SAF-RC-029
Remaining Sites Confirmation Sampling – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 8/21/12
INITIAL/DATE

COMMENTS:

SDG K3960 SAF RC-029

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Waste Site: 100-D-98:2

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

14 August 2012

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 #	1208001
SDG #	K3960
SAF #	RC-029
Date Received	08/01/12
# Samples	3
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	X
Glycols	
DRO/KRO/GRO	X
PAHs	
Herbicides	
Metals	X
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 39 pages.

CHAIN OF CUSTODY

Lionville Laboratory Use Only

1208001

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Lionville Laboratory
A Division of Eberline Analytical Corporation

Client: WC Hanford SAF# RC-029
Est. Final Proj. Sampling Date:
Project#:
Project Contact/Phone#:
Lionville Laboratory Project Manager: O. Johnson
QC: SW Del: SA TAT: 15 Days

Date Rec'd: 08-01-12 Date Due: 08-16-12

		A			B		C
Refrigerator #		1			1		1
#/Type Container	Liquid						
	Solid	1AG			1AG		1AG
Volume	Liquid						
	Solid	120			120		60
Preservatives		—			—		—
ANALYSES REQUESTED		ORGANIC					INORG
		VOA	BNA	Reed/PCB	Herb		8TPH-D	Metal Hg	CN
Lionville Laboratory Use Only				8082			8015	Met/Hg	

MATRIX CODES:
W Water
WW Waste Water
GW Groundwater
WST Waste
WI Wipe
SO Solid
S Soil
SL Sludge
SE Sediment
PC Paint Chips
O Oil
NAL Non-Aqueous Liquid
L Leachate
A Air
T Tissue
F Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
01	J1PWH0			Soil	7-30-12	1210			X			X		X					
02	1 1			1	1	1220			X			X		X					
03	1 2			1	1	1345			X			X		X					

Special Instructions:

① Met = HSL + B, Mo, Si (no TL)

Special Instructions:

1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	8/1/12	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-029-144	Page 1 of 1

Collector ~~Q. Stowe~~ H. Weber	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8C	Data Turnaround: 15 Days		
Project Designation: Remaining Sites Confirmation Sampling - Soil Full Protocol	Sampling Location: 100-D-98:2		SAF No.: RC-029
Ice Chest No.: WCH-11-055	Field Logbook No.: EL-1662-01	COA: C10D98A000	Method of Shipment: Fed
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A116473		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples may contain hazardous chemicals at levels that pose a risk to human health and/or the environment. Please handle accordingly.

Special Handling and/or Storage

Please keep cool (4 deg C) those requiring coolness, as shown on "Preservation" heading. Thank You.

Preservation			Cool 4C	Cool 4C	Cool 4C						
Type of Container			G/P	G	aG						
No. of Container(s)			1	1	1						
Volume			60mL	120mL	120mL						
SAMPLE ANALYSIS			See item (1) in Special Instructions.	TPH-Diesel Range - WTPH-D +	PCBs - 8082						
Sample No.	Matrix *	Sample Date	Sample Time								
J1PWH0	SOIL	7/30/12	1210	X	X	X					
J1PWH1	SOIL	7/30/12	1220	X	X	X					
J1PWH2	SOIL	7/30/12	1345	X	X	X					
J1PWH3 AA 7-30-12	SOIL										
J1PWH4	SOIL										

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Heather Weber, Heather Weber	~~1300~~ 1350 7-30-12	WCH MZL MStankovich	1350 7/30/12
		MZL	7/30/12
WCH MZL MStankovich	1515 7/30/12	1060#1 A. Freier A. Freier	1515 7-30-12
WCH A. Freier A. Freier	1060#1 7-31-12 1025	Fed Ex	
Fed Ex	8-1-12 0935	Victor Hernandez	8-1-12 0935

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)

REVIEWED BY MWShea DATE 7/31/12

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

000000004

Lionville Laboratory

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford **Date:** 8/1/12

Project/SAF/SOW/Release #: RC-029

LvL Batch #: 1208 001 **Sample Custodian:** Victor Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill #
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.1°	°C	Cooler # WCH-11-055
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvL) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ 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.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted_____ Date _____

PCBs

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

WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/15/2012 20:28

Analytical Report for Polychlorinated Biphenyls by SW846 8082

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PWH0	1208001-01	Soil	07/30/2012 12:10	08/01/2012 09:35
J1PWH1	1208001-02	Soil	07/30/2012 12:20	08/01/2012 09:35
J1PWH2	1208001-03	Soil	07/30/2012 13:45	08/01/2012 09:35

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

264 Welsh Pool Road
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Case Narrative

Client: WC-HANFORD RC-029 K3960
LVL #: 1208001

W.O. #: 60049-001-001-0001-00
Received: 08-01-2012

PCBs

Three (3) soil samples were collected on 07-30-2012.

The samples and associated QC samples were extracted 08-02-2012 and analyzed 08-13,15-2012 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. All samples received Copper-Sulfur and Sulfuric Acid cleanups based on SW846 methods 3660A and 3665A.

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 samples that met LvL's sample acceptance policy.
2. All required holding times for extraction and analysis have been met.
3. All obtainable surrogate recoveries were within acceptance criteria.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. The samples are reported on a dry weight 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.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or a designee as verified by the following signature.

Iain Daniels
LvL Laboratory Manager

8/20/12
Date

r:\group\data\2012\pcb\wc hanford\1208001oj.doc

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 pages.

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.

