

SAF-RC-006
100-N Area D4 – Other
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution Required

COMMENTS:

SDG K4067

SAF-RC-006

Rad only

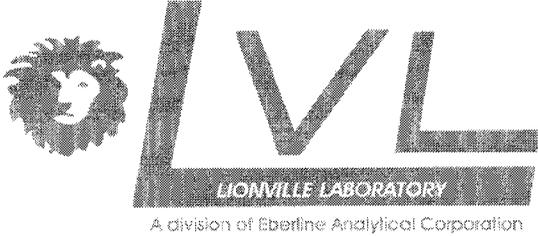
Chem only

Rad & Chem

Complete

Partial

Waste Site(s): 151-D Floor Stain



264 Welsh Pool Road
Exton, Pennsylvania 19341
Phone (610) 280-3000
Fax (610) 280-3041

11 March 2013

Joan Kessner
WC-Hanford, Inc.
2620 Fermi Avenue
MSIN H4-21
Richland, WA 99354

Subject: Analytical Data Package

Dear Ms. Kessner:

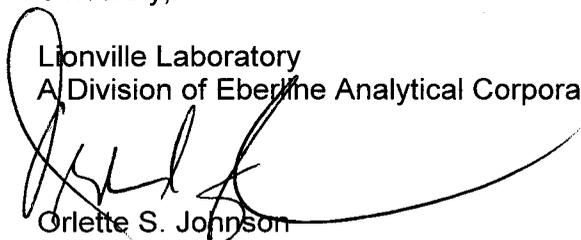
Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	1302025
SDG #	K4067
SAF #	RC-006
Date Received	02/08/13
# Samples	1
Matrix	OTHER
Volatiles	
Semivolatiles	
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
PAHs	
Herbicides	
Metals	
Inorganics	

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

Sincerely,

Lionville Laboratory
A Division of Eberline Analytical Corporation


Orlette S. Johnson
Project Manager

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 14 pages.

R:\GROUP\PMORLETTE\Hanford\Data\B_ltrs.DOC

000000001

CHAIN OF CUSTODY

Lionville Laboratory
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford
 Project/SAF/SOW/Release #: LC-006

Date: 2/8/13

LvL Batch #: 1302 025

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|--|---|---|
| 1. Samples Hand Delivered or <u>Shipped?</u> | Carrier <u>FedEx</u> | Airbill # <u>794704760285</u> |
| 2. Custody Seals on coolers or shipping containers intact, signed & dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 3. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Comments: |
| 4. All expected paperwork received (coc & other client specific information) sealed in plastic bag and easily accessible? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 5. Samples received cooled or ambient? | Temp <u>29</u> °C | Cooler # <u>WCH-11-017</u> |
| How was the temperature taken? | <input checked="" type="checkbox"/> IR <input type="checkbox"/> Temp. Blank | <input type="checkbox"/> Other (Specify): |
| Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 6. Custody seals on sample containers intact, signed and dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| <hr/> | | |
| 7. COC (Client & LvL) signed & dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 8. Sample containers are intact? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 9. All samples on COC received? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| All samples received on COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 10. All sample label information matches COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 11. Samples properly preserved? (If #5 is no, then this is no.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 12. Samples received within hold times? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Short holds taken to wet lab? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 13. VOA, TOC, TOX, RSK-175, Sulfides, Non-Halogenated VOAs (Alcohol/Glycol) free of headspace? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 14. QC stickers placed on bottles designated by client? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 15. Shipment meets LvL Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 16. Project Manager contacted concerning any discrepancies? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A |

Person Contacted _____

Date _____

PCBs

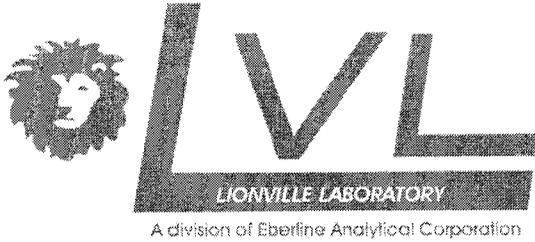


264 Welsh Pool Road
Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-006 Project Number: K4067 Project Manager: Joan Kessner	Reported: 02/19/2013 21:52
---	---	-------------------------------

Analytical Report for Polychlorinated Biphenyls by SW846 8082

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
JIRDD2	1302025-01	Other Solid	02/06/2013 10:10	02/08/2013 09:45



264 Welsh Pool Road
Exton, Pennsylvania 19341
Phone (610) 280-3000
Fax (610) 280-3041

Case Narrative

Client: WC-HANFORD RC-006 K4067
LVL #: 1302025

W.O. #: 60049-001-001-0001-00
Received: 02-08-2013

PCBs

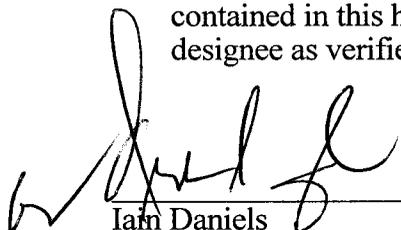
One (1) solid sample was collected on 02-06-2013.

