor-1242

CAS #: 53469-21-9

Operator disabled compound identification.

26 Aroclor-1248

CAS #: 12672-29-6

Operator disabled compound identification.

		CONCENTRATIONS					
		ON-COL		FINAL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO
27 Aroclor-1254							
21.742	21.767	-0.025	66506	0.0816	6400		100.00
22.822	22.846	-0.024	97930	0.0908	7120 112.00- 152.00		147.25
24.755	24.780	-0.025	90709	0.0938	7360 96.00- 136.00		136.39
Average of Peak Concentrations =					6960		

Data File: /chem/gc2.i/062298.b/025f1301.d
Report Date: 20-Jul-1998 07:30

Page 2

				CONCENTRATIONS					
				ON-COL	FINAL				
RT	EXP RT	DLT RT		RESPONSE (	ng)	(ug/Kg)	TARGET RANGE	RATIO	
==	=====	=====		=====	=====	=====	=====	=====	=====

28 Aroclor-1260

CAS #: 11096-82-5

Operator disabled compound identification.

-----						CAS #: 877-09-8			
\$ 29	Tetrachloro-m-xylene			316959	0.0215	1690		100.00	
12.644	12.654	-0.010							
-----						CAS #: 2051-24-3			
\$ 30	Decachlorobiphenyl			284611	0.0350	2740		100.00(R)	
42.682	42.728	-0.046							

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/gc2.i/062298.b/025f1301.d

Page 3

Report Date: 20-Jul-1998 07:30

222-S Laboratory

RECOVERY REPORT

Client Name:

Client SDG: 062298

Sample Matrix: SOLID

Fraction: PEST

Lab Smp Id: S98B000220D

Client Smp ID: 137tk100/100

Level: LOW

Operator: Gerald Ross

Data Type: GC MULTI COMP

SampleType: SAMPLE

SpikeList File: RESOLUTION.spk

Quant Type: ESTD

Method File: /chem/gc2.i/062298.b/rcrapcb.m

Misc Info: 137tk100/100

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	1570	1690	107.48	50-150
\$ 30 Decachlorobiphenyl	1570	2740	174.92*	50-150

Data File: /chem/gc2.i/062298.b/025f1301.d
 Report Date: 20-Jul-1998 07:30

Page 4

222-S Laboratory

TARGET COMPOUNDS

Client Name:
 Lab Smp Id: S98B000220D
 Sample Location:
 Sample Date:
 Sample Matrix: SOIL
 Analysis Type: PEST
 Data Type: GC MULTI COMP
 Misc Info: 137tk100/100

Client SDG: 062298
 Client Smp ID: 137tk100/100
 Sample Point:
 Date Received:
 Quant Type: ESTD
 Level: LOW
 Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg	Q
12674-11-2-----	Aroclor-1016	3300	U
11104-28-2-----	Aroclor-1221	15300	
1114-16-5-----	Aroclor-1232	3300	U
53469-21-9-----	Aroclor-1242	3300	U
12672-29-6-----	Aroclor-1248	3300	U
11097-69-1-----	Aroclor-1254	6960	
11096-82-5-----	Aroclor-1260	3300	U
=====			
877-09-8-----	Tetrachloro-m-xylene	1690	
2051-24-3-----	Decachlorobiphenyl	2740	

Data File: /chem/gc2.i/062298.b/025f1301.d
Date: 23-JUN-1998 19:08
Client ID: 137tk100/100
Sample Info: 137tk100/100
Volume Injected (uL): 1.0
Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

Page 5

/chem/gc2.i/062298.b/025f1301.d (Part 1 of 2)

00-WW-UP-308 REV.0

Data File: /chem/gc2.i/062298.b/025f1301.d
Date: 23-JUN-1998 19:08
Client ID: 137tk100/100
Sample Info: 137tk100/100
Volume Injected (uL): 1.0
Column Phase: Xt-i-5

Instrument: gc2.i
Operator: Gerald Ross
Column diameter: 0.25
/chem/gc2.i/062298.b/025f1301.d (Part 2 of 2)