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/15/2012 20:28

J1PWH0

1208001-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1221	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1232	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1242	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1248	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1254	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1260	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1262	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1268	13.3	U	13.3	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Surrogate: Decachlorobiphenyl	*75 %*		*43-144*			*L208016*	*08/02/2012*	*08/15/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*80 %*		*52-141*			*L208016*	*08/02/2012*	*08/15/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/15/2012 20:28

J1PWH1

1208001-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1221	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1232	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1242	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1248	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1254	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1260	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1262	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1268	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Surrogate: Decachlorobiphenyl	*78 %*		*43-144*			*L208016*	*08/02/2012*	*08/15/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*81 %*		*52-141*			*L208016*	*08/02/2012*	*08/15/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/15/2012 20:28

J1PWH2
1208001-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1221	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1232	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1242	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1248	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1254	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1260	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1262	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Aroclor 1268	13.6	U	13.6	ug/kg dry	1	L208016	08/02/2012	08/15/2012	8082
Surrogate: Decachlorobiphenyl	*81 %*		*43-144*			*L208016*	*08/02/2012*	*08/15/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*85 %*		*52-141*			*L208016*	*08/02/2012*	*08/15/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/15/2012 20:28

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 L208016 - SW 3540C										
Blank (L208016-BLK1)				Prepared: 08/02/2012 Analyzed: 08/13/2012						
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	*33.6*			*ug/kg wet*	*33.333*		*101*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*30.5*			*ug/kg wet*	*33.337*		*91*	*52-141*		
LCS (L208016-BS1)				Prepared: 08/02/2012 Analyzed: 08/13/2012						
Aroclor 1016	131		13.3	ug/kg wet	166.67		79	50-138		
Aroclor 1260	150		13.3	ug/kg wet	166.67		90	50-148		
Surrogate: Decachlorobiphenyl	*33.9*			*ug/kg wet*	*33.333*		*102*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*29.4*			*ug/kg wet*	*33.337*		*88*	*52-141*		
Matrix Spike (L208016-MS3)		**Source: 1208001-01**		Prepared: 08/02/2012 Analyzed: 08/15/2012						
Aroclor 1016	135		13.4	ug/kg dry	167.61	13.3 U	80	50-138		
Aroclor 1260	145		13.4	ug/kg dry	167.61	13.3 U	87	50-148		
Surrogate: Decachlorobiphenyl	*29.5*			*ug/kg dry*	*33.522*		*88*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*30.0*			*ug/kg dry*	*33.525*		*89*	*52-141*		
Matrix Spike Dup (L208016-MSD3)		**Source: 1208001-01**		Prepared: 08/02/2012 Analyzed: 08/15/2012						
Aroclor 1016	141		13.6	ug/kg dry	170.89	13.3 U	82	50-138	2	40
Aroclor 1260	153		13.6	ug/kg dry	170.89	13.3 U	89	50-148	3	40
Surrogate: Decachlorobiphenyl	*29.9*			*ug/kg dry*	*34.179*		*88*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*29.3*			*ug/kg dry*	*34.182*		*86*	*52-141*		

PREPARATION BENCH SHEET

L208016

Lionville Laboratory

Printed: 8/3/2012 3:20:52PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 1200502**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1207052-01	8081A TCL Pesticides	08/02/2012 16:31	15.17	10				250	Navarro Research & Engineering, Inc.	Added for BatchQC in: L208016
1207052-01	8082 PCBs	08/02/2012 16:31	15.17	10				250	Navarro Research & Engineering, Inc.	
1207052-02	8082 PCBs	08/02/2012 16:31	15.47	10				250	Navarro Research & Engineering, Inc.	
1207053-01	8082 PCBs	08/02/2012 16:31	9.43	10				250	ANR Pipeline	
1207054-01	8081A TCL Pesticides	08/02/2012 16:31	16.72	10				250	WC-Hanford, Inc.	Added for BatchQC in: L208016
1207054-01	8082 PCBs	08/02/2012 16:31	16.72	10				250	WC-Hanford, Inc.	
1208001-01	8081A TCL Pesticides	08/02/2012 16:31	30.89	10				250	WC-Hanford, Inc.	Added for BatchQC in: L208016
1208001-01	8082 PCBs	08/02/2012 16:31	30.89	10				250	WC-Hanford, Inc.	
1208001-02	8082 PCBs	08/02/2012 16:31	30.2	10				250	WC-Hanford, Inc.	
1208001-03	8082 PCBs	08/02/2012 16:31	30.71	10				250	WC-Hanford, Inc.	
1208007-01	8081A TCL Pesticides	08/02/2012 16:31	30.99	10				250	WC-Hanford, Inc.	Added for BatchQC in: L208016
1208007-01	8082 PCBs	08/02/2012 16:31	30.99	10				250	WC-Hanford, Inc.	
1208008-01	8081A TCL Pesticides	08/02/2012 16:31	30.51	10				250	WC-Hanford, Inc.	
1208008-01	8082 PCBs	08/02/2012 16:31	30.51	10				250	WC-Hanford, Inc.	
L208016-BLK1	QC	08/02/2012 16:31	30	10				250		PCB
L208016-BLK2	QC	08/02/2012 16:31	30	10				250		pest
L208016-BS1	QC	08/02/2012 16:31	30	10	1200902		250	250		PCB
L208016-BS2	QC	08/02/2012 16:31	30	10	1200903		250	250		pest
L208016-MS1	QC	08/02/2012 16:31	15.97	10	1200902	1207052-01	250	250		PCB
L208016-MS2	QC	08/02/2012 16:31	15.62	10	1200902	1207054-01	250	250		PCB