The sample and associated QC samples were extracted 02-12-2013 and analyzed 02-13-2013 according to criteria set forth in Lionville Laboratory SOPs. The extraction procedure was based on SW846 Method 3540C and the analysis procedure was based on SW846 Method 8082. The sample and associated QC received Copper-Sulfur and Sulfuric Acid cleanups based on SW846 methods 3660A and 3665A. The sample and associated QC were extracted with a reduced initial volume due to sample matrix. Reporting limits have been adjusted to reflect the necessary dilutions.

Lionville Laboratory (LvL) is NELAP accredited by the State of Pennsylvania. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvL certifies that all test results meet the requirements of NELAC with any exception noted in the following statements:

1. The results presented in this report are derived from a sample that met LvL's sample acceptance policy.
2. All required holding times for extraction and analysis have been met.
3. All surrogate recoveries were within QC acceptance criteria.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within QC acceptance criteria.
6. All matrix spike recoveries were within QC acceptance criteria.
7. The sample was reported on a wet weight 'as received' basis.
8. All initial calibrations associated with this data set were within acceptance criteria.
9. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria. Per SW846 Method 8000B, the attached table lists compounds where the % difference or drift was greater than 15%, and the mean across all compounds was used for evaluation of the continuing calibration. Results associated with these compounds are considered to have greater uncertainty.
10. Patterns of Aroclors 1016 and 1260 were identified in these samples. The reported Aroclors were chosen based on the best pattern match and fit. Quantitation was performed using congeners common to all Aroclors to give the best overall total PCB concentration.

11. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or a designee as verified by the following signature.



Ian Daniels
LvL Laboratory Manager



Date

8082/A PCBs

Analytes with %Difference or %Drift >15%, Where Mean is Used for Continuing Calibration

Analyte	CCV1 02.13.13 2:58:52 PM		CCV2 02.13.13 9:56:09 PM		CCV3 02.14.13 1:03:41 AM		CCV4	CCV5	CCV6	CCV7	CCV8	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Tetrachloro-meta-xylene (surrogate)												
Decachlorobiphenyl (surrogate)					-30.6	-23.7						
Aroclor 1016-1												
Aroclor 1016-2						15.5						
Aroclor 1016-3				16.5		16.3						
Aroclor 1016-4												
Aroclor 1016-5												
Aroclor 1260-1												
Aroclor 1260-2				17.0								
Aroclor 1260-3												
Aroclor 1260-4		16.0		20.0								
Aroclor 1260-5				18.5								
Mean %D or %Drift	6.1	8.7	6.6	10.3	4.3	3.4						

Sample results reported from affected CCV:

CCV1: L 302102 - BIKI, BSI, MSI, MSD1, 1302015-01, 02

CCV2: 1302025-01, L 302102 - MS2, MSD2

CCV3: _____

CCV4: _____

CCV5: _____

CCV6: _____

CCV7: _____

CCV8: _____



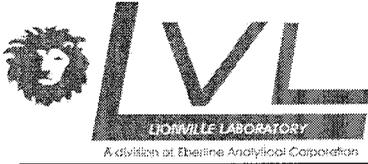
GLOSSARY OF DATA

DATA QUALIFIERS

- U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).
- J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
- E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- I = Interference.
- .I = Indicates an interference on one analytical column only. Result is reported from remaining analytical column.
- P = This flag is used for a dual column analysis (i.e. pesticides/PCB/herbicides) when there is greater than 40% difference for detected concentrations between the two GC columns; the lower of the two values is reported on Form 1 and flagged with a "P".
- D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C = This flag applies to a compound that has been confirmed by GC/MS.

ABBREVIATIONS

- BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.
- BSD = Indicates blank spike duplicate.
- MS = Indicates matrix spike.
- MSD = Indicates matrix spike duplicate.
- DL = Indicates that recoveries were not obtained because the extract had to be diluted for analysis.
- NA = Not Applicable.
- DF = Dilution Factor.
- NR = Not Required.
- NS = Not Spiked.
- SP = Indicates Spiked Compound.
- NPM = No pattern match for multi-component target analytes.