Data File: /chem/gc2.i/062298.b/027f1301.d
 Report Date: 20-Jul-1998 06:26

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/027f1301.d
 Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
 Inj Date : 23-JUN-1998 21:04
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1254
 Misc Info : 200ng/ml A1254
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 17-Jul-1998 09:20 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1254.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS							
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
27 Aroclor-1254					CAS #: 11097-69-1		
21.740	21.767	-0.027	163253	0.200	4.00		100.00
22.820	22.846	-0.026	211562	0.196	3.92	112.00- 152.00	129.59
24.753	24.780	-0.027	196065	0.203	4.05	96.00- 136.00	120.10
Average of Peak Concentrations =					3.99		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.641	12.654	-0.013	1351424	0.0916	1.83		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.679	42.728	-0.049	800141	0.0984	1.97		100.00

Report Date: 20-Jul-1998 06:26

222-S Laboratory

RECOVERY REPORT

Client Name:

Client SDG: 062298

Sample Matrix: LIQUID

Fraction: PEST

Lab Smp Id: 200ng/ml A1254

Client Smp ID: 200ng/ml A1254

Level: LOW

Operator: Gerald Ross

Data Type: GC MULTI COMP

SampleType: METHSPIKE

SpikeList File: Aroclor-1254.spk

Quant Type: ESTD

Method File: /chem/gc2.i/062298.b/rcrapcb.m

Misc Info: 200ng/ml A1254

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
27 Aroclor-1254	4.00	3.99	99.85	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	1.83	91.65	50-150
\$ 30 Decachlorobiphenyl	2.00	1.97	98.35	50-150

Data File: /chem/gc2.i/062298.b/027f1301.d
Report Date: 20-Jul-1998 06:26

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1254
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1254

Client SDG: 062298
Client Smp ID: 200ng/ml A1254
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
11097-69-1-----Aroclor-1254		3.99	
877-09-8-----Tetrachloro-m-xylene		1.83	
2051-24-3-----Decachlorobiphenyl		1.97	

Data File: /chem/gc2.i/062298.b/027f1301.d
Date : 23-JUN-1998 21:04
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/027f1301.d (Part 1 of 2)

HNF-SU-WM-DP-309 REV.0

Data File: /chem/gc2.i/062298.b/027f1301.d
Date : 23-JUN-1998 21:04
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 5

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/027f1301.d (Part 2 of 2)

HNF-SD-WM-DP-309 REV. 0

Data File: /chem/gc2.i/062298.b/027f1401.d
 Report Date: 29-Jun-1998 13:42

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/027f1401.d
 Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
 Inj Date : 23-JUN-1998 22:02
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1254
 Misc Info : 200ng/ml A1254
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-MAY-1998 20:13 Cal File: 028f0401.d
 Als bottle: 1 QC Sample: METHSPIKE
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1254.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL		FINAL	RATIO
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	
==	=====	=====	=====	=====	=====	=====
27 Aroclor-1254					CAS #: 11097-69-1	
21.740	21.767	-0.027	184134	0.226	4.52	100.00
22.819	22.846	-0.027	237933	0.221	4.41	112.00- 152.00 129.22
24.752	24.780	-0.028	227770	0.235	4.71	96.00- 136.00 123.70
Average of Peak Concentrations =					4.55	

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.640	12.654	-0.014	1487209	0.101	2.02	100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.678	42.728	-0.050	1027106	0.126	2.52	100.00

Data File: /chem/gc2.i/062298.b/027f1401.d
Report Date: 29-Jun-1998 13:42

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1254 Client Smp ID: 200ng/ml A1254
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: METHSPIKE
SpikeList File: Aroclor-1254.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1254

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
27 Aroclor-1254	4.00	4.55	113.65	50-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	2.02	100.86	50-150
\$ 30 Decachlorobiphenyl	2.00	2.52	126.25	50-150

Data File: /chem/gc2.i/062298.b/027f1401.d
Report Date: 29-Jun-1998 13:42

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1254
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1254

Client SDG: 062298
Client Smp ID: 200ng/ml A1254
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11097-69-1-----	Aroclor-1254	4.55	
877-09-8-----	Tetrachloro-m-xylene	2.02	
2051-24-3-----	Decachlorobiphenyl	2.52	

Data File: /chem/gc2.i/062298.b/027f1401.d
Date : 23-JUN-1998 22:02
Client ID: 200ng/ml A1254
Sample Info: 200ng/ml A1254
Volume Injected (uL): 1.0
Column phase: Xti-5