Extracts Relinquished By — Date 8/3/12 1550

Extracts Received By — Date 8-3-12

PREPARATION BENCH SHEET

L208016

Lionville Laboratory

Printed: 8/3/2012 3:20:52PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 1200502**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
L208016-MS3	QC	08/02/2012 16:31	30.7	10	1200902	1208001-01	250	250		PCB
L208016-MS4	QC	08/02/2012 16:31	30.12	10	1200902	1208007-01	250	250		PCB
L208016-MS5	QC	08/02/2012 16:31	30.5	10	1200902	1208008-01	250	250		PCB
L208016-MS6	QC	08/02/2012 16:31	30.28	10	1200903	1208008-01	250	250		pest
L208016-MSD1	QC	08/02/2012 16:31	15.83	10	1200902	1207052-01	250	250		PCB
L208016-MSD2	QC	08/02/2012 16:31	17.29	10	1200902	1207054-01	250	250		PCB
L208016-MSD3	QC	08/02/2012 16:31	30.11	10	1200902	1208001-01	250	250		PCB
L208016-MSD4	QC	08/02/2012 16:31	30.47	10	1200902	1208007-01	250	250		PCB
L208016-MSD5	QC	08/02/2012 16:31	31.99	10	1200902	1208008-01	250	250		PCB
L208016-MSD6	QC	08/02/2012 16:31	30.17	10	1200903	1208008-01	250	250		pest

S cleaned 8-6-12 LK

Cu Lot #G16W031

1550

Extracts Relinquished By 8/3/12 Date

LK 8-3-12

Extracts Received By Date

DRO/MO

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

WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/08/2012 20:47

Analytical Report for Extractable Petroleum Hydrocarbons by SW846 8015

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PWH0	1208001-01	Soil	07/30/2012 12:10	08/01/2012 09:35
J1PWH1	1208001-02	Soil	07/30/2012 12:20	08/01/2012 09:35
J1PWH2	1208001-03	Soil	07/30/2012 13:45	08/01/2012 09:35

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

264 Welsh Pool Road
Exton, Pennsylvania 19341
Phone (610) 280-3000
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Case Narrative

Client: WC-HANFORD RC-029 K3960
LVL #: 1208001

W.O. #: 60049-001-001-0001-00
Date Received: 08-01-2012

DIESEL RANGE ORGANICS

Three (3) soil samples were collected on 07-30-2012.

The samples and associated QC samples were extracted 08-06-2012 and analyzed 08-08-2012 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 8015B for Diesel Range Organics.

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 samples that met LvL's sample acceptance policy.
2. All required holding times for extraction and analysis have been met.
3. All obtainable surrogate recoveries were within acceptance criteria.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. All initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
9. The samples were reported on a dry weight basis.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or a designee as verified by the following signature.

Iain Daniels
LvL Laboratory Manager

8/18/12
Date

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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 pages.

LIONVILLE LABORATORY INC.

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
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Phone: 610-280-3000
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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/08/2012 20:47

Extractable Petroleum Hydrocarbons by SW846 8015
Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PWH0 (1208001-01) Soil								
Surrogate: p-Terphenyl	*90 %*	*39-129*			*L208030*	*08/06/2012*	*08/08/2012*	*8015M*
Diesel Range Organics	19300	3280	ug/kg dry	1	L208030	08/06/2012	08/08/2012	8015M
Motor Oil	31500	9840	ug/kg dry	1	L208030	08/06/2012	08/08/2012	8015M
J1PWH1 (1208001-02) Soil								
Surrogate: p-Terphenyl	*91 %*	*39-129*			*L208030*	*08/06/2012*	*08/08/2012*	*8015M*
Diesel Range Organics	7960	3410	ug/kg dry	1	L208030	08/06/2012	08/08/2012	8015M
Motor Oil	9030 J	10200	ug/kg dry	1	L208030	08/06/2012	08/08/2012	8015M
J1PWH2 (1208001-03) Soil								
Surrogate: p-Terphenyl	*94 %*	*39-129*			*L208030*	*08/06/2012*	*08/08/2012*	*8015M*
Diesel Range Organics	2830 J	3430	ug/kg dry	1	L208030	08/06/2012	08/08/2012	8015M
Motor Oil	3840 J	10300	ug/kg dry	1	L208030	08/06/2012	08/08/2012	8015M

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Phone: 610-280-3000
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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/08/2012 20:47

Extractable Petroleum Hydrocarbons by SW846 8015 - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L208030 - SW 3540C										
Blank (L208030-BLK1)				Prepared: 08/06/2012 Analyzed: 08/08/2012						
Diesel Range Organics	1750	J	3330	ug/kg wet						
Motor Oil	10000	U	10000	ug/kg wet						
Surrogate: p-Terphenyl	*5650*			*ug/kg wet*	*6666.7*		*85*	*39-129*		
LCS (L208030-BS1)				Prepared: 08/06/2012 Analyzed: 08/08/2012						
Diesel Range Organics	49700		3330	ug/kg wet	66667		75	42-133		
Surrogate: p-Terphenyl	*5620*			*ug/kg wet*	*6666.7*		*84*	*39-129*		
Matrix Spike (L208030-MS1)		**Source: 1208001-01**		Prepared: 08/06/2012 Analyzed: 08/08/2012						
Diesel Range Organics	55800		3360	ug/kg dry	67263	19300	54	42-133		
Surrogate: p-Terphenyl	*5370*			*ug/kg dry*	*6726.3*		*80*	*39-129*		
Matrix Spike Dup (L208030-MSD1)		**Source: 1208001-01**		Prepared: 08/06/2012 Analyzed: 08/08/2012						
Diesel Range Organics	63900		3360	ug/kg dry	67109	19300	66	42-133	20	40
Surrogate: p-Terphenyl	*5960*			*ug/kg dry*	*6710.9*		*89*	*39-129*		