264 Welsh Pool Road
 Exton, PA 19341
 Phone: 610-280-3000
 Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-006 Project Number: K4067 Project Manager: Joan Kessner	Reported: 02/19/2013 21:52
---	---	-------------------------------

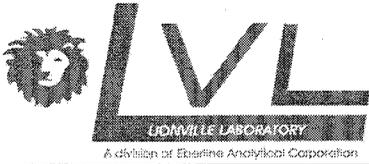
J1RDD2
1302025-01 (Other Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
---------	----------------------	-----------------	-------	----------	-------	----------	----------	--------

Lionville Laboratory

Polychlorinated Biphenyls by SW846 8082

Aroclor 1016	1240		380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1221	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1232	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1242	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1248	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1254	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1260	488		380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1262	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
Aroclor 1268	380	U	380	ug/kg wet	1	L302102	02/12/2013	02/13/2013	8082
<i>Surrogate: Decachlorobiphenyl</i>	86 %		43-144			L302102	02/12/2013	02/13/2013	8082
<i>Surrogate: Tetrachloro-meta-xylene</i>	89 %		52-141			L302102	02/12/2013	02/13/2013	8082



264 Welsh Pool Road
 Exton, PA 19341
 Phone: 610-280-3000
 Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-006 Project Number: K4067 Project Manager: Joan Kessner	Reported: 02/19/2013 21:52
---	---	-------------------------------

Polychlorinated Biphenyls by SW846 8082 - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L302102 - SW 3540C										
Blank (L302102-BLK1)					Prepared: 02/12/2013 Analyzed: 02/13/2013					
Aroclor 1016	13.3	U	13.3	ug/kg wet						
Aroclor 1221	13.3	U	13.3	ug/kg wet						
Aroclor 1232	13.3	U	13.3	ug/kg wet						
Aroclor 1242	13.3	U	13.3	ug/kg wet						
Aroclor 1248	13.3	U	13.3	ug/kg wet						
Aroclor 1254	13.3	U	13.3	ug/kg wet						
Aroclor 1260	13.3	U	13.3	ug/kg wet						
Aroclor 1262	13.3	U	13.3	ug/kg wet						
Aroclor 1268	13.3	U	13.3	ug/kg wet						
Surrogate: Decachlorobiphenyl	25.0			ug/kg wet	33.333		75	43-144		
Surrogate: Tetrachloro-meta-xylene	27.1			ug/kg wet	33.337		81	52-141		
LCS (L302102-BS1)					Prepared: 02/12/2013 Analyzed: 02/13/2013					
Aroclor 1016	150		13.3	ug/kg wet	166.67		90	50-138		
Aroclor 1260	168		13.3	ug/kg wet	166.67		100	50-148		
Surrogate: Decachlorobiphenyl	33.7			ug/kg wet	33.333		101	43-144		
Surrogate: Tetrachloro-meta-xylene	34.8			ug/kg wet	33.337		104	52-141		
Matrix Spike (L302102-MS2)			Source: 1302025-01		Prepared: 02/12/2013 Analyzed: 02/13/2013					
Aroclor 1016	3970		376	ug/kg wet	4717.0	1240	58	50-138		
Aroclor 1260	4130		376	ug/kg wet	4717.0	488	77	50-148		
Surrogate: Decachlorobiphenyl	766			ug/kg wet	943.40		81	43-144		
Surrogate: Tetrachloro-meta-xylene	825			ug/kg wet	943.49		87	52-141		
Matrix Spike Dup (L302102-MSD2)			Source: 1302025-01		Prepared: 02/12/2013 Analyzed: 02/13/2013					
Aroclor 1016	4400		319	ug/kg wet	4000.0	1240	79	50-138	31	40
Aroclor 1260	3950		319	ug/kg wet	4000.0	488	86	50-148	11	40
Surrogate: Decachlorobiphenyl	526			ug/kg wet	800.00		66	43-144		
Surrogate: Tetrachloro-meta-xylene	729			ug/kg wet	800.08		91	52-141		

PREPARATION BENCH SHEET

L302102

Lionville Laboratory

Printed: 2/13/2013 3:41:18PM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1201397

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	Spike μ l	Surrogate μ l	Client	Extraction Comments
L302015-01	8082 PCBs	02/12/2013 15:49	30.56	10			250	250	WC-Hanford, Inc.	
L302015-02	8082 PCBs	02/12/2013 15:49	30.83	10			250	250	WC-Hanford, Inc.	
L302025-01	8082 PCBs	02/12/2013 15:49	1.05	10			250	250	WC-Hanford, Inc.	
L302102-BLK1	QC	02/12/2013 15:49	30	10			250	250		
L302102-BS1	QC	02/12/2013 15:49	30	10	1300037		250	250		
L302102-MS1	QC	02/12/2013 15:49	30.04	10	1300037	1302015-01	250	250		
L302102-MS2	QC	02/12/2013 15:49	1.06	10	1300037	1302025-01	250	250		
L302102-MSD1	QC	02/12/2013 15:49	30.92	10	1300037	1302015-01	250	250		
L302102-MSD2	QC	02/12/2013 15:49	1.25	10	1300037	1302025-01	250	250		

*Searched 02.13.13 SZ
By ToFH BIDK036*

[Signature]
Extracts Relinquished By _____ Date 2/13/13 1541

Extracts Received By SE Stock Date 02.13.13 1550