Page 4

Instrument: gc2.i

Operator: Gerald Ross
Column diameter: 0.25

/chem/gc2.i/062298.b/027f1401.d (Part 1 of 2)

150

HNF-SD-WM-DP-309 REV. 0

Date : 23-JUN-1998 22:02

Client ID: 200ng/ml A1254

Sample Info: 200ng/ml A1254

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/027f1401.d (Part 2 of 2)

151

7787-OLY-WAV-LF-309 MEV. U

Data File: /chem/gc2.i/062298.b/028f1401.d
 Report Date: 13-Jul-1998 14:37

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/028f1401.d
 Lab Smp Id: 400ng/ml A1221 Client Smp ID: 400ng/ml A1221
 Inj Date : 23-JUN-1998 23:00
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 400ng/ml A1221
 Misc Info : 400ng/ml A1221
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-JUN-98 19:59 Cal File: 007f0301.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1221.sub
 Target Version: 3.10 Sample Matrix: WATER

			CONCENTRATIONS				
			ON-COL		FINAL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
23 Aroclor-1221					CAS #: 11104-28-2		
10.801	10.811	-0.010	86019				100.00
11.899	11.923	-0.024	33425			75.00- 115.00	38.86
13.275	13.282	-0.007	89899	0.457	9.14	208.00- 258.00	104.51
13.627	13.673	-0.046	93254	0.413	8.27	0.00- 0.00	108.41
13.834	13.849	-0.015	214274	0.429	8.59	0.00- 0.00	249.10
Average of Peak Concentrations =					8.67		

\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8		
12.638	12.654	-0.016	2558970	0.174	3.47		100.00

\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3		
42.678	42.728	-0.050	1579592	0.194	3.88		100.00

108.375 So CLUCK
 7/13/98

Data File: /chem/gc2.i/062298.b/028f1401.d
Report Date: 13-Jul-1998 14:37

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 400ng/ml A1221 Client Smp ID: 400ng/ml A1221
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: Aroclor-1221.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 400ng/ml A1221

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	4.00	3.47	86.77	50-150
\$ 30 Decachlorobiphenyl	4.00	3.88	97.08	50-150

Data File: /chem/gc2.i/062298.b/028f1401.d
Report Date: 13-Jul-1998 14:37

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 400ng/ml A1221
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 400ng/ml A1221

Client SDG: 062298
Client Smp ID: 400ng/ml A1221
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG) ug/L	Q
11104-28-2-----	Aroclor-1221	8.67	
877-09-8-----	Tetrachloro-m-xylene	3.47	
2051-24-3-----	Decachlorobiphenyl	3.88	

Date : 23-JUN-1998 23:00

Client ID: 400ng/ml A1221

Sample Info: 400ng/ml A1221

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/028f1401.d (Part 1 of 2)

Data File: /chem/gc2.i/062298.b/029f1401.d
 Report Date: 29-Jun-1998 13:43

Page 1

222-S Laboratory

Data file : /chem/gc2.i/062298.b/029f1401.d
 Lab Smp Id: 200ng/ml A1660 Client Smp ID: 200ng/ml A1660
 Inj Date : 23-JUN-98 23:58
 Operator : Gerald Ross Inst ID: gc2.i
 Smp Info : 200ng/ml A1660
 Misc Info : 200ng/ml A1660
 Comment :
 Method : /chem/gc2.i/062298.b/rcrapcb.m
 Meth Date : 24-Jun-1998 09:58 gar Quant Type: ESTD
 Cal Date : 22-MAY-1998 20:13 Cal File: 028f0401.d
 Als bottle: 1
 Dil Factor: 1.000
 Integrator: HP Genie Compound Sublist: AR1660.sub
 Target Version: 3.10 Sample Matrix: WATER