REVISION

PREPARATION BENCH SHEET

L208030

Lionville Laboratory

Printed: 8/8/2012 8:21:01PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 1200549**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1208001-01	8015M DRO	08/06/2012 11:11	31.39	1				1000	WC-Hanford, Inc.	
1208001-02	8015M DRO	08/06/2012 11:11	30.22	1				1000	WC-Hanford, Inc.	
1208001-03	8015M DRO	08/06/2012 11:11	30.57	1				1000	WC-Hanford, Inc.	
1208007-01	8015M DRO	08/06/2012 11:11	30.63	1				1000	WC-Hanford, Inc.	
1208008-01	8015M DRO	08/06/2012 11:11	30.49	1				1000	WC-Hanford, Inc.	
1208012-01	8015M DRO	08/06/2012 11:11	30.37	1				1000	WC-Hanford, Inc.	
1208012-02	8015M DRO	08/06/2012 11:11	30.31	1				1000	WC-Hanford, Inc.	
1208012-03	8015M DRO	08/06/2012 11:11	30.17	1				1000	WC-Hanford, Inc.	
1208012-04	8015M DRO	08/06/2012 11:11	30.9	1				1000	WC-Hanford, Inc.	
1208012-05	8015M DRO	08/06/2012 11:11	30.31	1				1000	WC-Hanford, Inc.	
L208030-BLK1	QC	08/06/2012 11:11	30	1				1000		
L208030-BS1	QC	08/06/2012 11:11	30	1	1200846		1000	1000		
L208030-MS1	QC	08/06/2012 11:11	30.6	1	1200846	1208001-01	1000	1000		
L208030-MS2	QC	08/06/2012 11:11	31.07	1	1200846	1208007-01	1000	1000		
L208030-MS3	QC	08/06/2012 11:11	30.72	1	1200846	1208008-01	1000	1000		
L208030-MS4	QC	08/06/2012 11:11	30.28	1	1200846	1208012-01	1000	1000		
L208030-MSD1	QC	08/06/2012 11:11	30.67	1	1200846	1208001-01	1000	1000		
L208030-MSD2	QC	08/06/2012 11:11	30.37	1	1200846	1208007-01	1000	1000		
L208030-MSD3	QC	08/06/2012 11:11	30.19	1	1200846	1208008-01	1000	1000		
L208030-MSD4	QC	08/06/2012 11:11	30.43	1	1200846	1208012-01	1000	1000		

Revision for BS ID + AMT CAC 8/8/12

Extracts Relinquished By Date Extracts Received By Date

PREPARATION BENCH SHEET

L208030

Lionville Laboratory

Printed: 8/7/2012 2:40:47PM

000000023

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 1200549**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1208001-01	8015M DRO	08/06/2012 11:11	31.39	1				1000	WC-Hanford, Inc.	
1208001-02	8015M DRO	08/06/2012 11:11	30.22	1				1000	WC-Hanford, Inc.	
1208001-03	8015M DRO	08/06/2012 11:11	30.57	1				1000	WC-Hanford, Inc.	
1208007-01	8015M DRO	08/06/2012 11:11	30.63	1				1000	WC-Hanford, Inc.	
1208008-01	8015M DRO	08/06/2012 11:11	30.49	1				1000	WC-Hanford, Inc.	
1208012-01	8015M DRO	08/06/2012 11:11	30.37	1				1000	WC-Hanford, Inc.	
1208012-02	8015M DRO	08/06/2012 11:11	30.31	1				1000	WC-Hanford, Inc.	
1208012-03	8015M DRO	08/06/2012 11:11	30.17	1				1000	WC-Hanford, Inc.	
1208012-04	8015M DRO	08/06/2012 11:11	30.9	1				1000	WC-Hanford, Inc.	
1208012-05	8015M DRO	08/06/2012 11:11	30.31	1				1000	WC-Hanford, Inc.	
L208030-BLK1	QC	08/06/2012 11:11	30	1				1000		
L208030-BS1	QC	08/06/2012 11:11	30	1				1000		
L208030-MS1	QC	08/06/2012 11:11	30.6	1	1200846	1208001-01	1000	1000		
L208030-MS2	QC	08/06/2012 11:11	31.07	1	1200846	1208007-01	1000	1000		
L208030-MS3	QC	08/06/2012 11:11	30.72	1	1200846	1208008-01	1000	1000		
L208030-MS4	QC	08/06/2012 11:11	30.28	1	1200846	1208012-01	1000	1000		
L208030-MSD1	QC	08/06/2012 11:11	30.67	1	1200846	1208001-01	1000	1000		
L208030-MSD2	QC	08/06/2012 11:11	30.37	1	1200846	1208007-01	1000	1000		
L208030-MSD3	QC	08/06/2012 11:11	30.19	1	1200846	1208008-01	1000	1000		
L208030-MSD4	QC	08/06/2012 11:11	30.43	1	1200846	1208012-01	1000	1000		

8/7/12 1450

Extracts Relinquished By Date Extracts Received By Date

METALS

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

WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

Analytical Report for Metals by SW846 6000/7000 series

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PWH0	1208001-01	Soil	07/30/2012 12:10	08/01/2012 09:35
J1PWH1	1208001-02	Soil	07/30/2012 12:20	08/01/2012 09:35
J1PWH2	1208001-03	Soil	07/30/2012 13:45	08/01/2012 09:35

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

264 Welsh Pool Road
Exton, Pennsylvania 19341
Phone (610) 280-3000
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Case Narrative

Client: WC-HANFORD RC-029
LVL#: 1208001
SDG/SAF#: K3960/RC-029

W.O.#: 60049-001-001-0001-00
Date Received: 08-01-12

METALS

The following is a summary of the QC results accompanying the sample results. Lionville Laboratory (LvL) certifies that all test results meet the requirements of NELAC except as noted below.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise.

1. This narrative covers the analyses of 3 soil samples.

2. The samples were prepared and analyzed in accordance with methods listed on the data report forms.

   The samples were analyzed and reported with 3-fold dilutions for ICP meals due to sample matrix.

3. All analyses were performed within the required holding times.

4. Please refer to the Sample Receipt Check List for any sample discrepancies in LvLI's sample acceptance policy.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury).

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the LOQ).

7. The preparation/method blank for 2 analytes were outside method criteria. {less than the Limit of Quantitation, samples greater than 20X MB value}.

8. All ICP Interference Check Standards were within control limits.

9. All Standard Reference Material (SRM) analytes were within the Prediction Interval control limits supplied by the manufacturer.

10. The matrix spike (MS) recoveries for 7 analytes were outside the 75-125% control limits.

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 pages.

11. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial dilution are performed. A serial dilution was performed on Mercury. A PDS was prepared at meaningful concentration level for the following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J1PWH0	Aluminum	22,000	87.3
	Antimony	100	101.2
	Iron	22,000	68.1
	Manganese	1,000	82.7
	Vanadium	1,000	87.9
	Silicon	2,100	93.4
	Mercury	5	110.9

12. The duplicate analysis for 1 analyte was outside the 20% Relative Percent Difference (RPD) control limit critieria. The ± 20% RPD control limit applies to sample results greater than ten times the MDL. The sample results for Chromium and Lead were less than ten times the MDL.

13. For the purposes of this report, the data have been reported to the Limit of Detection (LOD). Values between the LOD and the Limit of Quantitation (LOQ) are acquired in a region of less-certain quantification.

14. 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.

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

Iain Daniels
Laboratory Manager
Lionville Laboratory

8/20/12
Date

jjw/08-001hg%

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

WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

J1PWH0

1208001-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5020**		13.5	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Antimony	1.62	U	1.62	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Arsenic	**1.69**	B	2.71	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Barium	**64.6**		1.35	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Beryllium	**0.258**	B	0.542	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Boron	**1.90**	B	5.42	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Cadmium	0.542	U	0.542	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Calcium	**6340**		271	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Chromium	**4.26**		0.542	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Cobalt	**8.78**		5.42	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Copper	**16.5**		2.71	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Iron	**27700**		54.2	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Lead	**3.10**		1.35	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Magnesium	**4220**		203	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Manganese	**318**		13.5	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Molybdenum	**0.623**	B	5.42	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Nickel	**7.44**	B	10.8	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Potassium	**739**	B	1080	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Selenium	0.812	U	0.812	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Silicon	**420**		5.42	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Silver	0.542	U	0.542	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Sodium	**476**		135	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Vanadium	**79.8**		6.77	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Zinc	**49.4**		27.1	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Mercury	**0.0869**		0.0250	mg/kg dry	1	L208035	08/06/2012	08/07/2012	7471A

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

WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

J1PWH1
1208001-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**4980**		13.8	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Antimony	1.66	U	1.66	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Arsenic	**1.62**	B	2.76	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Barium	**53.4**		1.38	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Beryllium	**0.250**	B	0.553	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Boron	5.53	U	5.53	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Cadmium	0.553	U	0.553	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Calcium	**5790**		276	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Chromium	**4.35**		0.553	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Cobalt	**8.89**		5.53	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Copper	**15.6**		2.76	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Iron	**28000**		55.3	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Lead	**3.07**		1.38	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Magnesium	**4480**		207	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Manganese	**334**		13.8	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Molybdenum	**0.796**	B	5.53	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Nickel	**6.89**	B	11.1	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Potassium	**721**	B	1110	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Selenium	0.829	U	0.829	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Silicon	**269**		5.53	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Silver	0.553	U	0.553	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Sodium	**435**		138	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Vanadium	**77.1**		6.91	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Zinc	**56.1**		27.6	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Mercury	0.0258	U	0.0258	mg/kg dry	1	L208035	08/06/2012	08/08/2012	7471A

264 Welsh Pool Road
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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-029 Project Number: K3960 Project Manager: Joan Kessner	**Reported:** 08/17/2012 12:05

J1PWH2
1208001-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5780**		15.1	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Antimony	1.81	U	1.81	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Arsenic	**3.24**		3.02	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Barium	**61.9**		1.51	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Beryllium	**0.259**	B	0.605	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Boron	**5.17**	B	6.05	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Cadmium	0.605	U	0.605	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Calcium	**11500**		302	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Chromium	**6.19**		0.605	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Cobalt	**8.76**		6.05	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Copper	**17.7**		3.02	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Iron	**25200**		60.5	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Lead	**3.78**		1.51	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Magnesium	**4470**		227	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Manganese	**324**		15.1	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Molybdenum	6.05	U	6.05	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Nickel	**8.53**	B	12.1	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Potassium	**909**	B	1210	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Selenium	0.907	U	0.907	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Silicon	**322**		6.05	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Silver	0.605	U	0.605	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Sodium	**427**		151	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Vanadium	**64.2**		7.56	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Zinc	**49.6**		30.2	mg/kg dry	3	L208064	08/09/2012	08/13/2012	6010B
Mercury	0.0262	U	0.0262	mg/kg dry	1	L208035	08/06/2012	08/08/2012	7471A