CONCENTRATIONS						
			ON-COL		FINAL	
RT	EXP RT	DLT RT	RESPONSE (	ng)	(ug/L)	TARGET RANGE RATIO
--	-----	-----	-----	-----	-----	-----
22 Aroclor-1016					CAS #: 12674-11-2	
15.352	15.374	-0.022	126780	0.196	3.92	100.00
17.147	17.171	-0.024	137371	0.186	3.73 114.00- 134.00	108.35
17.224	17.247	-0.023	188699	0.200	4.00 134.00- 154.00	148.84
Average of Peak Concentrations =					3.88	
28 Aroclor-1260					CAS #: 11096-82-5	
25.987	26.019	-0.032	194217	0.199	3.99	100.00
27.221	27.253	-0.032	196540	0.203	4.06 89.00- 109.00	101.20
28.767	28.800	-0.033	191713	0.216	4.32 72.00- 92.00	98.71
Average of Peak Concentrations =					4.12	
\$ 29 Tetrachloro-m-xylene					CAS #: 877-09-8	
12.640	12.654	-0.014	1625772	0.110	2.20	100.00
\$ 30 Decachlorobiphenyl					CAS #: 2051-24-3	
42.677	42.728	-0.051	1055958	0.130	2.60	100.00

Data File: /chem/gc2.i/062298.b/029f1401.d
Report Date: 29-Jun-1998 13:43

Page 2

222-S Laboratory

RECOVERY REPORT

Client Name: Client SDG: 062298
Sample Matrix: LIQUID Fraction: PEST
Lab Smp Id: 200ng/ml A1660 Client Smp ID: 200ng/ml A1660
Level: LOW Operator: Gerald Ross
Data Type: GC MULTI COMP SampleType: SAMPLE
SpikeList File: RESOLUTION.spk Quant Type: ESTD
Method File: /chem/gc2.i/062298.b/rcrapcb.m
Misc Info: 200ng/ml A1660

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 29 Tetrachloro-m-xyle	2.00	2.20	110.26	50-150
\$ 30 Decachlorobiphenyl	2.00	2.60	129.80	50-150

Data File: /chem/gc2.i/062298.b/029f1401.d
Report Date: 29-Jun-1998 13:43

Page 3

222-S Laboratory

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 200ng/ml A1660
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: PEST
Data Type: GC MULTI COMP
Misc Info: 200ng/ml A1660

Client SDG: 062298
Client Smp ID: 200ng/ml A1660
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: Gerald Ross

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/L	Q
12674-11-2-----Aroclor-1016		3.88	
11096-82-5-----Aroclor-1260		4.12	
=====		=====	
877-09-8-----Tetrachloro-m-xylene		2.20	
2051-24-3-----Decachlorobiphenyl		2.60	

Data File: /chem/gc2.i/062298.b/029F1401.d
Date : 23-JUN-98 23:58
Client ID: 200ng/ml A1660
Sample Info: 200ng/ml A1660
Volume Injected (uL): 1.0
Column phase: Xti-5

Instrument: gc2.i
Operator: Gerald Ross
Column diameter: 0.25

Page 4

/chem/gc2.i/062298.b/029F1401.d (Part 1 of 2)

HMF-SD-WM-DF-309 REV. 0

Data File: /chem/gc2.i/062298.b/029f1401.d

Page 5

Date : 23-JUN-98 23:58

Client ID: 200ng/ml A1660

Sample Info: 200ng/ml A1660

Volume Injected (uL): 1.0

Column phase: Xti-5

Instrument: gc2.i

Operator: Gerald Ross

Column diameter: 0.25

/chem/gc2.i/062298.b/029f1401.d (Part 2 of 2)

DISTRIBUTION SHEET

To Distribution	From Production Planning & Control		Page 1 of 1		
			Date: 07/29/98		
Project Title/Work Order HNF-SD-WM-DP-309, Rev. 0 "Final Report for Tank 100 Sump Sludge (KON332) for Polychlorinated Biphenyl's (PCB)"			EDT NO.: EDT-623162		
			ECN NO.: N/A		
Name		MSIN	Text With all Attach	EDT/ECN ONLY	
<u>Lockheed Martin Hanford Corp.</u>					
A. E. Young		R1-10	X		
<u>Lockheed Martin Services, Inc.</u>					
Central Files		A3-88	1		
<u>Los Alamos Technical Associates</u>					
M. T. Ellsworth		T6-12		X*	
<u>Waste Management of Hanford, Inc.</u>					
R. K. Fuller		T6-50	X		
K. L. Powell		S3-30		X	
S. M. Steele		T6-03	X		
LTIC		T6-03		X	

* Needs only releasing paperwork, not a copy of the released document.