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L208035 - SW 7471A Prep										
Blank (L208035-BLK1)				Prepared: 08/06/2012 Analyzed: 08/07/2012						
Mercury	0.0290	U	0.0290	mg/kg wet						
Duplicate (L208035-DUP1)		**Source: 1208001-01**		Prepared: 08/06/2012 Analyzed: 08/07/2012						
Mercury	0.0257	U	0.0257	mg/kg dry		0.0869				20
Matrix Spike (L208035-MS1)		**Source: 1208001-01**		Prepared: 08/06/2012 Analyzed: 08/07/2012						
Mercury	0.150		0.0257	mg/kg dry	0.14293	0.0869	44.2*	75-125		
Reference (L208035-SRM1)				Prepared: 08/06/2012 Analyzed: 08/07/2012						
Mercury	1.20		0.0281	mg/kg wet	1.2900		93.1	62.6-138		
Batch L208064 - SW 3050B										
Blank (L208064-BLK1)				Prepared: 08/09/2012 Analyzed: 08/13/2012						
Aluminum	4.72	U	4.72	mg/kg wet						
Antimony	0.566	U	0.566	mg/kg wet						
Arsenic	0.943	U	0.943	mg/kg wet						
Barium	0.472	U	0.472	mg/kg wet						
Beryllium	0.189	U	0.189	mg/kg wet						
Boron	1.89	U	1.89	mg/kg wet						
Cadmium	0.189	U	0.189	mg/kg wet						
Calcium	9.35	B	94.3	mg/kg wet						
Chromium	0.189	U	0.189	mg/kg wet						
Cobalt	1.89	U	1.89	mg/kg wet						
Copper	0.943	U	0.943	mg/kg wet						
Iron	18.9	U	18.9	mg/kg wet						
Lead	0.472	U	0.472	mg/kg wet						
Magnesium	1.78	B	70.8	mg/kg wet						
Manganese	4.72	U	4.72	mg/kg wet						
Molybdenum	1.89	U	1.89	mg/kg wet						
Nickel	3.77	U	3.77	mg/kg wet						
Potassium	377	U	377	mg/kg wet						
Selenium	0.283	U	0.283	mg/kg wet						
Silicon	1.89	U	1.89	mg/kg wet						
Silver	0.189	U	0.189	mg/kg wet						
Sodium	47.2	U	47.2	mg/kg wet						
Vanadium	2.36	U	2.36	mg/kg wet						
Zinc	9.43	U	9.43	mg/kg wet						

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L208064 - SW 3050B										
Duplicate (L208064-DUP2)		**Source: 1208001-01**		Prepared: 08/09/2012 Analyzed: 08/13/2012						
Aluminum	5430		14.8	mg/kg dry		5020			7.98	20
Antimony	1.78	U	1.78	mg/kg dry		1.62 U				20
Arsenic	1.86	B	2.97	mg/kg dry		1.69			9.65	20
Barium	70.6		1.48	mg/kg dry		64.6			8.88	20
Beryllium	0.256	B	0.594	mg/kg dry		0.258			0.659	20
Boron	1.87	B	5.94	mg/kg dry		1.90			1.65	20
Cadmium	0.594	U	0.594	mg/kg dry		0.542 U				20
Calcium	5930		297	mg/kg dry		6340			6.76	20
Chromium	3.38		0.594	mg/kg dry		4.26			22.9*	20
Cobalt	8.93		5.94	mg/kg dry		8.78			1.72	20
Copper	17.3		2.97	mg/kg dry		16.5			5.17	20
Iron	26900		59.4	mg/kg dry		27700			2.86	20
Lead	4.58		1.48	mg/kg dry		3.10			38.7*	20
Magnesium	4140		223	mg/kg dry		4220			2.07	20
Manganese	306		14.8	mg/kg dry		318			3.90	20
Molybdenum	0.623	B	5.94	mg/kg dry		0.623			0.00336	20
Nickel	6.74	B	11.9	mg/kg dry		7.44			10.0	20
Potassium	679	B	1190	mg/kg dry		739			8.48	20
Selenium	0.891	U	0.891	mg/kg dry		0.812 U				20
Silicon	298		5.94	mg/kg dry		420			33.9*	20
Silver	0.594	U	0.594	mg/kg dry		0.542 U				20
Sodium	520		148	mg/kg dry		476			8.66	20
Vanadium	72.0		7.42	mg/kg dry		79.8			10.3	20
Zinc	53.6		29.7	mg/kg dry		49.4			8.07	20
Matrix Spike (L208064-MS2)		**Source: 1208001-01**		Prepared: 08/09/2012 Analyzed: 08/13/2012						
Aluminum	5810		13.3	mg/kg dry	177.43	5020	446*	75-125		
Antimony	18.2		1.60	mg/kg dry	44.358	1.62 U	40.9*	75-125		
Arsenic	153		2.66	mg/kg dry	177.43	1.69	85.4	75-125		
Barium	220		1.33	mg/kg dry	177.43	64.6	87.6	75-125		
Beryllium	3.99		0.532	mg/kg dry	4.4358	0.258	84.2	75-125		
Boron	76.4		5.32	mg/kg dry	88.717	1.90	83.9	75-125		
Cadmium	4.57		0.532	mg/kg dry	4.4358	0.542 U	103	75-125		
Calcium	8370		266	mg/kg dry	2217.9	6340	91.3	75-125		
Chromium	21.0		0.532	mg/kg dry	17.743	4.26	94.4	75-125		
Cobalt	45.0		5.32	mg/kg dry	44.358	8.78	81.7	75-125		
Copper	35.0		2.66	mg/kg dry	22.179	16.5	83.5	75-125		

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L208064 - SW 3050B									
Matrix Spike (L208064-MS2)		**Source: 1208001-01**	Prepared: 08/09/2012 Analyzed: 08/13/2012						
Iron	25600	53.2	mg/kg dry	88.717	27700	-2380*	75-125		
Lead	40.9	1.33	mg/kg dry	44.358	3.10	85.2	75-125		
Magnesium	6040	200	mg/kg dry	2217.9	4220	82.0	75-125		
Manganese	331	13.3	mg/kg dry	44.358	318	29.0*	75-125		
Molybdenum	75.4	5.32	mg/kg dry	88.717	0.623	84.3	75-125		
Nickel	47.0	10.6	mg/kg dry	44.358	7.44	89.2	75-125		
Potassium	2600	1060	mg/kg dry	2217.9	739	83.8	75-125		
Selenium	149	0.798	mg/kg dry	177.43	0.812 U	83.8	75-125		
Silicon	341	5.32	mg/kg dry	88.717	420	-89.8*	75-125		
Silver	3.95	0.532	mg/kg dry	4.4358	0.542 U	89.1	75-125		
Sodium	2580	133	mg/kg dry	2217.9	476	94.8	75-125		
Vanadium	110	6.65	mg/kg dry	44.358	79.8	68.1*	75-125		
Zinc	87.1	26.6	mg/kg dry	44.358	49.4	84.8	75-125		
Reference (L208064-SRM1)			Prepared: 08/09/2012 Analyzed: 08/13/2012						
Aluminum	8400	14.4	mg/kg wet	6670.0		126	0-200.89		
Antimony	27.1	1.73	mg/kg wet	53.000		51.1	0-235.8		
Arsenic	111	2.88	mg/kg wet	114.00		97.3	82.8-117.54		
Barium	297	1.44	mg/kg wet	307.00		96.8	79.8-120.2		
Beryllium	103	0.577	mg/kg wet	108.00		95.3	82.8-117.6		
Boron	79.0	5.77	mg/kg wet	85.100		92.8	67.5-132.8		
Cadmium	221	0.577	mg/kg wet	225.00		98.4	83.6-116.4		
Calcium	3090	288	mg/kg wet	3360.0		92.0	83.3-116.9		
Chromium	75.8	0.577	mg/kg wet	77.200		98.1	73.3-126.4		
Cobalt	160	5.77	mg/kg wet	166.00		96.5	80.7-118.7		
Copper	258	2.88	mg/kg wet	271.00		95.1	80.8-119.2		
Iron	8080	57.7	mg/kg wet	8420.0		95.9	78.6-121.1		
Lead	180	1.44	mg/kg wet	190.00		94.7	81.6-118.4		
Magnesium	7560	216	mg/kg wet	8570.0		88.2	83.2-116.7		
Manganese	710	14.4	mg/kg wet	965.00		73.6	69.3-130.5		
Molybdenum	229	5.77	mg/kg wet	235.00		97.5	76.2-123.8		
Nickel	216	11.5	mg/kg wet	221.00		97.8	79.6-120.8		
Potassium	13700	1150	mg/kg wet	14400		95.3	81.9-118.1		
Selenium	185	0.865	mg/kg wet	187.00		99.1	75.9-124.6		
Silicon	257	5.77	mg/kg wet	807.00		31.8	0-219.3		
Silver	80.3	0.577	mg/kg wet	83.500		96.1	82.7-117.1		
Sodium	9360	144	mg/kg wet	9730.0		96.2	82.5-117.2		

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WC-Hanford, Inc.	Project: RC-029	
2620 Fermi Avenue	Project Number: K3960	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	08/17/2012 12:05

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L208064 - SW 3050B									
Reference (L208064-SRM1)			Prepared: 08/09/2012 Analyzed: 08/13/2012						
Vanadium	97.9	7.21	mg/kg wet	98.700		99.2	75.9-123.6		
Zinc	193	28.8	mg/kg wet	199.00		97.1	78.4-121.6		

Lionville Laboratory

Logbook #: 1128

SAMPLE DIGESTION RECORD

Digestion Batch #: L208064
Date/Time Initiated: 8/9/12 1900
Date/Time Completed: 8/10/12 0130
Analyst: ERB
Matrix (circle): Soil Water Other
Method (circle one): 3005A 3010A 3050 200.7 (1994)
pH/Turbidity: N/A for Solids.
NOTE: All temperatures are recorded as corrected temperatures

Digested / Undigested (circle one)
Balance #: B14
Balance Cal Verification: Y NA
Temp: 96°
BLOCK 1 2 (circle one)

Work Order #	Spike Vol (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/Sol/ TC	Texture	Color / Appearance	Artifact	Turb
1207052-01		0.56	50		TOT	MIXED	PAPER, foil, DUST	NA	NA
01R		0.52	50			MIXED	PAPER, foil, DUST		
01S	0.5	0.54	50			MIXED	PAPER, foil, DUST		
02		0.51	50			MIXED	PAPER, foil, DUST		
1208001-01		0.57	50			SAND	DARK SANDY		
01R		0.52	50			SAND	DARK SANDY		
01S	0.5	0.58	50			SAND	DARK SANDY		
02		0.56	50			SAND	DARK SANDY		
03		0.52	50			fine	BROWN SOIL		
1208007-01		0.50	50			SAND	DARK SANDY		
01R		0.54	50			SAND	DARK SANDY		
* 01S	0.5	0.51	50			SAND	DARK SANDY		
1208008-01		0.59	50			fine	Brown SANDY		
01R		0.54	50			fine	Brown SANDY		
* 01S	0.5	0.53	50			fine	Brown SANDY		
1208019-01		0.53	50			fine	yellow loamy		
01R		0.52	50			fine	yellow loamy		
* 01S	0.5	0.50	50			fine	yellow loamy		
BLK		0.53	50			COARSE	Boiling Chips		
(*) SRM	TEGn (*) 8/9/12	0.52	50			fine	Pink LOAMY		

ERB 8/9/12

Spiking IDs / Expiration Date:
MS#: 1200457

LCS#: (*) 1101357

Reagent IDs:
HNO_3 L08023
HCl L01031
H_2O_2 K09A03
1:1 HNO_3 637-066-02
1:1 HCl

File ID#:

Data Review By/Date: 8/10/12

R:\group\QA\SOP\
Signed\SPI\Metals Digestion log.doc

TEGn 8/9/12
* (*) ALSO SPIKED w/ 0.25mL 1200380 (W)
1200386 (Zr)

Page #:

000000035

Lionville Laboratory

MERCURY PREPARATION

Logbook # 1143

Analyst: EB
Date 8/6/12
Start Time/Temp: 1505 / 94°
End Time/Temp: 1535 / 95°

Instrument ID: HG3.1
Balance # B29 /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: L208035
Worksheet: HG080701
SOP No. ME-HgCVAA
BLOCK 1 2 (circle one)

NOTE: All temperatures are recorded as corrected temperatures.

LvL Work Order#	pH <2 (Liq)	Spike Vol (mL)	Spike Conc. (µg/L)	Initial Wt. or Vol (g or mL)	Final Sample Vol (mL)	Comments, % Solids, etc.
Blank				10mL	50	
0.2 µg/L		0.100		10mL	50	
1.0		0.500		10mL	50	
2.0		1.000		10mL	50	
5.0		2.500		10mL	50	
10.0		5.000		10mL	50	
ICV		0.125	2.5	10mL	50	
CCV		0.250	5.0	10mL	50	
ICB/CCB				10mL	50	
L208035-BLK1				0.31	50	
SRM1		*	*	0.32	50	
1208001-01				0.37	50	
01R				0.36	50	
01S		0.500	1.0	0.36	50	
02				0.36	50	
03				0.36	50	
1208011-01				0.36	50	
01R				0.38	50	
01S		0.500	1.0	0.36	50	
1208012-01				0.37	50	
01R				0.34	50	
01S		0.500	1.0	0.33	50	
02				0.34	50	
03				0.31	50	
04				0.31	50	
05				0.38	50	
		EB 8/6/12				

Standard:	ID	Prep Date/Time
ICAL/MS	R1 1200588	8/6/12 1130
ICV/CCV/LCS	IV 1200532	NA

Reviewed By/Date: [illegible] 8/8/12

se book # 9368 for std traceability information

Soil LCS True Value = 1.29 mg/Kg
Standard # 1101357

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Soil LCS Spiking Concentration: 1.0 µg/ml

ME-HgCVAA-Prep0910

Page #:

Lionville Laboratory Use Only

1208001

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Lionville Laboratory
A Division of Eberline Analytical Corporation

Client: WC Hanford SAF# RC-029
Est. Final Proj. Sampling Date:
Project#:
Project Contact/Phone#:
Lionville Laboratory Project Manager: O. Johnson
QC: SW Del: SAL TAT: 15 Days

Date Rec'd: 08-01-12 Date Due: 08-16-12

		A			B		C							
Refrigerator #		1			1		1							
#/Type Container	Liquid													
	Solid	1AG			1AG		1AG							
Volume	Liquid													
	Solid	120			120		60							
Preservatives		—			—		—							
ANALYSES REQUESTED →		ORGANIC					INORG							
		VOA	BNA	Pest/PCB	Herb		HTPH-D		Metal Hg	CN				
Lionville Laboratory Use Only				8082			8015		Metal/Hg					

MATRIX CODES:
W Water
WW Waste Water
GW Groundwater
WST Waste
WI Wipe
SO Solid
S Soil
SL Sludge
SE Sediment
PC Paint Chips
O Oil
NAL Non-Aqueous Liquid
L Leachate
A Air
T Tissue
F Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
01	J1PWHO			Soil	7-30-12	1210			X		X		X						
02	1 1			1	1	1220			X		X		X						
03	1 2			1	1	1345			X		X		X						

Special Instructions:

① Met-HSL+B, Mo, Si (no TL)

Special Instructions:

1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
Fred Ee	[illegible]	8/1/12	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

000000037

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-029-144	Page 1 of 1

Collector ~~Q. Stowe~~ H. Weber	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8C	Data Turnaround: 15 Days		
Project Designation: Remaining Sites Confirmation Sampling - Soil Full Protocol	Sampling Location: 100-D-98:2		SAF No.: RC-029
Ice Chest No.: WCH-11-055	Field Logbook No.: EL-1662-01	COA: C10D98A000	Method of Shipment: Fed
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A116473		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples may contain hazardous chemicals at levels that pose a risk to human health and/or the environment. Please handle accordingly.

Special Handling and/or Storage

Please keep cool (4 deg C) those requiring coolness, as shown on "Preservation" heading. Thank You.

Preservation	Cool 4C	Cool 4C	Cool 4C								
Type of Container	G/P	G	aG								
No. of Container(s)	1	1	1								
Volume	60mL	120mL	120mL								
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH-Diesel Range - WTPH-D +	PCBs - 8082								

Sample No.	Matrix *	Sample Date	Sample Time									
J1PWH0	SOIL	7/30/12	1210	X	X	X						
J1PWH1	SOIL	7/30/12	1220	X	X	X						
J1PWH2	SOIL	7/30/12	1345	X	X	X						
J1PWH3 A4 7-30-12	SOIL											
J1PWH4	SOIL											

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Heather Weber Heather Weber	7-30-12 1350	WCH MSTankovich	1350 7/30/12
		MSTankovich	7/30/12
WCH MSTankovich	7/30/12 1515	1060#1 A. Freier A. Freier	1515 7-30-12
WCH A. Freier A. Freier	7-31-12 1060#1 1025	Fed Ex	
Fed Ex	8-1-12 0935	VICTOR HERNANDEZ	8-1-12 0935

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)

REVIEWED BY MWSheen DATE 7/31/12

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

000000038

Lionville Laboratory

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford **Date:** 8/1/12

Project/SAF/SOW/Release #: RC-029

LvL Batch #: 1208 001 **Sample Custodian:** Victor Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill #
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.1 °C		Cooler # WCH-11-055
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvL) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ 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.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

SR-002-B.doc